



The interaction of the knowledge society and rural development in Iceland and Scotland

Anna Guðrún Edvardsdóttir

Dissertation submitted in partial fulfilment of a Ph.D.-degree



UNIVERSITY OF ICELAND
SCHOOL OF EDUCATION

The interaction of the knowledge society and rural development in Iceland and Scotland

Anna Guðrún Edvardsdóttir

Supervisor

Allyson Macdonald, Professor, University of Iceland

Co-supervisor

Frank Rennie, Professor, Lews Castle College, UHI, Scotland

Doctoral committee

Allyson Macdonald, Professor, University of Iceland

Frank Rennie, Professor, Lews Castle College, UHI, Scotland

Karl Benediktsson, Professor, University of Iceland

Opponents

Kristinn Hermannsson, Lecturer, University of Glasgow, Scotland

Philomena de Lima, Director of Centre for Remote and Rural Areas at
University of the Highlands and Islands, Scotland

Dissertation submitted in partial fulfilment of a Ph.D. degree

Faculty of Education Studies

School of Education, University of Iceland

December 2016

The interaction of the knowledge society and rural development in Iceland
and Scotland

A thesis for a Ph.D. degree in Education Studies

© 2016, Anna Guðrún Edvardsdóttir

All rights reserved

ISBN 978-9935-9265-7-9

Printed at: Háskólaprent ehf.

Reykjavík, Iceland, 2016

I dedicate this work to my husband,
Kristján, and sons, Þorbjörn and Óskar,
for their support and patience.

Abstract

The interaction of the knowledge society and rural development in Iceland and Scotland

The expansion of the knowledge society became a regional policy issue in Iceland and Scotland in the 1990s. Attention was increasingly paid to the development of the knowledge society in rural areas, especially higher education and research activities. Today, in all Iceland's regional areas there is a university center and/or research institutes, operating as independent institutes or as a part of bigger institutes based in the Reykjavik area. Similar development has taken place in rural areas of Scotland with the establishment of the University of the Highlands and Islands.

This research examines the interaction of the knowledge society and rural development in three regions: The Westfjords of Iceland, East Iceland, and the Western Isles of Scotland. The aims are to investigate the effect of selected historical events on rural communities; to analyse the policy discourse on these events; and to examine whether and how higher education and research activities encourage people to become active place-makers in their communities.

The theoretical approach draws on resilience focusing on the knowledge society and rural development as a social-ecological system and incorporating epistemological pluralism and triple-loop learning. It also draws on theories of eco-feminism and place-based pedagogy in rural development and the formation of communities.

Data was collected in three ways. Historical research, based on the revisionist perspective, was used in describing the development of the knowledge society and rural development over time, emphasising specific historical events. Historical discourse analysis was used when analysing governmental policy documents about rural development and development of the knowledge society in the three research areas. Interviews were taken with people who were living in these areas, and who were working within the field of rural development, the knowledge society and/or had finished a higher education degree through distance learning methods. Those interviews were analysed using a thematic approach and the key aspects of In Vivo coding.

The main findings are that strong economic emphasis is built into projects that are launched in the name of rural development. However, an environmental and social emphasis can also be found, but because of the strong emphasis on the economic factor, environmental and social factors are less visible or important and cultural factors are rarely mentioned. This emphasis on the economy is not peculiar to the region but reflects both the global context and national strategy and forms the basis for rural development at any given time. In order to reach the current governmental goals of creating sustainable and resilient communities, all four sustainability factors must be built into projects.

An important finding in the discourse analysis is that despite statements about creating resilient and sustainable communities found in the policies and the inhabitants' discourse in the Westfjords and East Iceland, it is confirmed that the economic factor is the most influential in these two areas because of the belief that the other aspects will follow if the economy is strong. In the Western Isles the rural policy about creating resilient and sustainable communities is backed up in the goals and actions in the policy documents keeping a balance across economic, environmental, social and cultural factors. Despite regional place-based development plans being now an important focus in discussions on rural development, state-led interventions are apparent; and governmental policy about activities that are agreed upon in the name of rural development and the development of the knowledge society, do not match with the participants' aspirations or beliefs that the activities will have the desired result of increasing the population and jobs for a more highly educated workforce. Both the governmental policy and the inhabitants support the idea that the speciality and strength of the rural areas are nature, culture and history.

The main research question is about how the knowledge society interacts with rural development. The first two parts of this thesis traced historical developments and policy discourse. The third question concerns the inhabitants, both their views on community life in rural areas and the effect on their lives of the advent of the knowledge society in the form of distance programs. Members of the community usually chose study areas that suited the needs of their community. Women were likely to choose study programs that enhanced their private life but men chose areas that increased their actions space and participation in the public sphere of life. All agree that male values dominated rural communities and men are more active place-makers than women.

The overall conclusion reached is that rural development in the areas studied revolve around economic factors, such as job creation, population increase and research activities that focus on the main industry. The knowledge society however enables rural areas to deepen connections with environmental, social and cultural factors, thus creating sustainable activities and resilient communities, which is in line with recent policy in rural Iceland and the Western Isles.

The thesis suggests three criteria that could guide communities in becoming sustainable and resilient and where the knowledge society is a key player with a leading role. The first criterion is to form a broad partnership among stakeholders when working on place-based plans at community level, second, to establish a trust fund when dealing with the use of natural resources in the community and third, to form regional and national partnerships with universities, research institutions and knowledge centres.

Ágrip

Samspil þekkingarsamfélagsins og byggðapróunar á Íslandi og í Skotlandi

Á tíunda áratug 20. aldar beindust augu stjórnvalda á Íslandi og Skotlandi að uppbyggingu þekkingarsamfélagsins. Í öllum landshlutum á Íslandi eru háskólasetur og/eða rannsóknarstofnanir sem ýmisst starfa sjálfstætt eða sem hluti af stærri stofnunum. Svipuð þróun átti sér stað í Skotlandi með stofnun háskóla sem þjónað gæti Hálöndum og eyjum Skotlands.

Í þessari rannsókn er samspil þekkingarsamfélagsins og byggðapróunar á Vestfjörðum, Austurlandi og á Vestureyjum Skotlands kannað. Í því augnamiði verða athuguð áhrif ákveðinna sögulegra atburða á dreifðar byggðir; hin pólitíska orðræða um atburðina verður greind; og skoðað verður hvort og þá hvernig háskólamenntun og rannsóknastarfsemi hvetur fólk til að hafa áhrif á samfélagið sitt.

Hin fræðilega nálgun byggir á kenningum um seiglu (e. *resilience*) með áherslu á þekkingarsamfélagið og byggðapróun sem félags- og vistfræðileg (e. *social-ecological*) kerfi þar sem þekkingarfræðilegur fjölbreytileiki (e. *epistemological pluralism*) og nám sem felur í sér þrjá ferla (e. *triple-loop learning*) eru hluti af kerfinu. Einnig er byggt á kenningum um vistfémínisma (e. *eco-feminism*) og grenndarnám (e. *place-based pedagogy*) í byggðapróun og mótun samfélaga.

Gagnasöfnun fór fram með þrenns konar hætti. Í fyrsta lagi voru ákveðnir sögulegir atburðir skoðaðir með aðferð sögulegra rannsókna, þar sem þróun þekkingarsamfélagsins og byggðapróunar á ákveðnum tímabilum er lýst. Í öðru lagi var sögulegri orðræðugreiningu beitt við greiningu opinberra stefnumótunargagna um byggðapróun og þróun þekkingarsamfélagsins er varða ofangreind rannsóknarsvæði. Í þriðja lagi voru viðtöl tekin við fólk sem bjó á þessum svæðum og störfuðu að byggðamálum, innan þekkingarsamfélagsins og/eða höfðu aflað sér háskólamenntunar í fjarnámi. Við greiningu viðtalana var þemanálgun beitt og lykilkættir In Vivo aðferðarinnar notaðir.

Fjallað er um niðurstöður rannsóknarinnar í þremur köflum. Helstu niðurstöður eru þær að mikla áherslu á efnahagsmál er að finna í verkefnum sem beinast að byggðapróun. Hins vegar er einnig að finna umhverfis- og félagslegar áherslur en vegna efnahagslegrar slagsíðu, verða

umhverfis- og félagslegir þættir lítið áberandi og umfjöllun um menning er vart að finna. Þó er þessi mikli slagþungi á efnahagsmál ekki bundin rannsóknarsvæðunum heldur endurspeglar hann hið alþjóðlega samhengi og stefnumörkun á landsvísu og myndar grunn fyrir áherslur í byggðapróun á hverjum tíma. Stefna núverandi stjórnvalda er að skapa sjálfbær samfélög sem sýnt geta seiglu en til þess verða allar framangreindar áherslur að vera hluti af byggðapróunarverkefnum.

Þrátt fyrir að í stefnumörkun stjórnvalda í byggðamálum sé að finna yfirlýsingu um að þróa eigi sjálfbær samfélög sem sýnt geta seiglu, og í orðræðu íbúa á Vestfjörðum og Austurlandi um slíkt, þá er það staðreynd að efnahagslegir þættir eru fyrirferðamestir. Ástæðan er sú að í orðræðunni er að finna þá skoðun að aðrir þættir munu fylgja í kjölfarið sé efnahagur byggðanna sterkur. Á Vestureyjum í Skotlandi er sú stefna í byggðamálum um sjálfbær samfélög studd með markmiðum og aðgerðum í byggðaaætlanum, þar sem jafnvægi er á milli efnahags-, umhverfis-, félags- og menningarlegra þátta. Þá er til að taka að þrátt fyrir aukna áherslu á svæðisbundnar byggðaaætlanir á Íslandi eru bein afskipti stjórnvalda af byggðamálum enn við lýði. Einnig er misræmi á milli væntinga og trúar íbúa á að aðgerðir í byggðamálum sem samþykktar hafa verið af stjórnvöldum munu hafa þær afleiðingar í för með sér að fólki fjölgi og störfum fyrir háskólamenntaða einnig. Hins vegar eru bæði íbúar og stjórnvöld sammála um að náttura, menning og saga sé styrkleiki og sérstaða hinna dreifðu byggða sem beri að nýta.

Samspil þekkingarsamfélagsins og byggðapróunar er aðalrannsóknarspurning ritgerðarinnar. Umfjöllunarefni í tveimur fyrstu hlutum er söguleg þróun lykilatburða og stefnumótandi orðræða stjórnvalda. Þriðja rannsóknarspurningin varðar íbúa, bæði viðhorf þeirra til búsetu á dreifðum svæðum og þau áhrif sem tilkoma þekkingarsamfélagsins í formi fjarnáms hafði á líf þeirra. Íbúar völdu yfirleitt að stunda nám á þeim sviðum sem hentaði því samfélagi sem þeir bjuggu í. Konur voru líklegri til að velja nám sem styrkti stöðu þeirra í hinu persónulega lífi en karlar völdu nám sem stækkaði athafnarými þeirra og þátttöku í hinu opinbera lífi. Bæði kynin gera sér grein fyrir því að þau búa í karllægum samfélögum þar sem karllægum gildum er gert hærra undir höfði en kvenlægum. Slíkt gerir körlum kleift að vera virkari gerendur (e. *place-makers*) en konum.

Meginniðurstaðan er sú að byggðapróun á rannsóknarsvæðunum snýst um efnahagslega þætti, svo sem atvinnusköpun, fólksfjölgun og rannsóknaverkefni sem einblína á aðalatvinnuveg svæðanna. Hins vegar gerir þekkingarsamfélagið dreifðum byggðum kleift að dýpka tengslin við

umhverfislega, félagslega og menningarlega þætti og skapa þannig sjálfbær samfélög sem sýna seiglu. Það rímar við núverandi byggðastefnu bæði á Íslandi og á Vestureyjum Skotlands.

Að lokum eru sett fram þrjú viðmið sem gætu aukið seiglu samfélaga og stuðlað að því að þau verði sjálfbær. Þar er þekkingarsamfélagið í lykilhlutverki. Fyrsta viðmiðið er að skapa samstarf á breiðum grunni meðal hagsmunaaðila við gerð samfélagsáætlana. Annað viðmiðið er að stofna samfélagssjóð sem heldur utan um náttúruauðlindir hvers samfélags. Þriðja viðmiðið er að skapa svæðisbundið samstarf og/eða á landsvísu á milli háskóla, rannsóknastofnana og þekkingarsetra.

Acknowledgements

Writing a Ph.D. thesis can be compared with being on a journey where the destination is clear, but everything else that happens on the way is unclear. On this journey I have been to many places, staying there for a long or short period of time. I have taken unscheduled detours and met people, who have travelled with me, some longer than others. There have been times when the journey was difficult, times when I thought that I would not make it to the destination, but overall it has been an educational journey and a happy one.

Those in my family who travelled with me all the way; my husband and sons and my daughter-in-law, my mother and stepfather and my brothers, I would like to thank them for their support. I owe a debt of gratitude to my supervisors, Dr Allyson Macdonald and Dr Frank Rennie. With Dr Karl Benediktsson, they formed the doctoral committee. I thank them for being insightful, supportive, encouraging, and critical of my work in a constructive way.

I specially want to thank a very good friend of mine and her colleagues, who always seemed to know when I needed support and advices. Finally, I want to thank friends, colleagues and participants for travelling with me; without you all, I would not have made it to the destination.

The research received a financial support from the Equal Rights Fund in 2008, The Marjorie Jeanne Allen Scholarship offered by the Delta Kappa Gamma Society in 2010, Westfjord's Growth Agreement in 2011, University of Iceland's Institute of Research Centres in 2011 and The Eimskip University Fund in 2012. This support made the work easier and for that I am grateful.

Table of contents

Abstract	v
Ágrip	ix
Acknowledgements	xiii
Table of contents	xv
Figures	xx
Tables	xxi
1 Statement of the problem	1
1.1 The development of the problem	1
1.2 Rationale for choice of topic	3
1.3 Research questions	5
1.4 My professional identity and positionality	6
1.5 Setting the scene for the research	9
1.5.1 Iceland	9
1.5.2 The Westfjords	11
1.5.3 East Iceland	12
1.5.4 Scotland	15
1.5.5 The Western Isles	16
1.6 Summary and discussion	18
1.7 The structure of the thesis	19
2 Conceptual issues	21
2.1 Knowledge for development	21
1.7.4 The knowledge society as a concept	21
1.7.5 Evolution of the knowledge society	22
1.8 Regional and rural issues	26
1.8.4 Region	26
1.8.5 Urban and rural	28
2.2.3 Regional development	31
2.2.4 Rural development	32
2.1.5 Community	34
1.9 Sustainability in a regional and rural context	37

2.5	Summary and discussion	40
3	Theoretical approach	43
3.1	Introduction.....	43
3.2	Resilience theory of socio-ecological systems.....	44
3.2.1	Resilience	44
3.2.2	Vulnerability.....	47
3.2.3	Adaptability.....	48
3.2.4	Transformability.....	49
3.2.5	Resourcefulness	49
3.2.6	Resilience as invoked by government.....	50
1.10	Theorising place	51
3.3.1	Place and space	52
3.3.2	The ecological dimension of place	56
3.3.3	The sociological and political dimensions of place.....	57
3.4	Quality of life and well-being.....	57
3.4.1	Eco-feminism	57
3.4.2	The 'good life'	58
3.5	The frameworks/models used for analysing the problem	59
3.5.1	The adaptive cycle.....	60
3.5.2	Triple-loop learning.....	62
3.6	Summary and discussion	64
4	Methodology and methods.....	67
4.1	Contemporary historical review	69
4.1.1	Issues in contemporary historical review	69
4.1.2	Carrying out the review	71
4.2	Historical discourse analysis.....	72
4.2.1	Issues in historical discourse analysis	73
4.2.2	Using historical discourse analysis	75
4.3	Generation of interview data	77
4.3.1	Aspects of thematic approach under the influence of grounded theory	78
4.3.2	Using the thematic approach – In Vivo coding	79
4.4	Quality criteria	82
4.4.1	Scientific and practical values of the research.....	82

4.4.2 Ethical issues	84
4.5 Summary and discussion	85
5 The knowledge society and rural development.....	89
5.1 Developments in universities from 1970	90
5.2 Higher education and gender.....	93
5.3 Changes in knowledge production and increased role of universities in regional development	97
5.4 The development of the knowledge society in Iceland and Scotland from 1970.....	100
5.4.1 Iceland.....	100
5.4.2 Scotland	106
5.5 A closer look at the three research areas.....	109
5.5.1 The Westfjords.....	109
5.5.2 East Iceland	114
5.5.3 The Western Isles.....	118
5.6 Key events in rural development in Iceland and Scotland	119
5.6.1 Social and economic concerns: the stern trawler project in 1971	121
5.6.2 Environmental and economic concerns: the development of the quota system	126
5.6.3 Social and economic concerns on the Western Isles.....	132
5.7 Application of the framework/model	138
5.7.1 The knowledge society in Westfjords and East Iceland.....	139
5.7.2 The stern trawler project and the quota system	143
5.7.3 Relationship of phases in adaptive cycle to population development in the Westfjord and East Iceland regions ...	145
5.7.4 Population development in the Western Isles	148
5.8 Summary and discussion	150
6 Policy-making for rural areas	155
6.1 Analysis of Icelandic policies	155
6.1.1 Overview of official documents	158
6.1.2 The knowledge society and its interaction with rural development.....	160
6.1.3 Reinforcement of rural areas.....	161

6.1.4 Triple Helix model	162
6.1.5 Strength and specialities of rural areas	164
6.1.6 Sustainable development	165
6.2 Analysis of policy related to the Western Isles	167
6.2.1 The knowledge society and its interaction with rural development	168
6.2.2 Sustainable communities	170
6.2.3 Resilient communities.....	171
6.2.4 Demographic changes.....	172
6.3 Summary and discussion	173
7 Living in a rural community.....	177
7.1 Background information.....	179
7.2 Urban and rural	183
7.3 Equal rights issues	185
7.4 Undertaking university studies.....	186
7.5 The knowledge society and rural development	193
7.5.1 Migration pattern.....	193
7.5.2 Universities and research activities	196
7.6 The communities and natural resources.....	200
7.7 The realization of rural development plans	204
7.8 Rural development emphasis.....	207
7.9 Strength and specialities	209
7.10 Sustainable development	211
7.11 Summary and discussion.....	213
8 Knowledge society as a social and cultural force.....	217
8.1 Introduction.....	217
8.1.1 Westfjords and East Iceland – resilient enough?.....	218
8.1.2 Western Isles – resilience in action?.....	221
8.2 The life of discourse.....	222
8.2.1 Westfjords and East Iceland.....	223
8.2.2 The Western Isles.....	223
8.2.3 The educational discourse	224
8.2.4 The social discourse	227
8.2.5 The political discourse.....	228

8.3 The patterns of place-making.....	231
8.4 Discursive differences across regions.....	234
8.5 The knowledge society’s interaction with rural development....	237
8.5.1 Westfjords and East Iceland	237
8.5.2 The Western Isles.....	240
8.6 Summary	241
Conclusions and implications.....	245
9.1 Resilient and sustainable communities.....	246
9.1.1 Rural development of today	247
9.1.2 Place in rural communities	248
9.1.3 Change towards resilient and sustainable communities....	249
9.2 Criteria: Creation of resilient and sustainable communities through partnerships, participation, and a sense of place.....	250
9.2.1 Partnership in place-based plans at the community level..	250
9.2.2 Establishing community trust funds	251
9.2.3 A knowledge society partnership	252
9.3 Concluding comments.....	253
References.....	255
Appendixes.....	289

Figures

Figure 1. Location of Iceland and Scotland	10
Figure 2. The Westfjords	12
Figure 3. East Iceland.....	13
Figure 4. The Highlands and Islands of Scotland.....	15
Figure 5. The Western Isles (Outer Hebrides)	16
Figure 6. Transformation towards the good life (Hopwood et al., 2005)	40
Figure 7. Presentation of the thesis strategy.	41
Figure 8. The adaptive cycle (from Gunderson & Holling, 2002).	60
Mynd 9. The development of distance learning in Iceland (Adapted from Simmie & Martin, 2010).	62
Figure 10. Triple-loop learning (Adapted from Serrat, 2013).....	63
Figure 11. Juxtaposition of data from documents and from interviews.....	68
Figure 12. Universities in Iceland.	101
Figure 13. Research institutions in parts of Iceland in 2010.	104
Figure 14. UHI partners	108
Figure 15. The location of higher education and research institutions in the Westfjords.....	112
Figure 16 The location of higher education and research institutions in East Iceland	115
Figure 17. Population development in Westfjords related to projects and historical events since 1970.	120
Figure 18. Population development in East Iceland related to projects and historical events since 1970.	120
Figure 19. The development of distance learning in Iceland (Adapted from Simmie & Martin, 2010).	140
Figure 20. The development of knowledge centres and research institutions in the Westfjords and East Iceland (Adapted from Simmie et al., 2010).....	141
Figure 21. The development of the stern trawler project in Iceland (Adapted from Simmie et al. 2010).....	143
Figure 22. Population development in the Western Isles linked to events (Adapted from Simmie et al. 2010).	150

Tables

Table 1. Demographic changes in the Westfjords 1970 - 2015	12
Table 2. Demographic changes in East Iceland 1970 – 2015.	13
Table 3. Demographic changes in the Western Isles 1900 – 2014.	17
Table 4. The analysed documents.....	76
Table 5. The number of participants in the three research areas	81
Table 6. The rise in number of university students in Iceland from 1975.	93
Table 7. The number of distance learning students in 2005, 2009 and 2013.	94
Table 8. The academic drift in the university sector in Iceland since 1970.	102
Table 9. The knowledge society in the Westfjords, locations and year	113
Table 10. Knowledge society in East Iceland, locations and year	117
Table 11. Changes in population with the respect to resilience and the adaptive cycle in the Westfjords and East Iceland (Adapted by Simmie et al., 2010).	146
Table 12. The Icelandic policy documents	158
Table 13. The Western Isles policy documents.....	167
Table 14. Identified themes.....	178
Table 15. Participants, criteria by countries and gender.	179
Table 16. Discursive themes in analysed documents and interviews.....	224

1 Statement of the problem

1.1 The development of the problem

Higher education and research activities in rural areas grew worldwide in the late 20th century. The reason for this expansion is, among other things, related to governmental belief that education is 'a key way of investing in human capital as a means of improving a nation's competitive edge in a growing world economy' (Boronsky & Hassan, 2015, p. 187). Technological changes such as the creation of the World Wide Web, and globalisation with its flow across borders of economy, technology, people, knowledge, values and gender issues were also influential. In order for nations to be competitive on the global market, human capital needs to be well educated (Harman, 2004; Boronsky & Hassan, 2015). Today, *knowledge society* include education and lifelong learning (learning that is pursued throughout life), higher education and research activities, local or tacit, and scientific knowledge. However, in rural context, knowledge society is used when addressing higher education and research activities, emphasising the knowledge society as the main source for economic development (Ministry of Education, Science and Culture, 2010; Outer Hebrides Planning Partnership, 2013, UNESCO, 2005; Välimaa & Hoffmann, 2008).

In all of Iceland's eight regions there are regional universities, university centres and/or one or more research institutes operating as independent institutes or as part of an institute based in the Reykjavík area. Most of these institutes were established between 1995 and 2010 (Ministry of Education, Science and Culture, 2010).

This expansion of the knowledge society and its interaction with rural development emerged as the problem that I wanted to understand in my doctoral research (see overview in Table 9 and 10, Chapter 5). Most of the knowledge centres and institutions in Iceland were established over a short period of time and I wondered why that is. This rate of sudden growth was the trigger of this research, because I started to ask myself many questions; why were these centres and institutions established and what was their purpose? Were they established because of global, national and/or regional influences? How did the knowledge society develop in other countries? What is the role of the government, local authorities and the inhabitants in this knowledge development? What kind of research institutions and

knowledge centres were established and why? I had been reading scholarly articles and official documents about universities, views on knowledge and rural development and discussing these things with local inhabitants as well as working in the local public sector as a politician. I decided that discourse analysis of official documents and interviews with inhabitants of effected areas about the knowledge society and rural development in the Westfjords and East Iceland would give me the answers that I was looking for.

Through my work and experience I was particularly interested in two rural areas in Iceland, the Westfjords and East Iceland, which have both been influenced by the development of the Universtiy of the Highlands and Islands (UHI) in Scotland. No university operates in these areas and inhabitants have to rely mostly on distance learning methods. I also know these two areas; the Westfjords from living in the area for 24 years and East Iceland through local politics and traveling around talking to people about rural development and the knowledge society. The choice of the Western Isles of Scotland as a research area came into the picture in 2010, when meeting Frank Rennie from Lews Castle College on the Western Isles, who later came to be my co-supervisor. After a discussion with him and my main supervisor, it became clear that my research interests matched his knowledge and experience and the Western Isles were an appropriate research area, with many similarities in the island communities.

The role of regional universities and/or higher education institutions in rural development has been studied by many researchers including Etzkowitz and Leydesdorff (1995), Välimaa & Hoffmann (2008), Nielsen (2010), Heng, Othman, Rasli & Iqbald (2012) Caryannis & Campbell (2012), Carayannis & Rakhmatullin (2014), Colapinto & Porlezza (2012), Nordberg (2015) and Kolehmainen, et al (2016). Their research results show that knowledge is vital for continuing local development. Creating well-educated inhabitants as a key resource for innovation and research activities is the basis for regional growth and well-being.

This research project will involve system analysis of the knowledge society system and the rural development system by exploring how these systems work individually and how they interact with each other. Next, the educational, social and political discourse of the systems will be identified and analysed. Lastly, the differences in discourse across rural areas in Iceland and Scotland will be investigated.

The thesis is a monograph, but I have written a peer-reviewed article about place and space for higher educated women in Iceland, which was

published in the journal *Education in the North*, issued by the University of Aberdeen (Appendix 1). Some of the issues discussed in the article can be found in this thesis and will be introduced as such when necessary. I have also introduced and discussed the thesis topic at conferences and symposiums in Iceland and Scotland (Appendix 2).

Qualitative research methods are used to gather data, mostly through semi-structured interviews. A historical research approach is used to explain the development of the knowledge society and rural development over time, linking it to changes in policy and theories. Historical discourse analysis is used when analysing official data and In Vivo coding, which is a thematic approach when analysing the interviews. This research is a contribution towards understanding the knowledge society and rural development as socio-ecological systems, and how they interact with each other. The purpose of this study is to explore whether the systems are adapting to new realities in knowledge production and if not, how systems can be helped to improve and adjust.

1.2 Rationale for choice of topic

As a former local politician and an inhabitant of a small village in a rural area, my interests in rural issues have grown in the last 20 years. As an educator, my interests lie in the educational sector, especially the development of higher education and research activities in rural areas. In this research, I have had the chance to combine those interests. I believe that my study can deepen the understanding of rural issues and hopefully come up with some new ideas on how rural development is best met.

I was born and raised in Reykjavík, but at the age of 27 I moved with my family to Bolungarvík, a small village in the Westfjords area. It is a traditional fishing community where most activities are based around that industry. I am a trained teacher and taught at the town's compulsory school. Soon I became involved in local politics and later I became the principal of the school.

During this time the community faced a major change in its existence, when the largest fishing operator in the community became bankrupt and the local economy almost came to a stop. The village council, of which I had become a member, had to face a new reality. Looking back, we did not know what to do, but what we managed to do was keep the newly introduced fishing quota within the community, because fishing was the foundation for the community existence. Slowly Bolungarvík recovered, but it will probably never be the same. The village that had once almost 1.300

inhabitants has now, in 2015, 923 inhabitants, a reduction of around 30% (Statistics Iceland, 2015a). In hindsight, I think that the community really needed a *disaster management* approach, because what happened was a kind of slow catastrophe. Such an approach, which focuses on preparedness, response and recovery in order to lessen the impact of such an absolute shock to the economy would have made the community more resilient towards external changes.

My village was not the only one in the Westfjords that faced economic or equally harsh difficulties. In some villages, large companies did go completely bankrupt. In others, major catastrophes occurred in 1994 and 1995, when snow avalanches swept houses away and many people lost their lives. As a result, a number of families gave up living in these towns and moved away. Since 1991 the number of inhabitants in the entire Westfjords area has decreased from 9.740 (Statistics Iceland, 2015b) to 6.497 (Statistics Iceland, 2015c) or about 30%. My family often thought of moving away, but despite everything we were happy there, my husband's family lived there, and our sons were doing well and didn't want to move, so we stayed.

In 2006, I was still in politics and became the chairman of the Association of the Municipalities of the Westfjords. That meant that now I was working for the whole area and had to use a more holistic point of view. It also meant formulating policies for the whole area in a variety of fields, such as road construction affairs. It meant dealing with the state government about issues concerning the Westfjords as a whole. The Association's main concerns were how to stop the out-migration and get people to move into the area. To reach that goal, major efforts were put into higher education, research activities and better roads in the area. I was the chairman for four years, and during that time my research interest in the development of knowledge as a tool for rural development grew. I had also started my doctoral studies on this topic. At first I was convinced that education was the right tool and to attract people with higher education to the area, all we needed were jobs. We would get our young people to move back with their families. Now I have doubts about our emphasis on higher education and research activities in rural areas, because instead of increasing the number of people in the Westfjords area, the population has continued to decrease.

During my time as a chairman of the Association of the Municipalities of the Westfjords I realised that local authorities and inhabitants had little to say about the making and managing of rural development plans. They are

done at a governmental level by the Regional Development Institute, which operates under the jurisdiction of the Ministry of Industry and Innovation (Icelandic Regional Development Institution, 2015). It is one plan for everyone, but place-based plans were released for the first time in 2015 for the regions. However, they took notice of what had been agreed upon in the rural development plan by the government, so similar goals and projects for the areas were found in the place-based plans (The Association of the Municipalities of East Iceland, 2015; The Association of the Municipalities of the Westfjords, 2015). The government decides on funds for various projects, but local authorities, institutions and/or people work on them. I do not believe that such an arrangement about the making and managing of rural development plans is right and would like to see more involvement of inhabitants in this process, so rural development plans truly will become place-based development plans.

1.3 Research questions

This thesis focuses on the development of the knowledge society and rural development systems, specifically what characterises them, how they work independently, and how they interact with each other. This is further focused on individuals living in rural areas by identifying and exploring the similarities and differences in discourses among local inhabitants.

The main research question in this study is:

How do aspects of the knowledge society interact with rural development in Iceland and Scotland?

Sub-questions for this study are:

- What characterises the knowledge society and rural development systems in rural communities in Iceland and Scotland?
- What are the key features of the educational, social and political discourses in rural communities in Iceland and in Scotland?
- Does the rural discourse in Iceland differ from that of Scotland with regards to higher educational activities and rural development, and if so, how?

For ethical reasons, it is important for the research integrity that I disclose my personal and professional identity, and what my positionality in the research is. Having lived in a rural area and taking part in issues related to the knowledge society and rural development can affect the research lens. Being aware of that helps me to identify my own strength and perspectives.

1.4 My professional identity and positionality

Issues of gender based on inequality are innately linked to this study for a variety of reasons, including local culture, access to education and economic disparity between men and women. This issue is emphasized in this thesis and fits my view of life. I believe I have practised feminism and taken responsibility for my behaviour in life. I have always considered myself to be a feminist. Feminism includes a variety of political perspectives and ideas and is therefore difficult to define, but what all the feminist's perspectives and ideas have in common is the assumption that 'women's and men's positions in society are the result of social, not natural or biological factors' (Andersen, 2006, p. 10). One perspective, introduced by Andersen (2006) is, that 'women's experiences, concerns, and ideas are as valuable as those of men and should be treated with equal seriousness and respect' (Andersen, 2006, p. 10). For me it is a natural thing that men and women should have the same opportunities and the same right to do whatever they want to do. In contrast many people live in patriarchal societies which favour male values more than female ones, so women struggle to be heard.

I tend to think politically and took part in politics for many years at a local authority level. I was the school principal in my village, elected as a chairman of the village council, and I was elected as a chairman of the Association of the Municipalities of the Westfjords. I draw on these experiences in writing this thesis.

When I was a principal I took a Master's degree in educational administration; writing about the gender and values of Icelandic principals. During my time as a principal the operation of compulsory schools moved from the state to the local authorities, affecting a principal's status. Suddenly a principal became a manager on whom the local authorities relied, and they started to look at a principal as 'their man', who had the task of managing the school in an efficient way. A principal was given space and autonomy to manage all aspects of the school and teachers were supposed to accept his/her authority (Sachs, 2001; 2012). By becoming managing directors of their schools, with financial responsibilities, it became 'more difficult for principals to focus on the pedagogical dimensions of leaderships' (Lárusdóttir, 2013). What guided this transition of compulsory schools was decentralisation, which 'emphasises the empowering of schools and participative decision-making' (Björnsdóttir, Hansen & Jóhannsson, 2008, p. 513). Looking back, I realise that at that time, the Western World was guided by market driven discourse, where the

public sector was run more like the private one, and where parents and students were looked at as customers. The administrative task that principals were given was developed as part of the drive to the *new public management system*, which 'directs management approaches towards issues associated with finances, operations and various service components' (Lárusdóttir, 2013, p. 4).

During my principalship I practised both managerial professionalism and democratic professionalism. On reflection, I see that I identified myself both with the entrepreneurial identity, which favoured individualism, competition, control and regulation and is externally defined, as well as with the activist identity, which favours an open flow of ideas, a collective capacity of people, critical reflection and analysis, the welfare of others and the dignity and rights of individuals and minorities. I expected the teachers to be more accountable and responsible, trying to make the school system more efficient, but at the same time I was trying, by practicing shared leadership, involving teachers in taking responsibility in developing the school into a professional learning community which would nurture every member of that society (Sachs, 2001; 2003; 2012; Spillane, 2006).

During most of my time as a principal (1991-2004), the economy was buoyant and local communities were competing with each other for everything: for people, buildings, and public works, especially swimming pools that were bigger and better than in the neighbouring community. Schools were used as a tool to get people to move to the communities and the local authorities wanted schools to do well so they could advertise that. My community also took part in this and every time we did well in the national standardized tests it was published so we could say 'look how good our school is'. But by doing that education became more like a commodity, in that parents were being given access to a range of products from which they could select (Sachs, 2001). A competitive, market driven environment had been created, where schools competed against each other (Lárusdóttir, 2013).

While thinking about these things during my reading and writing, I realised that perhaps the reason that I left my principal post was that I did not quite associate myself with this managerial professionalism or the new public management system, nor was I happy with the entrepreneurial identification. I think that trying to build a learning society was a form of democratic professionalism

which seeks to demystify professional work and build alliances between teachers and excluded constituencies of students, parts

and members of the community on whose behalf decisions have traditionally been made either by professions or by the state (Sachs, 2001, p. 152).

This professionalism was something I had aimed for and when it did not happen, I was very disappointed and saw no reason for staying on as a principal any longer. Lárusdóttir (2013) and Hansen (2013) point out in their papers that educational or pedagogical tasks are duties Icelandic principals rank as highly important and would like to see practiced more, but managerial tasks take up most of their time and are seen as less desirable. I also understand it now that practicing a distributed leadership means to involve the whole school community. That would have suited the creation of a professional learning community better, because paramount to distributed leadership is 'the collective interactions among leaders, followers and their situation' (Spillane, 2006, p. 4).

A school in a community is a part of that community, but often teachers do not see it that way. They are too preoccupied with teaching their classes or their subjects and seldom think about the school's role in the community. Judyth Sachs (2001, p. 153) states that:

the teacher has a wider responsibility than the single classroom and includes contributing to the school, the system, other students, the wider community, and collective responsibilities of teachers themselves as a group and the broader profession (Sachs, 2001, p. 153).

Being a feminist and having completed a Master's thesis that involved a gender perspective (Edvardsdóttir, 2002), I wanted to include that perspective in my doctoral work. Therefore I took 30 ECT in Gender Studies at the University of Iceland. I also took courses in Landscape and place as well as Regional development in the Department of Geography. It opened my eyes towards the place concept and how that could play a key role in analysing whether and how higher education studies change women's lives. Later in the process higher educated men came into the picture, as well as place-making in rural communities.

I believe that it is important for this research that I understand my role as a researcher and after going through my behaviour and profession as a teacher, a principal and a politician, I found out that I always have shown an activist identity, which is

concerned to reduce or eliminate exploitation, inequality and oppression. Accordingly the development of this identity is deeply rooted in principles of equity and social justice (Sachs, 2001, p. 157).

An activist identity is deeply rooted in my personality and the way I look at life. I became a principal because I wanted to change my school and I decided to take part in politics because I wanted my community to show more equity and social justice. Now with my research, I want to try to change the rural development policy in Iceland, because I believe it could be practiced differently with community involvement as the core unit, along with a focus on local inhabitants and their local knowledge.

1.5 Setting the scene for the research

Place matters by shaping and teaching those who live in a particular place. Most of those who live in a place can be seen as place-makers, but in different ways. Moving to another place might influence their place-making behaviour, doing things they never did in their old place. Location and landscape of a place, its history and culture, are important factors in place-making and addressing and understanding these issues helps to understand the discourse of the inhabitants about their places in Iceland and Scotland. In this section a short introduction about the three research areas will be put forward, starting off by showing the location of Iceland and Scotland on a map (Figure 1).

1.5.1 Iceland

Much of Iceland, about 80%, is uninhabited and indeed uninhabitable. It is Europe's most sparsely populated country with only 3.1 inhabitants per km² and an area of 103.000 km² (Figure 1). Due to historical, political, cultural and practical reasons the country is considered to be a part of Europe, but in the 20th century the United States of America had considerable influence (Jóhannesson, 2007; Lárusdóttir, 2013).

Iceland is divided into eight regions; the capital area, Westland, Westfjords, North West, North East, East, South and Southernness. The majority of the population, over 63% or about 212.000, live in the capital area in the south-west of Iceland. The remaining 37% or around 118.000 live in towns and fishing villages around the coast, other small urban centres, and sparsely populated farming communities. There are a total of

74 of these communities in Iceland (Jóhannesson, 2007; Ómarsson, 2009; Statistics Iceland, 2015d).

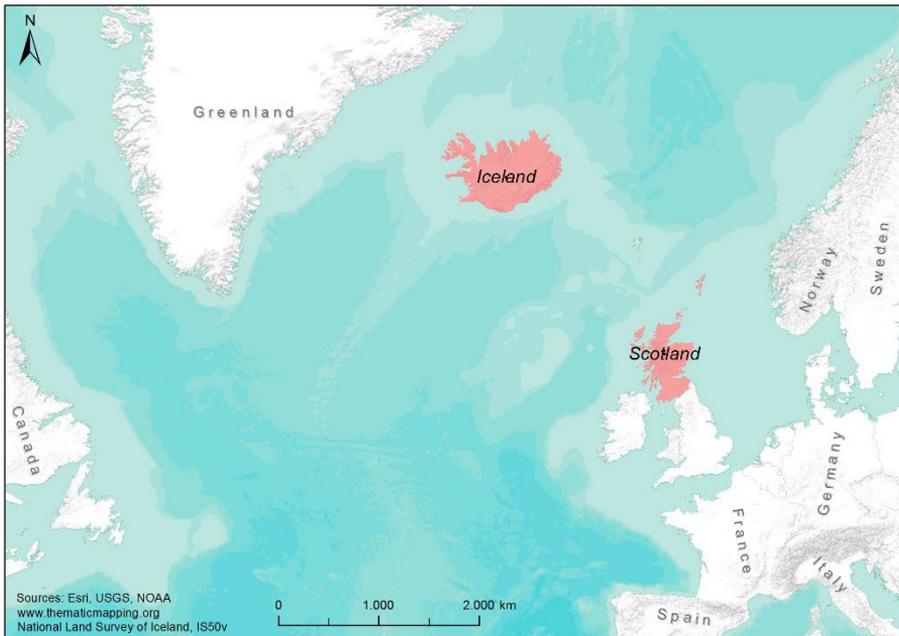


Figure 1. Location of Iceland and Scotland

Around Iceland, cold and warm oceanic currents come together, causing the fishing grounds to be rich in valuable marine resources. Since the beginning of the settlement of Iceland, Icelanders have always fished substantially. Along with agriculture, these fishing grounds have over many centuries provided both work and food for inhabitants (Matthíasson, 2003; Róbertsson, 2009). For the past three decades, Iceland has been facing significant changes in both fisheries and agriculture. Iceland, like so many other western market societies, has been moving from a primary production society towards a service and knowledge-based society. This has led to out-migration from rural areas to more urban areas, mainly to the capital region. It seems that people prefer to reside in urban areas, often because they value the diverse opportunities available there (Jóhannesson, 2003; OECD, 2010a; Ómarsson, 2009; Róbertsson, 2009)

This out-migration in Iceland has occurred in the Westfjords, Northwest and East regions. At the same time, the population of the capital region has grown considerably (Jóhannesson, 2007). This imbalance in the population distribution around Iceland has led to a rural policy that focuses on how to

increase the population in rural areas. (Árnason & Agnarsson, 2005; Benediktsson, 2001; OECD, 2010a). In an OECD report on rural development policy in the country from 2010, it is stated that

[t]he changes in the economic conditions for these activities (larger fishing vessels, general technological developments and automatisisation, trading of quotas) mean that new employment opportunities need to be developed that are suitable for younger well-educated generations in rural areas (OECD, 2010a, p. 158).

The key challenge for Iceland, according to the OECD, is 'delivering well-paying jobs and in some cases public services as well to the remote rural communities' (OECD, 2010a, p. 158).

1.5.2 The Westfjords

The Westfjords area (Figure 2) in the northwest part of Iceland is 8.898 km² (Karlsdóttir, Þorgrímsdóttir, Þórðardóttir & Árnason, 2012). Glaciers from the last ice-age have formed the landscape, with steep mountains and deep and narrow fjords. Agricultural land is limited but rich fishing grounds and sheltered fjords have been the foundation for settlements and sometimes more prosperity than in other parts of Iceland. The landscape and difficult road transport, especially in winter, has influenced the settlement there, and when urbanization started in the 20th century, many small but independent communities were formed. The inhabitants relied on transport by sea and later air transport. Throughout the ages the area had direct interaction with foreign markets. The Westfjords area can be divided into three economic areas, the North part, the South part and 'Strandir', where small fishing villages are the basis for the economy. There are 9 municipalities, but 13 communities in the Westfjords, where some smaller communities are part of larger municipalities (The Prime Minister's Office, 2007; Karlsdóttir et al., 2012).

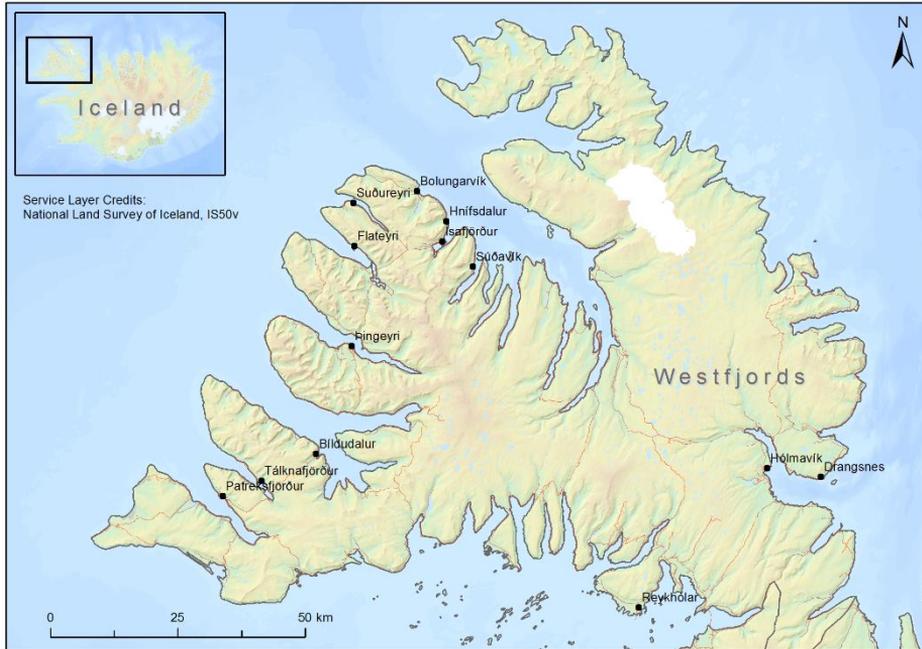


Figure 2. The Westfjords

Since 1970 there has been a decrease in the population of the Westfjords (Table 1). This decrease can be attributed to the introduction of the individual transferable quota (ITQ) system in fisheries and changes in quota ownership in 1991, the bankruptcy of companies in the fishing industry, and devastating snow avalanches in January and October 1995 (Hall, Jónsson & Agnarson, 2002; Matthíasson, 2003; The Association of the Municipalities of the Westfjords, 2007; Icelandic Regional Development Institute, 1999).

Table 1. Demographic changes in the Westfjords 1970 - 2015

	1970	1981	1991	2011	2015
Population	10.050	10.500	9.722	6.955	6.970

(Statistics Iceland, 2015)

1.5.3 East Iceland

The East Iceland area of 15.792 km² is a region that is known for its variety in nature and landscapes from the wilderness at the root of Vatnajökull, Europe’s largest glacier, to forested valleys. Large glacial rivers originating

from the Vatnajökull glacier have created a rich agricultural area with the town of Egilsstaðir, which also provides services to the smaller fishing villages in the fjords (Figure 3) (Karlsson et al., 2012).

In 2002 a major industrial development took place in East Iceland, with the construction of a hydroelectric power plant, and a year later an aluminium plant. The hydroelectric power project and the aluminium plant project were both finished in 2007. This explains the increase in population during this time, because

the workforce that moved to the area registered as inhabitants during the period of operations. Now, as things have settled, the population in East Iceland has decreased. In 2011 the population fell to 12.360 inhabitants, but by the end of 2015 the population had increased a little to 12.496 (Table 2). There are 8 municipalities, but 14 communities because, as in the Westfjords, some smaller ones belong to larger municipalities (Statistics Iceland, n.d.; Althingi, 2004; Jóhannesson, Jóhannesson, Heiðarson, Ólafsson, Jóelsdóttir & Sigurbjarnarson, 2010).



Figure 3. East Iceland

Table 2. Demographic changes in East Iceland 1970 – 2015.

	1970	1981	1991	2007	2011	2015
Population	11.315	12.953	13.187	13.975	12.360	12.496

(Statistics Iceland; 2015; Althingi, 2004)

Even though the Westfjords area and East Iceland have similar economies with fisheries and agriculture as the main industry in both areas, their natural resources are different. In the Westfjords, the fishing industry is the main industry and mostly relies on demersal fish. The land is harsh and mountainous, and even though agriculture is practiced, not many farmers are left. In East Iceland, the fishing industry relies both on demersal and pelagic fish. It is easier to practice agriculture, because the land is more suitable for it. East Iceland has also harnessed their waterfalls for providing electricity to the aluminium plant, while the possibility for the Westfjords to harness their waterfalls for large industry is not in place due to the fact that the rivers are short and rather low in water. (Heiðarsson, Jóhannesson & Ólafsson, 2007; Jóhannesson, et al., 2010).

Salmon culture in Iceland, where Norwegian salmon is cultured in floating marine pens, is becoming a big industry both in the Westfjords and East Iceland in recent years. It is a fast growing industry, from a few thousand tons of cultured salmon in 2012 to over 20 thousand tons today (Ingólfsson, 2016). The companies plan to grow further and spread their activities across these two regions, and to be able to do that foreign companies have become shareholders. These companies have established themselves in rural communities where population decrease has been a reality for many years (Table 1 and 2) by claiming that this industry can create a lot of job opportunities (Hávarðsson, 2015; Unnarsson, 2013). The companies apply for licences to state run regulatory agencies and in order to get licences, the companies must pay for environmental impact assessments (Gunnarsson, 2013).

This developing industry will be further discussed in section 9.1.1, where it will be put into the context of the rural development of today.

For governmental convenience, Iceland is divided into two areas; the capital region is one area and the rest of Iceland is the other area (Harðarson & Sindradóttir, 2012; Warén, 2012). The regions tend to be looked at from similar perspectives, with a tendency to look at and define rural areas in Iceland as one homogenous area facing the same problems: out-migration of young people, low education status, poor public services, low-paid jobs, job insecurity and weak infrastructure. They are seen as lagging regions which must be 'fixed', and where the benchmark is the capital area, which is seen as the leading region.

1.5.4 Scotland

The reason for choosing the Western Isles as a research area is that the people there have been facing similar difficulties in population decreases similar to those in the Westfjords and East Iceland and traditionally the area's economy has

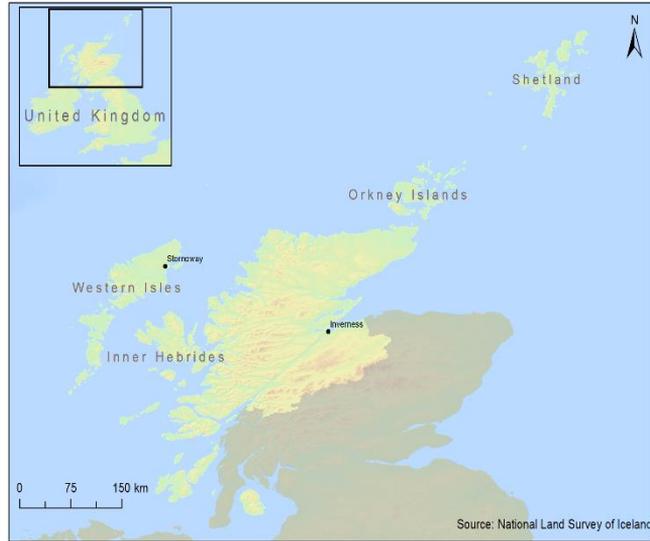


Figure 4. The Highlands and Islands of Scotland

predominantly been based on fisheries and agriculture. Some facts about Scotland (Figure 1), the Highlands, and the Western Isles (Outer Hebrides) on the west coast of Scotland are presented.

Rural areas cover 95% of the land area in Scotland and host about 18% of the population. Most of Scotland's people live in urban cities, such as Glasgow, Edinburgh, Aberdeen and Dundee (National Record of Scotland, 2013).

The largest city in a rural area is Inverness, based in the Highland Region, and unofficially regarded as the capital and the main service centre of the Highlands of Scotland. It is one of Europe's fastest growing cities. One third of the Highland population lives around Inverness and it is in fifth place out of 189 British cities for its quality of life, and that is the highest of any Scottish city (Explore Inverness, n.d.). In 1993 the region was, as a result of its poor economic performance, designated under the EU Structural Fund as a lagging region. Since 2000 the region's status has improved to a 'transitional' one. The Highlands and Islands refers to the five local authority regions of Highland, Orkney, Shetland, the Western Isles, and the Argyll Islands (Figure 4). The region is the second-most sparsely populated area in the EU (after Lapland in Finland), extends to over 39.000 km², and has a coastline of over 9.000 km² and with an average population density of 9 persons per square km. Many iconic landmarks in the UK can be found in the Highlands and Islands areas, such as the highest mountain and the deepest freshwater loch. Almost 40% of the area is mountainous

terrain and the land quality is poor, but despite that about 13% of the area’s workforce works in the agriculture and fisheries sectors, though this rises to 25% in the islands. Agriculture here is difficult, due to the poor nature of terrain and climate, and more than 80% of agricultural land is classified as rough grazing. The fishing industry is relatively important in the area and high proportion of all Scottish landings are made in the Highlands and Islands (Bryden & Richard, 2000).

The Highlands and Islands’ largest employment sectors consist of public administration, education, and health, which are numerically dominated by women. Besides agriculture and fisheries, tourism, manufacturing, construction and transport are also important employment sectors. Unemployment in the area has been lowland the area appears to have suffered less than the rest of Scotland from the financial crisis in 2008. Over 50% of workers are employed by companies with fewer than 20 employees and that indicates how significant employment within small businesses is within the region (Bryden & Richard, 2000; Highlands and Islands Enterprise, 2011).

1.5.5 The Western Isles

The Western Isles or Outer Hebrides are located off the north-west mainland of Scotland (Figure 5). Over 70 islands form the Western Isles and most of them have been temporarily or permanently inhabited in the past. Now 11 of them are inhabited; Lewis and Harris, North Uist, Benbecula, South Uist, Eriskay, Barra, Grimsay, Scalpay, Great Bernera, Berneray, and Vatersay. The Western Isles are looked at as one unitary local authority, with 16



Figure 5. The Western Isles (Outer Hebrides)

communities, spread across the island (Armstrong, 2012; Falconer et al., 2013; Mardsen, 2012).

It has been said that the islands have a so-called 'despoiled landscape because people in the late 18th century and well into the 19th century, were evacuated by often absent landlords. That ended the land's cultivation, which made the soil poorer and less productive for agriculture. Exploitation of the area's forests and sheep grazing also had effects on the soil. People who remained were confined to small areas of coastal land and could not support themselves (Thomson, 2001).

That is one reason why the people of the Western Isles started to look to the sea for food. They were first and foremost farmers, who became fishermen out of necessity. The importance of fisheries for the islands' economy grew and became a key factor in improving the quality of life. But still, the Hebridean people never looked at fisheries with the same eyes as agriculture or crofting. Their attachment to the land was greater than towards the sea (Thomson, 2001). These strong ties to the land come from the people's struggle with the landlords for their rights to live on the land (Shucksmith, 2007).

Scotland has the highest level of private land ownership in Europe. There are about 1200 landowners who own two-thirds of Scottish land. Those landlords often live somewhere else and tend to manage their land from their own perspectives, which is often contrary to the broader community interests (Shucksmith, 2007). In 2003 the crofting communities were given more rights to own their land and this has strengthened views on sustainability (Shucksmith, 2007, p. 7).

Gradually, the land ownership is coming back into the hands of the people, mainly through the Land Reform Act of 2003, and now more than half of the land area of the Western Isles is under community ownership (Rennie & Billing, 2015; Shucksmith, 2007).

At the beginning of the 20th century the population of the Western Isles was around 46 thousand (Thomson, 2001). (Table 3).

Table 3. Demographic changes in the Western Isles 1900 – 2014.

	1900	1981	1991	2001	2011	2014
Population	46.000	30.702	29.600	26.502	27.684	27.250

(The Western Isles Council, n.d.).

The 4% increase between 2001 and 2011 is mostly because of retired people returning to the area (Stockdale, 2006). The Western Isles have one of the highest proportions of people over retirement age (The Western Isles Council, n.d.).

Salmon culture, where Atlantic salmon is cultivated in floating marine pens, is a substantive industry in Scotland. The country is the third biggest exporter of cultivated salmon in the world. There are five big companies who dominate the salmon culture, and three of them are owned by Norwegians. The industry has mostly established itself in rural areas of the Highlands and Islands of Scotland (Marsden, 2012). Salmon culture in the Western Isles has been an important industry since the 1990s. It is estimated that the industry generates around 350 local jobs and produces around 40 thousand tons of Atlantic salmon, and it is seen as a growing industry in the area (Armstrong et al., 2012; Falconer, et al., 2013).

This industry in the Western Isles will be discussed in section 9.1.1 where it will be put into the context of the rural development of today in the Westfjords and East Iceland.

1.6 Summary and discussion

This first chapter discussed the statement of the research problem, which is to investigate whether and how the knowledge society and rural development interact. Reinforcing higher education and research activities in rural areas has been on the governments agenda since the 90s (Albulescu & Albulescu, 2014; Chatterton & Goddard, 2000; Fägerlind & Strömqvist, 2004; Heng et al., 2012; Peer & Penker, 2014). Establishing regional universities, and/or higher education centres and research institutions in rural areas was seen by governments as a tool for increasing rural population and creating jobs for higher educated people (Icelandic Regional Development Institute, 1999; Hills & Lingaard, 2003). In section 1.5 where the three research areas were introduced and discussed, statistics show that in the Westfjords and East Iceland, the rural population was declining at the same time most of the higher education centres and research institutions were established (Table 9 and 10), while the population in the Western Isles has been more stable (The Western Isles Council, n.d.).

The purpose of this research is to investigate and analyse the interaction of the knowledge society and rural development, since increased higher education and research activities does not seem to be an effective tool for population growth, and to find out what is effective when dealing with rural issues.

In chapter two, concepts of the knowledge society, regions both urban and rural, regional development, rural development, rural communities, and sustainability will be discussed. These concepts will be used and/or referred to throughout the thesis when discussing the interaction of the knowledge society and rural development in rural communities.

The reason for choosing these concepts is that when setting a policy for rural areas, the core unit for such policies are the regions. Place-based development plans are set for regions and are as such 'one-size-fits-all' plans. They do not take into the account the differences among the communities in the regions. This thesis argues that the core unit for place-based development plans could be reconceptualised so that the community will be the unit of analysis. Communities differ geographically, economically, environmentally, socially, culturally, and historically. Each community needs to be addressed from its point of view, and place-based development plans must reflect that (Hogan, 2014). Therefore, an understanding on how these concepts have been defined and used in the academic literature is vital to understand how the usage of these concepts have been adopted into policy settings at international, national, and regional levels. Definitions and discussion about the above concepts from global organisations such as the United Nations Educational, Science and Cultural Organisation (UNESCO) and the Organisation for Economic Co-operation and Development (OECD) will be looked at, because even though they do not have the power to set policies, their work influence national policy. Their influence can also be found in the setting of the European Union (EU), which has a direct influence on member states of the EU. Iceland is not a member of the EU, but is still influenced by policy settings through the European Economic Agreement (EEA).

1.7 The structure of the thesis

There are nine chapters in this thesis. Chapter two introduces the concepts used in the thesis: the knowledge society, and concepts about regional and rural issues. Chapter three introduces the theoretical approach, which is the resilience theory, and theories about place and a place-based approach. Examples of how the resilience theory can be used to understand the development of the knowledge society and rural development will be given, and the place-based approach is discussed to understand the place and space of higher educated women in rural areas. Chapter four is a discussion of the thesis methodology and methods. Chapter five gives a historical overview of particular events of the knowledge society and rural

development in the three research areas, and the developments are put into the context of the resilience theory and the adaptive cycle. Chapters six and seven present the research findings from a study using historical discourse analysis and an analysis of interviews with inhabitants, and chapter eight responds to the research questions. In the final chapter conclusions will be drawn from the findings along with speculations about the thesis methodology and some implications regarding resilient and sustainable communities will be introduced.

2 Conceptual issues

In this chapter the knowledge society, regions both urban and rural, regional development, rural development, and rural communities as concepts will be discussed. These concepts will be used and/or referred to throughout the thesis when discussing the interaction of the knowledge society and rural development in rural communities.

2.1 Knowledge for development

The advent of the *knowledge society* has changed the way in which people can create, store, process, and disseminate knowledge. Innovations in information technology have contributed to the rapid rate of this change. With new knowledge and state-of-the-art technology came the promise of transformation and new possibilities. Learners, young and old, can enrol in university studies wherever they live, and doing research in remote areas is possible. Major organisations and individuals in their kitchens can all participate in the new world of knowledge. In this section, the development of the knowledge society both globally and locally is analysed.

1.7.4 The knowledge society as a concept

The concept of the *knowledge society* emerged in the 1970s at the same time as the concepts *learning society* and *knowledge economy* (UNESCO, 2005). This idea reflects the belief that in future societies, scientific reasoning and knowledge are central to societal development, and that knowledge is pooled and shared to form the foundation of economy and social action. The concept of the *knowledge society* comes originally from sociology, but has been adopted both in economic and education studies. These fields interact with each other in the development of public policy (Heng et al., 2012; UNESCO, 2005; Välimaa & Hoffmann, 2008).

Knowledge societies are said to be

about capabilities to identify, produce, process, transform, disseminate and use information to build and apply knowledge for human development (UNESCO, 2005, p. 27).

In the 1990s, when ideas about the *knowledge society* were strengthening, due to technology and internet progress, the emphasis was all on new technology and internet access to information. It was now possible and very important for individuals, companies, and communities to know how to analyse and use the massive flow of information for decision-making. Beck and Giddens, in Guðmundsson (2012), describe our modern world as *late modernity*, where information and knowledge have greater roles in both individual and community decision-making. However, a shift from the discourse of information towards a discourse of knowledge calls for a sociological and educational understanding about how individuals learn and create knowledge in social contexts, and how knowledge becomes legitimated in social contexts (Guðmundsson, 2012). Changes in technology altered the flow and volume of information, creating many new opportunities for the acquisition and creation of knowledge. This new technology is considered to have the potential to change how academics describe modern societies. These changes also made studying and researching while living in remote areas possible, and through the dissemination and application of newly collected knowledge, a broader implication was seen that a knowledge economy can foster education, research, and innovation.

The role of knowledge has changed and may not be as adequate and compelling as in once was. In a knowledge society there is a need for reflexivity, where individuals and communities confront the consequences of their own actions, and it is important that awareness and deliberation about possible consequences becomes part of human actions. Instead of talking about society as a knowledge society, one should look at society in late modernity as a knowledge-based society (Guðmundsson, 2012), in which inter-disciplinary place-based work becomes a reality. Before 1990, the theory of the knowledge society had primarily focused on the relationship between labour and capital. Subsequent to this date (and the creation of the World Wide Web) a social perspective is necessary to consider whether knowledge production could change societies, cultures, and economics (Albulescu & Albulescu, 2014; European Foundation for the Improvement of Living and Working Conditions, 2005; UNESCO, 2005; Välimaa & Hoffmann, 2008).

1.7.5 Evolution of the knowledge society

The learning society, as one part of the knowledge society, refers to a new form of learning where distinctions between formal and non-formal

education are no longer quite so clear-cut. Education, in its broadest meaning, is considered to be a human rights issue; everybody has a right to get an education. Lifelong learning is thought to play an important role in the development of both individuals and societies, because in a rapidly changing globalized world, the need for well-educated labour puts the demand on the citizens to become lifelong learners. Thus the ability to learn how to learn is the most important skill an individual can have in a learning society (UNESCO, 2005).

Additionally, in a more complex, technologically innovative and global economy, the need for people with higher education, research skills, and innovation has been increasing (UNESCO, 2005). At the same time the relationship between knowledge production and universities has changed (Albulescu & Albulescu, 2014; Rinne & Koivula, 2005; Välimaa & Hoffmann, 2008). With new technology, universities are losing their monopoly on knowledge production, because other institutions and organisations can also be knowledge producers (Albulescu & Albulescu, 2014; Rinne & Koivula, 2005; Välimaa & Hoffmann, 2008).

Välimaa & Hoffmann (2008) and Albulescu & Albulescu (2014) in writing about the economic development, growth, and prosperity of a society, say that for it to be a reality, it is necessary that universities and/or higher education institutions work with the public and private sector on collaborative research that leads to innovation and entrepreneurship both at national and regional levels. In supporting this statement they discuss cases where such a collaboration has been successful, for example the Silicon Valley in USA, 'a market-driven, open society' (Välimaa, 2008, p. 273) and the Babeş-Bolai University in Romania (Albulescu & Albulescu, 2014). Such a collaboration is based on what Etzkowitz and Leydesdorff introduced in 1995, the *Triple Helix* relations among the academic, industry, and government and they claimed such relations to be the key component in innovation strategy, based on Mode 1 knowledge production, which is disciplinary based inside the university system (Etzkowitz & Leydesdorff, 1995). The *Triple Helix* model brings together academic, economic, and social actors in innovation or trans-disciplinary learning and research. The focus is on innovation and entrepreneurship to increase growth and prosperity in societies (Albulescu & Albulescu, 2008; Heng et al., 2012; Peer & Penker, 2014; UNESCO, 2005; Rinne & Koivula, 2005; Välimaa & Hoffmann, 2008). However, in recent years researchers such as Heng et al. (2012), Välimaa & Hoffmann (2008), Caryannis & Campbell (2012), Caryannis & Rakhmatullin (2014), Colapinto & Porlezza

(2012), Kolehmainen et al. (2016) and Nordberg (2015) claim that a fourth and a fifth aspect, the community and the environment, which are based on Mode 2 and 3 of knowledge production, which are trans-disciplinary and have a sustainable and holistic perspectives, should be added to the three helices of the *Triple Helix* model. The modes and the helices will be further discussed in chapter 3 about development of universities at international, national, and local levels.

In recent years the growth of student numbers in universities and the privatisation of services in the higher education sector are two obvious characteristics of sectoral change (Albulescu & Albulescu, 2014; Scott, 2006; Trow, 1999; UNESCO, 2005). This growth has not led to increased knowledge or its significance in the knowledge society, but what has increased is the value that society attaches to educational qualifications (Albulescu & Albulescu, 2014; Rinne & Koivula, 2005). This is the belief that the knowledge society needs an increasing number of higher educated workers, because higher education is ‘...expected to meet demands from science, innovation, and regional and labour policy’ (Rinne et al., 2005, p. 100). Higher education institutions now consist of complex networks of both public and private institutions (Albulescu & Albulescu, 2014; Heng et al., 2012; Peer & Penker, 2014; UNESCO, 2005; Rinne & Koivula, 2005; Välimaa & Hoffmann, 2008), but neither an increased number of higher education or research institutions nor this complex networks of different institutions do not automatically lead to increased knowledge.

Knowledge economy, as one part of the knowledge society, has been defined as a

particular knowledge-driven stage of capitalist development, based on knowledge, succeeding a phase marked by the accumulation of physical capital (UNESCO, 2005, p. 46).

By supporting and encouraging public-private partnerships between universities and higher education institutions and various private companies, governments seek to link the learning society and the knowledge economy (UNESCO, 2005; Välimaa & Hoffmann, 2008). In putting so much emphasis on the role of universities and scientific knowledge as the primary source of knowledge, the local knowledge of a place, a community, or a society may be in danger of being forgotten or ignored when tackling certain issues (UNESCO, 2005; Välimaa & Hoffmann, 2008). To create a balanced perspective in the knowledge society, UNESCO also notes that ‘...the construction of knowledge societies opens the way

to humanization of the process of globalization' (UNESCO, 2005, p. 27) and it emphasises also the importance of linking the economy, the environment, and social and cultural factors in a knowledge society.

In addition, the European Union has linked concepts pertaining to the knowledge society to the knowledge-based economy, or knowledge-driven economy concepts, and has stated that this approach has been used by policymakers in the EU and many national governments (Albulescu & Albulescu, 2014; European Foundation for the Improvement of Living and Working Condition, 2005). This indicates that to the EU there is no fundamental difference between the knowledge society and the knowledge economy.

Key developments in the EU articulation of the knowledge society are social learning initiatives, which reflect 'a wide range of efforts, in many different locations, to apply knowledge to the processes of producing and using knowledge' (European Foundation for the Improvement of Living and Working Conditions, 2005, p. 3). Innovation characterizes successful firms and countries, as well as service economies, which 'place an emphasis on [the] service sector and their involvement in delivering intangible products to specific clients' (p. 3). Also highlighted is globalisation, where the emphasis is on

removing barriers to trade and investments in services and intangibles, on greater use of IT to coordinate distributed decision-making, and on innovation activities on a world scale (European Foundation for the Improvement of Living and Working Condition, 2005, p. 4).

There is a clear link between the knowledge society, economic growth, and prosperity in the EU policy documentation, as seen in the EU goal, set in Lisbon 2000, for a European knowledge society, this is

to become the most competitive and dynamic knowledge-based economy, in the world, capable of sustainable economic growth with more and better jobs and greater social cohesion (Rinne et al., 2005, p. 95).

The analysis of discourse about the knowledge society reveals an assumption that higher education institutions are more important than ever as tools for supporting global knowledge economies and as Marginson

(2006), in Välimaa & Hoffmann (2008, p. 266) says, in the age of globalization,

higher education institutions are integral to the continuous flows of people, knowledge, information, technologies, products and financial capital.

Various factors are included in the definition of the knowledge society concept. This thesis focuses on the development of higher education and research as drivers for regional innovation, growth, and the well-being of local inhabitants. This is how policy-makers look at the role of the knowledge society in rural development and implement it in rural development plans.

1.8 Regional and rural issues

In this section the discussion moves from the knowledge society to regional and rural issues, defining concepts, such as region, the urban and the rural, and community. Regional and rural development as concepts will be discussed in connection with regional–national (micro-environment) and national–global relations (macro-environment). First, some viewpoints of academic disciplines will be introduced, and then the discussion moves towards definitions from OECD and EU perspectives, because their understanding of these concepts influences policy-making in regional and rural development.

In policy settings regions that develop must grow. Some regions, especially those which are defined as *rural* are considered to have problems that can be fixed by development plans. They are often also called *lagging regions*. The benchmarks for success are urban area conditions. The goals in rural development plans often appears to be getting rural areas into the process of development that eventually will lead them closer to conditions in urban areas (Keune, 2001, McCall, 2010; Rennie, 2008).

1.8.4 Region

The word *region* comes from the Latin word *regio*, which means ‘to govern’. In the context of regional development, the term *region* has been used ‘to signify the governance of policies to assist the process of economic development’ (Cooke & Leydesdorff, 2006, p. 6). So *region* has been and is strongly linked to the area of economy, politics, and policies

and is used in a homogeneous way, which narrows the use and understanding of the concept.

Region is a multidimensional concept and should be approached from multidisciplinary perspectives (Pike, 2007), because 'regions remain an arena in which synthesis across disciplines – including economics, geography, planning, politics and sociology – can take place' (Pike, 2007, p. 1143).

For this research, the concept *region* is defined from a holistic point of view. Geographical, economic, and policy perspectives are important in regional development, but an emphasis on the social and cultural perspectives must be included on equity grounds (Mooney & Carling, 2006). In this study, regions are '...not just a set of places' (Mooney & Carling, 2006, p. 1) but also '... a collection of flows between these places' (Mooney & Carling, 2006, p. 1). Regions can have both urban areas and rural areas, which are linked together in all sorts of ways (Karlsson & Olson, 2015; Mooney & Carling, 2006). Isserman (2002) states that 'regions are everywhere. Regions reflect and shape how we think' (p. 35). Regions are places to which people can be attached, and then a feeling of regionalism can be identified and defined as '...the process of creating or reinforcing regions, most notable through the cultural and social characteristics which go to identify and reinforcing regions' (McCall, 2010, p. 5). Regions are places which people occupy, but they differ in many ways: such as geography, demography, economy, culture and social factors, even though the places are linked together by some or all of the categories above, and those places have been divided into urban and rural. Acknowledging that there are differences both inside regions and between them is not always in place in rural policy settings.

The OECD, on the other hand, offers two perspectives of a region; the acceptance region and the administrative region. *An acceptance region* refers mainly to statistics; meaning that regions are measured and unitized from a statistical point of view (OECD, 2013). The acceptance region is based on the theoretical definitions of the homogeneous and the pre-scientific region.

The other OECD definition of a region is *the administrative region*, which says that

Administrative regions are the territorial units which a country is divided in. There is normally an administration with some government functions and powers connected to administrative

regions. The jurisdiction of an administrative area normally covers the total area inside its borders. In some countries parts of the sea is also included in administrative region (OECD, 2013, n.p.).

In regional development the European Union uses the NUTS (Nomenclature des Unites Territoriales Statistiques) for categorisation of regions of its member states. The goal of such a categorisation is 'to provide a single uniform breakdown of territorial units for the production of regional statistics...' (Eurostat, 2011, p. 5).

Every three years a report, which shows the social, economic, and territorial situation and development of the regions, is published, based on the data that has been collected. This report is the source for regional development plans and funds for the regions in the EU (Eurostat, 2011).

Both OECD and the European Union define regions from a multidisciplinary view, taking into account the territorial, economical, sociological, and cultural aspects of regions. It is when those theoretical perspectives are tested and used in the regional development plans that the political view comes to the light in the policy that is formed.

Regions are put into administrative units in order to implement regional development plans, because plans must be administered by officials at a regional or state level. The boundaries of regions are marked so they will be administratively manageable. By doing so, the social perspective can be lost, because humans are viewed as objects which can be measured and managed.

1.8.5 Urban and rural

It is common, when defining the *urban* and *rural* concepts, to first define *urban* and then to define *rural* as the opposite to urban, in effect non-urban. This definition comes from Latin and in Latin 'rural is the antithesis of urban and has the same etymological roots as the word rustic, something that is simple, unadorned, unspoiled or primitive' (Schaeffer, Kahsai & Jackson, 2013, p. 85).

Rural areas are defined as those areas with a low number of people living on any given area of land and urban areas are defined as those areas that have over 10.000 inhabitants (Commission for rural communities, 2006; Isserman, 2005; OECD, 2009a, 2009b; Ward & Brown, 2009). The criterion that is often used is the population in a certain area, if it is small or the population density is low, the area is defined as rural. This

population density criterion in the rural-urban definition can vary between and within countries at different levels ‘...reflecting different experiences, environments and administrative structure’ (Hedeström & Littke, 2011, p. 15).

The OECD definition on the rural-urban concept has been adopted in many parts of the world. The definition is based on combination of population density and distribution. A local community is defined as rural if its population density is below 150 inhabitants per km². The population distribution criteria states that a region is defined as rural if more than 50% of its population lives in rural communities (OECD, 2009b).

The European Union member states do not have a harmonized definition of the urban-rural concepts and the reason for the difference lies in the

- meaning of what is rural and what is not, along with the elements that characterize rurality (such as natural, economic, cultural)
- need to have a tailor-made definition in order for an objective analysis or policy setting
- difficulty in collecting relevant data that are based on geographical units (such as administrative unit) (OECD, 2009b, p. 20).

Because of this difference, the European Union has used the OECD definition for the urban-rural concepts, but is aware that this methodology does not always reflect the true character of the rural areas. To harmonize regional statistics, the EU has developed the NUTS classification, which was discussed above, and largely corresponds to the OECD classification (OECD, 2009b).

The main purpose of the OECD and the EU classification of the urban-rural concepts are to form a basis for socio-economic analysis (OECD) and urban-rural policymaking (EU) (Hedeström & Littke, 2011). This is a quantitative approach where statistics about the areas are gathered, and then measured and compared to find out how each area is doing compared to others that are similar in structure. Even so, rural area conditions are still compared with conditions in urban areas. Rural is understood to be ‘places of tradition rather than modernity, of agriculture rather than industry, of nature rather than culture and of changelessness rather than dynamism and innovation’ (Ward & Brown, 2009, p. 1239). Urban is thought to be a modern, industrial place, where culture,

dynamism, and innovation flourish and as desirable goal that is worth striving for in rural areas (Jansson, 2013).

The policy concerning rural areas has often been aimed at so-called 'problems' in rural areas, where rural areas are thought to be 'lagging behind national average economic growth rates' (Ward & Brown, 2009, p. 1238).

Rural studies have been an interdisciplinary academic area for many years, though Ward & Brown (2009) point out: '...with disciplinary complexions coloured by the prevailing governmental priorities of the time' (p. 1241). Agriculture is believed to be the characteristic feature of rural areas in most OECD countries and therefore the discipline of agricultural economics has dominated the rural academic discourse and debate about rural policy. Traditional agriculture, however, is declining, farms are getting fewer and bigger, with around 5% of OECD population living on farms. Less than 10% of the OECD countries' workforce work in the industry and the industry no longer dominates the economy of many rural areas (OECD, 2009a, 2009b; Ward & Brown, 2009). Because of that, rural areas are changing; they are connecting more with urban areas and the borderline between the two is blurring as urban areas expands, transportation are getting better and people' mobility increases (Ward & Brown, 2009).

Dividing regions/areas into categories like urban versus rural is complicated. People may live in a rural area but work in an urban one or vice versa, and the interaction between these two areas is more complex than in previous decades (Isserman, 2005; Karlsson & Olson, 2015; Ward & Brown, 2009). Most areas have an urban area or service centre and the rural areas around it are connected to it. There is a need to consider the urban-rural linkages and interactions which include the movement of people, goods, capital, and other social transactions and play an important role in rural and urban change (Karlsson & Olson, 2015; Tacoli, 1998, 2003; Ward & Brown, 2009). This consideration requires an interdisciplinary approach that looks at rural development from a holistic point of view, taking into consideration all aspects of rural life from an economic, environmental, social, and cultural perspective.

The urban/rural concept is a contested issue, and there is no clear cut boundary between these two. It is necessary to have a classification to build on, but often it appears that too much reliance is placed upon quantitative data, which then obscures the precision in classification. Other aspects must be taken into account when discussing the urban/rural

concept, such as social and cultural factors. It is necessary to reach an understanding of the connection between urban and rural, and make policy-making more holistic.

2.2.3 Regional development

Countries are divided into regions. They are then divided into urban and/or rural areas, based on fixed geographical, social, environmental, and economical paradigms of a place that has fixed boundaries and does not cross regional borders (Amin, 2004). However, the flow of ideas, goods, capital, and knowledge and mobility of people interacting inside regional borders, is accepted. Regional and rural development policy-makers encourage such interactions, and in their regional or rural development plans try to set up strategies and projects for facilitating flow and mobility (Amin, 2004; Jansson, 2013). The projects that are agreed upon reflect academic theories and results from research at any given time. Since regional development policy emerged in the 1950s emphasis has been on how well regions performed economically. By the end of the 20th century, disciplines such as political science, public policy and sociology were also analysing regional development. In the 21st century, the focus has been more on the spatial dynamics of regions, and how people who live and work in a region have become as important as economic factors. These theories focus on human and social capital and innovation as well as spatial dynamics, including demographic change (McCall, 2010).

Organisations such as the OECD and European Union define regional development and use this definition for policymaking in the field. The definition and use of concepts changes over time and such a paradigm shift affects the policies.

On the OECD website, regional development is defined as ‘...a broad term but can be seen as a general effort to reduce regional disparities by supporting (employment- and wealth-generating) economic activities in regions’ (OECD, n.d¹, n.p.) and to reach that goal ‘...regional development policy tended to try to achieve these objectives by means of large-scale infrastructure development and by attracting inward investments’ (OECD, n.d¹, n.p.). The organisation acknowledges that this approach has failed to reduce regional disparities and has introduced a new approach. This new approach ‘...promises more effective use of public resources and significantly better policy outcomes’ (OECD, n.d¹, n.p.). The regional development focus is on building strong regions from the inside, working

with the local people and focusing on the region's resources and opportunities (OECD, 2010a).

The European Union first aimed at reducing regional disparities, but by the end of 1980s cohesion became the objective and was used to 'encourage the integration of less developed regions and countries into the single market and encourage investments in EU priorities supporting growth and employment' (OECD, 2010a, p. 310). The EU Cohesion Policy mobilises traditional regional policy instruments and encourages productive investments. The EU regional development plans are laid down in programmes (McCann & Varga, 2015; OECD, 2010a) and the purpose of regional policy is to '...support job creation, competitiveness, economic growth, sustainable development, and improve citizens' quality of life' (EU, n.d, n.p). The policy is in harmony with the Europe 2020 strategies, which are the EU's strategies to promote smart, sustainable and inclusive growth in the member states (EU, n.d).

In regional development policy, regions, whether they are urban, rural or urban and rural, are the core units within which economic growth and innovation is promoted. Rural development policy deals only with rural areas that are densely populated, according to definitions used by governments, the EU or the OECD. The three research areas fall under the definition of being densely populated, so the term rural development will be used when addressing issues about rural policy.

2.2.4 Rural development

Rural development policy, key events, trends and discourses are reflected in rural policy, where the main focus has shifted from economic and agricultural development theories to broader thinking about social, non-agricultural and national development (Ellis & Biggs, 2001).

In this section it will be shown how the OECD and the European definitions, meaning, and understanding of the rural development concept and rural development plans have changed from being aimed solely at agriculture towards a broader discussion of the concept, aimed at all of the rural sectors.

The primary reason for this paradigm shift is that agriculture is no longer the main employment sector in rural regions. Fewer people have worked in the agricultural industry since 1945, and in the OECD countries only 5.6% of the workforce was employed in agriculture in 2005. Full-time farming has decreased and at the same time part-time farming and off-

farming work has been increasing among farm households. Changes in the rural workforce show that agriculture is still an important aspects of rural development, but it must be seen as only one of many factors that influence rural economies (OECD, 2006b; OECD, 2010b).

In an OECD paper called 'Governance Strategies to Support Rural Policy' (2006a) place-based rural development is introduced. This new rural paradigm is said to require 'important changes in how policies are conceived and implemented to include a cross-cutting and multi-level governance approach' (OECD, 2006a, p. 106). Place-based rural development is a bottom-up approach, where the initiative comes from those living in the rural areas. The implementation stage would first be that a target area is defined, which is based on administrative and/or functional criteria. Then local public and private actors form a partnership and pool knowledge and resources. Finally, a rural development strategy is developed around a shared vision of all involved. In order to monitor and evaluate the development plan, it is important to create measurable indicators, so all involved can assess how well the strategy is performing, how effective the development actions are, and how they can be improved (Margarian, 2013; OECD, 2006a).

Some policy makers are starting to prioritise place-based rural development policies. One issue with implementing these policies is evaluating success because of the 'objective difficulties in evaluating (especially in quantitative terms) cross-sectoral policies' (OECD, 2006a, p. 139). Policy makers have also found that bringing together various researchers from different disciplines to work harmoniously together is another difficulty (Margarian, 2013; OECD, 2006a).

The European Union's argument for having a rural development policy is that it helps to achieve developmental goals for the countryside, and the people who live and work there (EU, 2013). That is the main reason that the EU makes a distinction between regional and rural development. The Cohesion Policy, which is EU' main investment policy, targeted at all regions and cities in the European Union, is aimed at regional development, while the Common Agricultural Policy (CAP) is aimed at rural development. As seen in the name, the CAP is aimed primarily at agriculture, but agriculture has changed in recent decades, and because of that the CAP is becoming a policy that is '...concerned with economic diversification, local development, remuneration for environmental goods, and compensation for disadvantage' (Lindberg, Copus, Hedeström, & Perjo, 2012, p. 1). For this, the EU has created two *pillars* of financial support.

Pillar I aiming at agriculture and *Pillar II* for other rural development. Agriculture is still the main objective of the CAP, so the funds from both pillars go into agriculture, to 'ensure that the EU 2020 objectives of smart, sustainable and inclusive growth will be met' (Lindberg et al., 2012, p. 1). In order to do so, *Pillar II* was divided into three so-called *Axes*, with the aim of improving the competitiveness of the agricultural and forestry sector (*Axis 1*), improving the environment and the countryside (*Axis 2*) and improving the quality of life in rural areas and encouraging diversification of the rural economy (*Axis 3*). The programming period, from 2007–2013 introduced a fourth *Axis*, the LEADER Programme, which is intended to introduce possibilities for innovative governance. The axes address the environmental, ecological, social and economic problems of rural development (Margarian, 2013). The present programming period, from 2014–2020 maintains the two pillars, but strengthens the links between them 'thus, offering a more holistic and integrated approach to policy support' (European Commission, 2013, p. 1). More emphasis is on greener and sustainable agriculture as a way to strengthen rural development (European Commission, 2013, p. 1).

Agriculture has been the key driver in rural development policy and plans, both in the OECD countries and the EU member states. However, in recent years, other aspects of rural life have been valued and acknowledged. The policy has changed from focusing not only on the development of the agricultural sector but also to place-based rural development policy and plans, which in their implementation present a holistic and sustainable approach.

However, these place-based development plans look at the rural region as the core unit and is a 'one-size-fits-all' development plan for the region as a whole.

2.1.5 Community

The community concept is multidimensional and can be found in many academic disciplines, such as geography, sociology, economy, and psychology. The definitions of the concept depend on the perspectives scholars choose to use.

It was in the field of sociology that research of the community concept started, with the sociologist Tönnies, who developed *Gemeinschaft*, which briefly means a solidarity that is based on close sociological relationships and kinship and *Gesellschaft*, which describes impersonal and weak sociological relationships (Brint, 2001; Moulaert & Nussbaumer, 2005;

Tönnies, 1887). *Gemeinschaft* is often associated with common ways of life, common beliefs, concentrated ties and frequent interaction, a small number of people, distance from centres of power, familiarity, continuity, and emotional bonds. By contrast, *Gesellschaft* is associated with things that are opposite to the definition of *Gemeinschaft* (Brint, 2001; Tönnies, 1887). Although Tönnies' definitions were constructed from a sociological point of view, a geographical perspective is also present, because the above description of *Gemeinschaft* is believed to be descriptive for smaller communities in some locations (Liepins, 2000a, 2000b).

The community concept is used both for relationships between individuals or groups of people who have 'common interests, values, culture, etc., but not bounded by physical locale' (Pretty, Chipuer & Bramston, 2003, p. 274) or 'inhabited geographically defined areas' (Pretty et al, 2003, p. 274). Larner (2005) as cited in Rose (1999, p. 172) states that

community is not simply a geographical space, a social space, a sociological space or a space of services, although it may attach itself to any or all such spatializations. It is a moral field binding people into durable relations. It is a space of emotional relationships through which individual identities are constructed through their bonds to micro-cultures of values and meanings (p.13).

An inter-disciplinary understanding of the concept is much broader than simply geographical or sociological perspectives, because it also puts psychological, epistemological, anthropological, and economical aspects into our understanding of the community concept. Studies in rural development implicitly acknowledge this inter-disciplinary approach.

Liepins (2000a) talks about how important it is to understand the complexity of the community. Community can be seen as a social phenomenon, which brings people together and helps them to talk to each other even though they are located in different places.

As a means to establish a sense of the geographic and social formation there are four dimensions that are required.

- Community as a social construct, where people are the key players.
- In a community people will develop shared meanings about their relationships through discourse and activity.

- People will agree on those relations and construct their meanings about the community, which are based on practices that connect people.
- The people's meanings and the practices will take on material and political shape in the form of key sites and organisational spaces.
- It is the interplay of these four dimensions of community that should be considered (Liepins, 2000b, p. 327-328).

In Liepins' work, community is a social construct and interaction among people inside the community is the key aspect. This is worth investigating further as:

Different people will influence, and be affected by, the meanings, practices and spaces of the 'community'. Likewise, these meanings, practices and spaces will mutually legitimate, circulate, embody, materialize and shape each other (Liepins, 2000b, p. 328).

In short, communities could be described as 'social life support systems where people engage with each other, relate to the places and spaces around them, and create meaning together' (Stevenson, 2002, p. 738). In that context, the concept 'sense of community' comes to mind, as a description of the relationships people have with a community. Then community is a place, a geographical site, where people live and relate to and engage with each other. In both Pretty et al. (2003, 2006) and Liepins' (2000a, 2000b) work on communities, this geographical understanding is the foundation of their research; communities are social relationships inside definitive geographical boundaries that are known and acknowledged.

Therefore, a successful implementation of place-based development plans in rural development means that the community must be the core unit instead of regions. This becomes even more important regarding the future vision of creating resilient and sustainable communities, which is the fundamental factor in rural development in Iceland and Scotland (Althingi, 2011, 2014; Outer Hebrides Community Planning Partnership, 2009, 2011, 2013).

1.9 Sustainability in a regional and rural context

Both regional and rural development address the concept of sustainability, meaning that growth in rural areas should be sustainable, and that the goal of regional and rural development is to create sustainable communities (EU, n.d; Lindberg et al., 2012). This concept is introduced here, because it is important and widely used rural development plans in the three research areas when deciding on projects, because the rationalisation is that projects such as development of the knowledge society will help to create sustainable and resilient communities (Althingi, 2011, 2014; Prime Minister's Office, 2011; Outer Hebrides Community Planning Partnership, 2009, 2011, 2013).

Sustainability is an old concept, which can be traced to the Middle Ages (Zink, 2013). Then it was an economic principle, which came from forestry. In this time timber was economically important and was the main source of several economic processes, such as an energy source and as building material. As the population grew, this '...led to excessive overuse and clearings causing an economic and ecological crisis...' (Zink, 2013, p. 1). Regulations about forestry felling and systematic reforestation were agreed upon, which helped to regenerate the timber resources and regulated how they could be used. The meaning of the concept back then '...was of something capable of being maintained or likely to endure' (Haslam & Waterson, 2013, p. 343). This economic understanding of the concept was dominant over time, along with the belief that human knowledge and technology could overcome all obstacles (Haslam & Waterson, 2013). The belief that the world 'was made for man' controlled the discourse and that view is said to be linked to the development of capitalism, the industrial revolution, and modern science (Haslam & Waterson, 2013; Hopwood, Mellor & O'Brien, 2005; Zink, 2013).

There is a distinction between the terms *sustainability* and *sustainable development*. Frequently the word *sustainability* is used when referring to how sustainable things are, but what is missing is the *development* of sustainability. To become sustainable, some development (management) has to take place, so it could be argued that *sustainable development* is a process to move a situation towards *sustainability*; meaning that *sustainable development* is the process and *sustainability* is the goal (Partridge, 2005).

There are different theoretical schools, according to Williams & Millington (2004), Roper (2012) and Hopwood et al., (2005), on the ways

by which sustainable development could lead to sustainability, each of which combine demands on the Earth and her resources. *Weak sustainability* which is sometimes called 'shallow environmentalism' (Williams & Millington, 2004, p. 100) suggests that stocks of resources need to expand and can be replaced by technology. This can be done by developing renewable resources,

creating substitutes for non-renewable resources, making more effective use of existing resources, and/or searching for technological solutions to problems such as resource depletion and pollution (Williams & Millington, 2004, p. 100).

This is a human-centred discourse, which argues that humans are separate from nature, that the Earth's resources are to be used for the benefit of society, and that humans have the right to dominate nature (Hopwood et al., 2005; Roper 2012; Williams & Millington, 2004). It also reflects optimism, because it is believed that humans, with their scientific and technological expertise, can find solutions to any environmental problems that come up (Hopwood, et al., 2005; Roper, 2012; Williams & Millington, 2004).

Weak sustainability is related to the theories of neo-classical economies which 'views the market economy as an autonomous self-regulating system' (Sabau, 2010, p. 1197). By maintaining non-declining capital stocks through savings and investments instead of non-renewable resources, the problems of sustainability are thought to be solved. The neoclassical economies theory believes that sustainability can be achieved through never-ending growth. (Sabau, 2010).

Strong sustainability or 'deep ecology', as it is often called (Williams & Millington, 2004), argues that instead of adapting the Earth to human demands, humans need to adapt to meet the finitude of nature. The focus is on changing the demands that humans make of the Earth. Humans are part of nature, and nature has biotic rights. Those who favour this school believe that

the common strategy advocated is a more small-scale decentralized way of life based upon greater self-reliance, so as to create a social and economic system less destructive towards nature (Williams & Millington, 2004, p. 102).

Strong sustainability has a particular view of the relationship between people and nature in which the goal is to protect natural ecosystems, not just for the pleasure of humans, but because nature is seen to have the right to remain untouched, and that does not need to be justified from human perspectives (Hopwood et al., 2005; Roper, 2012; Williams & Millington, 2004).

The theories of ecological economies use a strong sustainability concept and 'it sees the economy as a subsystem of a larger ecosystem that is finite, non-growing and materially closed' (Sabau, 2010, p. 1197). This theory believes that sustainability can be achieved by understanding that growth and environment are one and must be looked at as such (Sabau, 2010).

The third school is called *moderate sustainability*, which combines elements of weak and strong sustainability, and seeks both to expand the resource stock and reduce the demands on the stock in order to coordinate the supply of resources and demand (Williams & Millington, 2004). Weak sustainability puts economic development as a priority, while strong sustainability tries to balance economics, the natural environment, and society by acknowledging ecological limits to growth. Moderate sustainability lies somewhere between these two positions (Roper, 2012; Hopwood et al., 2005).

According to Hopwood et al (2005) when the characteristics of various projects were plotted against each other, three levels of impact could be seen in projects working towards sustainability (Figure 6). The first is those that keep the *status quo (moderate sustainability)*; meaning that the sustainability project does not change the environment or the socio-economic much, the second is *reform (weak sustainability)*; where projects are able to bring about more fundamental reform within the present structures, and the third level is *transformation (strong sustainability)*; meaning that because the roots of the problems are caused by the present economic and power structures of society, a radical transformation is needed (Hopwood et al., 2005). It will be argued in this thesis that *transformation* is the only effective way to change the system to ensure that effective sustainability becomes part of human activities in the future.



Figure 6. Transformation towards the good life (Hopwood et al., 2005)

Hopwood, Mellor & O'Brien, 2005

2.5 Summary and discussion

In this chapter the concept of the knowledge society and how it has changed was discussed. The rural discourse identified in this thesis include region, urban, rural, and community. These concepts are chosen because they represent spatial locations where people live and which developmental strategies may influence the community such as rural development and the knowledge society. To know how they work as systems, it is important to have a mutual understanding of these concepts. These concepts and developments are key threads throughout this research and have to be put into context in an educational, social, and political literature discourse.

The concept of sustainability was also defined with emphasis on weak, strong and moderate sustainability. The reason for discussing the sustainability concept is that the concept of sustainable development infiltrates the development discourse of rural areas as a tool in creating sustainable and resilient communities.

My involvement working in both the education sector and as a member of local and regional authorities can make things difficult when deciding to do research involving these two sectors. The positive part is that the researcher knows these sectors very well, but the negative part is that there is a danger of bringing in preconceived ideas about them. Realising this issue exists helps to put such ideas aside and come to this research with fresh ideas and an open mind.

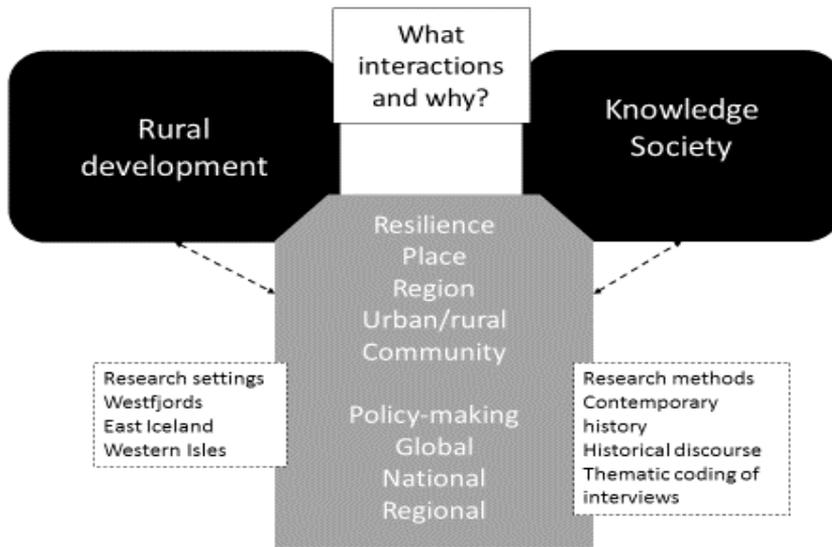


Figure 7. Presentation of the thesis strategy.

In order to answer the research questions, the resilience theory was chosen. This involves a system approach and a place-based approach, as well as looking at individuals of a place as place-makers. Chapter 3 discusses these theoretical frameworks and links them to sustainable development, which as a concept is seen as a bridge incorporating both resilience theory and place-based approaches in an attempt to create sustainable and resilient communities (Figure 7).

3 Theoretical approach

3.1 Introduction

The arguments made in this thesis move from the general to the specific, from the global context to national strategy to local development. In the global context and discourse on the knowledge society, the primary references are drawn from or reflect the work of the OECD, which in turn influences national strategies. The EU perspectives through their thorough and detailed planning have influenced development strategies across Europe.

In trying to understand the research questions and the emphasis on interactions between development and knowledge, I read widely, some may say too widely. Eventually I narrowed down my choice of theories that I felt would be useful in a theoretical approach to the problem and that would be useful in planning data collection, analysis, and interpretation.

Increasingly, as the work progressed, I found that I was drawn to socio-ecological ideas to understand this interdisciplinary work. Theories about resilience, as developed by Holling and colleagues, including the adaptive cycle, were welcomed to my desk as if they were old friends. From there it was but a short walk to epistemological pluralism and triple-loop learning, and theories about rural development. Theories on place and space, and about place-based education and development, coupled with feminist theories showed me the importance of understanding gender in rural development and formation of communities. This is especially important in recent decades where women, more so than men, have crossed the divide into the knowledge society and entered higher education. This work thus also draws on feminist theories.

Finally it proved to be unrealistic to ignore theories and perspectives originating from sustainability, and ultimately the discourse on sustainability seemed to be an important part of the interactions between rural development and the knowledge society. However, I discuss sustainability more in keeping with the chronological development of my ideas and as a response to the analysis. The theoretical approach may have been different if sustainable development had been incorporated from the

outset, but I argue that the field of study for this thesis has been broadened rather than narrowed by working with the other areas first.

This chapter is divided into two main sections, one on resilience theories and the other on place-based approaches. In the conclusion the adaptive cycle from work on resilience is put forward as the framework to be used in analysing the problem.

3.2 Resilience theory of socio-ecological systems

The theoretical framework of resilience theory builds on system analysis (Simmie & Martin, 2010; Lotz-Sisitka, Wals, Kronlid & McGarry, 2015). The reason for choosing this perspective is that resilience theory offers useful tools to look into changes in systems, how they work individually, and whether and how they interact. Both rural development and the knowledge society are complicated systems. In rural areas some societal changes could be minimal while others could be dramatic. An apparently simple example is how a local community might rationalise its postal services and what happens to businesses or farmers as they adapt to frequency and nature of services being provided. Some benefit, others not.

This section begins with an overview of resilience itself. Then, four key components of resilience, vulnerability, adaptability, transformability and resourcefulness, are discussed. How these components function, and whether and how they facilitate or block interactions, is the problem under investigation.

3.2.1 Resilience

The word *resilience* has its Latin root, *resilire*, which means to leap back or rebound (Simmie & Martin, 2010). Originally, the term was used in natural and physical science and was more recently adopted by social science and public policy. The theory was seen as an answer to dealing with various global threats such as 'economic crisis, climate change and international terrorism...' (MacKinnon & Derickson, 2013, p. 1). Therefore, great interest has emerged in the political sector about how to build up the resilience of places and communities (MacKinnon & Derickson, 2013).

The concept has many definitions; in one source it has been described as the 'ability of socio-ecological systems to cope with and adapt to change' (Marshall & Marshall, 2007, p. 2). Cultural resilience is gaining in significance (Rotarangi & Stephenson, 2014).

The resilience concept has been used in various disciplines such as engineering, where it refers 'to the ability of a material to return to a pre-existing state after being stressed' (Maguire & Cartwright, 2008, p. 3) or in psychology where it deals with 'individuals coping with trauma and major life events' (Maguire & Cartwright, 2008, p. 3). In ecology it was used 'to describe the ability of an ecosystem to absorb and adapt to change and maintain its functions' (Maguire & Cartwright, 2008, p. 3). In the 1980s its functions broadened when the ecological concept of resilience was used to understand the interactions between people and environment and to explain 'the complexity of community-environment interactions, and the complexity of change' (Maguire & Cartwright, 2008, p. 3). The resilience concept is still developing and now includes a social and cultural aspect, which 'takes into account the economic, institutional and social dimension of a community' (Maguire & Cartwright, 2008, p. 4). The political aspect of the resilience concept is gaining status, and discussions about resilience and sustainability in order to stay within the planetary boundaries is increasing (Orach & Schlüter, 2016; Stockholm Resilience Centre, n.d). The three schools of weak, strong, and moderate sustainability are important in this context.

The economic aspect has been defined as the capacity of a regional or local economy to withstand or recover from market, competitive, and environmental shocks to its developmental growth path. Adaptive changes to its economic structures and its social and institutional arrangements may be necessary, so as to maintain or restore its previous developmental path, or transition to a new, sustainable path characterized by good use of its physical, human, and environmental resources (Martin & Sunley, 2013, p. 14–15).

There are three major views on resilience which all reflect the ability of a community to withstand and respond positively to stress/shock or change; 1) resilience as stability; 2) resilience as recovery and 3) resilience as transformation (Abel et al., 2016; Maguire & Cartwright, 2008):

Resilience as stability refers to communities or cultural systems that are unable to return to their functional states because their threshold of change is too low and therefore are not able to deal with major change or shock (Abel et al., 2016; Maguire & Cartwright, 2008). Some parts of a system must remain unchanged if the system as a whole must continue to exist (Rotarangi & Stephenson, 2014).

Resilience as recovery is the 'communities' ability to 'bounce back' from a change or shock to return to its original state' (Maguire &

Cartwright, 2008, p. 4). The more resilient a community is, the quicker it can recover (Rotarangi & Stephenson, 2014)

Resilience as transformation is the communities' ability to respond to a change adaptively, not returning to its pre-existing state, but rather change into a new state 'that is more sustainable in the current environment' (Maguire & Cartwright, 2008, p. 4-5).

Viewing resilience as transformation deals with renewal, regeneration, and the reorganisation of communities where resilient communities are seen to be able to 'use the experience of change to continually develop and to reach a higher state of functioning' (Maguire & Cartwright, 2008, p. 5). This view recognizes that change is inevitable and accepts 'the dynamic characters of communities and human-ecosystem interactions and sees multiple potential pathways within them' (Maguire & Cartwright, 2008, p. 5). The social and cultural aspects of resilience are important, because they acknowledge the capacity of people to learn from their experiences and incorporate their learning into new interactions with their environment or the place they live in by believing in peoples 'ability to shape the communities' change path (Maguire & Cartwright, 2008; Rotarangi & Stephenson, 2014). According to Blanch (2015) these aspects, especially the social part, are also seen as the way to achieve sustainable rural development, by focusing on 'equity and economic efficiency in the sustainable use of natural resources' (Blanch, 2015, p. 69).

The more resilient a system is, the bigger shock/disruption it can withstand without lasting detrimental changes in the system. A system can move along a cyclic path, but it can also stagnate. Using resilience theory can help when trying to understand why systems are stuck in one phase of the cycle and how the systems can be helped to move along, specifically to anticipate how well the system is able to adapt and allow that development to continue (Holling, 2004, 2009; Marten, 2001; Simmie & Martin, 2010; Walker, Gunderson, Kinzig, Folke, Carpenter, & Schultz, 2006; Walker, Holling, Carpenter, & Kinzig, 2004).

Transformation is key to creating a resilient and sustainable community. To transform social relations in a 'more progressive, anti-capitalist and socially just way' (MacKinnon & Derickson, 2013, p. 3), the concept of resourcefulness, which will be discussed in more detail below, must be added because resilience has been applied to places and community governance to 'meet the changing demands of capital accumulation in an increasingly globalized economy (MacKinnon and Dericksson, 2013, p. 2).

Robinson & Carson (2015) also stated that in political discourse, resilience is linked to

community participation in decision making, the creation of an inclusive and creative culture, a local economy based on sound environmental principles and supportive inter community links (Robinson & Carson, 2015, p. 6).

The inhabitants of a community must be active in the community development process (MacKinnon & Derickson, 2013; Robinson & Carson, 2015). Building a self-reliant community where the inhabitants are responsible for, not only their own well-being, but also the well-being of their communities, is the governmental emphasis in the rural dimension of resilience (Cheshire, Esparcia, & Shucksmith, 2015). Such a viewpoint is useful when discussing execution of place-based development plans and inhabitants involvement in natural resource management.

Resilience thinking invites a systems approach for working with sustainability and is of value in understanding what sustainability means for systems (Xu, Marionva, & Guo (2015). Including the sustainability concept when working on community resilience is vital, because the sustainability concept deals with economic, environmental, social, and cultural components, and a holistic approach in community development is likely to be the result (Christopherson, Michie & Taylor, 2010; Robinson & Carson, 2015; Xu et al., 2015).

3.2.2 Vulnerability

Community vulnerability has been described as

a function of exposure and sensitivity of a system that is usually not able to cope with risks, hazards and slow or catastrophic change, leading eventually to the disappearance of the system or parts thereof (Wilson, 2010, p. 367).

This approach can be referred to as resilience as stability, meaning that low thresholds for change in a community prevent it from dealing with the shock or the change when it occurs inside the community. Identifying community vulnerability and responding to this is vital for a system's continuing existence and ability to deal with changes (Kotilainen & Vatanen, 2014; Martin & Sunley, 2013; Wilson, 2010). Some research

claims that resilience and vulnerability are related but they respond differently to change (Miller et al., 2010).

Miller et al. (2010) state that the resilience approach is influenced by a positivist epistemology, arguing that 'the phenomena can be objectively defined and measured' (Miller et al., 2010, p. 2). Vulnerability, however, is under the influence of a constructivist tradition, where 'the subjective world of diverse human perceptions, values, cultures, agency and ontologies is explored' (Miller et al., 2010, p. 2). Resilient communities prefer a systems approach, but with vulnerability a community might take an actor-oriented approach.

Vulnerability research is linked with policy and practice in key areas such as 'disaster risk reduction, livelihoods, food insecurity, and climate change adaptations' (Miller et al., 2010, p. 13).

Vulnerability is more related to people and communities and is as such helpful when drawing a holistic framework on how the knowledge society interact with rural development. While the resilience approach, with its positivist epistemology, addresses the knowledge society and rural development as systems and analyses how they interact as systems, the vulnerability, with its constructivist tradition, refers to the individuals and their places, explaining how rural development and the knowledge society interact with them.

3.2.3 Adaptability

Adaptability is the capacity of those who are in the system to manage resilience (Robinson & Carson, 2015). In a community context it means 'the collective capacity of people to learn and adapt to changing conditions in to stay within a desired state' (Flint, 2010, p. 48). In a socio-ecological system, human actions can affect resilience intentionally or in an unintended way (Holling, 2004, 2009; Marten, 2001; Walker et al., 2006; Walker et al., 2004). How humans cope with resilience determines whether 'they can successfully avoid crossing into an undesirable system regime, or succeed in crossing back into a desirable one' (Walker et al., 2004, p. 5). Communities must take actions that reduce vulnerabilities and increase resilience. In doing so, the communities are able to utilise their resources to transform and respond to changes in an adaptive way (Flint, 2010; Robinson & Carson, 2015; Simmie & Martin, 2010).

Adaption to changes in rural communities are either proactive or reactive (Hogan et al., 2014). In the context of this thesis adaption to

changes in rural development has been more reactive, meaning that rural communities in Iceland and Scotland are responding to changes that already have happened. The development of the knowledge society in rural areas is a reactive response to depopulation and a homogenous economy. This was a 'one-size-fit-all' governmental response offered to every rural region, led by national and local authorities, with little involvement from the inhabitants.

3.2.4 Transformability

Transformability is the capacity of a system to create a totally new system, when the existing one can no longer be reformed. Putting it into the context of communities, it is:

the capacity of people to innovate and transform in periods of crisis in order to create a new system when ecological, social, or economic conditions make the existing system untenable (Flint, 2010, p. 48).

Sometimes a socio-ecological system can get stuck in a resilience phase that is undesirable for the purposes system. Getting out of such a situation may demand greater disruption or reorganisation for change to become a reality. A change in a socio-ecological system can provide feedback on policy that is put into action because of reduction in resources or changes in social values. It is necessary to bear in mind environmental, economic, social, and cultural factors when changing a system, in order for that system to be sustainable (Holling, 2004, 2009; Marten, 2001; Robinson & Carson, 2015; Simmie & Martin, 2010; Walker et al., 2006; Walker et al., 2004).

3.2.5 Resourcefulness

In order for a socio-ecological system to transform in a holistic and sustainable way, resourcefulness can be an asset in ensuring that environmental, economic, cultural, and social factors are equally valued.

In the Merriam-Webster Online Dictionary the meaning of the word is 'to be able to deal well with new or difficult situations and to find solutions to problems' (Merriam-Webster Online Dictionary, n.d.). Resourcefulness must be looked at as a process and must be nurtured and encouraged in the community (Robinson & Carson, 2015).

According to MacKinnon & Derickson (2013) this concept challenges the power of neoliberal capitalism. Using this concept could draw attention towards how resources may be distributed unevenly in the community and 'maintains an openness to the possibilities of community self-determination through local skills and 'folk' knowledge' (MacKinnon & Derickson, 2013, p. 15). It can also shed light on the role of power in the community and how it is exercised (Robinson & Carson, 2015).

3.2.6 Resilience as invoked by government

The resilience of social-ecological systems has been widely used at the governmental level as an approach to deal with uncertainty (Folke, 2006; Welsh, 2014). This approach has been used in relation to coastal communities, the vulnerability of cities, and to patterns of migration (Folke, 2006). On an international scale resilience has reached into international disaster planning and the discourse of climate change and sustainable development. At a national scale the engineering resilience approach 'still dominates thinking, mostly around civil contingencies planning' (Welsh, 2014, p. 19). Regions are told by the national government that economic development and the relationship between government services and its citizens' are important for progress (Welsh, 2014, p. 19). National and local authorities have been trying to find ways of helping rural areas, for example, in fisheries and agriculture, thereby building up rural resilience. Thus a system must learn

to adapt to changing external circumstances in such a way that a satisfactory standard of living is maintained, while coping with its inherent ecological, economic and social vulnerability (Schouten, Van Der Heide & Heijman, 2009, p. 2).

The involvement of government in a resilience system approach is a helpful tool to use in system changes because complexity can be simplified, and a growing awareness is emerging of how the approach is used at governmental level. Welsh (2014) points out that some critical researchers link 'complexity, resilience and modes of neoliberal governmentality' (Welsh, 2014, p. 16). Governmental strategies aim at strengthening the system's ability to withstand shock instead of 'adapt and reconfigure in response to them' (Welsh, 2014, p. 20). This approach gives a promise of knowing when changes will enter a system, and that changes can be managed if the right tools are used. The normative assumption of the resilience approach is that communities

can and should self-organise in order to deal with uncertainty, that uncertainty is a given, not something with a political dimension, and the role of government is limited to enabling, shaping and supporting, but specifically not to direct or to fund those processes (Welsh, 2014, p. 20).

This view towards using the resilience approach at the governmental level puts responsibility into the hands of the local authorities and its people to know, understand, and manage changes in their region, community, or place. Places where people live are complex systems, and the question is whether those systems can be simplified and managed. The simplification of social-ecological resilience can be addressed by focusing on transition management towards the goal of sustainability (Welsh, 2014).

Resilience and sustainability concepts have entered rural development plans in Iceland and Scotland in recent years (Althingi, 2013; Outer Hebrides Community Planning Partnership, 2013). Rural communities are supposed to be resilient and sustainable and to reach that goal, place-based development plans are agreed upon. The responsibility of executing these plans is in the hands of local authorities and the people. However, the place-based development plans are made within the framework of the national regional development plans, so in reality the local authorities and inhabitants are only being allowed to operate within that national sphere of regional development.

In order for the execution of place-based development plans to be successful, it is important that local people become active players in their communities. Therefore, a place-based approach which emphasis place awareness and understanding, both scientific and local knowledge, a sphere for evaluation and reflection, and a forum for inhabitants to practice their place-making is vital for the well-being of the people (Hogan et al., 2014). Of interest would be the way on how men and women work with and identify their place.

1.10 Theorising place

Place, like resilience, is a concept that cuts across boundaries and disciplines. By considering some of the benefits of using place as a tool or a resource in planning initiatives, there is much to be gained. Using place as a perspective gives planners an idea of resources, many untapped, in the community. People in the community can become involved, unleashing latent abilities and interests. However, place is not always used as a good thing, it can localise and isolate a community and be used to take no responsibility for another place.

3.3.1 Place and space

The two fundamental concepts in place theories are *place* and *space*. Place has been defined as a space which people have made significant, spaces that people are attached to in one way or another. The distinction between place and space is often not very clear, but Cresswell (2015) states that space can be linked to movement and place to stops along the way. Balfour, Mitchell and Molestane (2008, p. 100) define space 'as both that which is inhabited and that which is moved within'. They also connect the space concept with time, saying that 'space not only is an enculturated and organizational concept in any discussion of rurality but also the one feature that changes or elongates time' (Balfour et al, 2008, p. 100). In that sense, the space concept is opposite to place, meaning that it is a domain without a meaning, but as soon as the space starts to have meaning to people, it becomes a place (Cresswell, 2015; Johnson, 2012).

Place theories have mostly been used in human geography. At first geographers talked about *regions* and *areas* and were occupied in analysing the difference between regions, or describing regions by viewing them from the outside. Then geographers started to talk about *space*, so spatial science evolved and the concept *region* was replaced by the concept *space* as a central focus of human geography. In spatial science *place* was simply a location (Cresswell, 2015).

Later, place became a concept that expressed an attitude about the world that emphasised subjectivity and experience. Here the movement is about place as a region and fixed location. This is moving towards a more abstract and wider understanding of the place concept. Such an approach towards the concept is based on philosophy, phenomenology, and existentialism, where humans get to know the world through their perception of places. In this context, space is connected to spatial science and economic rationality, while place is connected to values and belonging (Cresswell, 2015; Hargreaves, 2007; Piselli, 2007).

3.1.1.1 *The meaning and understanding place*

Place can be considered as a way of seeing, knowing, and understanding the world (Cresswell, 2015; Johnson, 2012). It is no longer only related to an area where people live, but also how people relate and understand their living in that place. Some philosophers and critical human geographers, like Massey (1991), say that place is a socially constructed concept, which means that there are human forces that create a place. People's understanding and meaning of a place is often constructed by

Western cultural values, capitalism, and materiality, which set the scene/place in which we live. Then there are scholars who look at place as movement, suggesting that place is understood on a daily basis by people in their own lives. This approach is based on structuration theory, which describes the relations between structures that influence people's lives, and people's ability to respond to these structures on a daily basis. Here place is constructed by people doing things and can therefore never finish, because people make and remake place every day (Cresswell, 2015).

In the 1990s, when globalization was an emerging issue, the place concept got a new meaning. Technological advancements, in the last decades of the 20th century, had been enormous and played a significant part in globalization, which is defined as a flow of technology, economy, knowledge, people and values across national borders (Harman, 2004; Karlsson et al., 2015). Economic prosperity was thought to be attained through knowledge and led to a society's development, because economic barriers were no longer in place. The world was looked at as a global market place, where knowledge, people, and technology moved independently (Fitzsimons, 2006).

Because globalization meant a smaller world for many people, with this new flow of individuals across borders and connecting through the internet, place as a concept had to change. It was no longer possible to relate place to a certain location or people's lived experience in a certain location, as this could not fully describe how the place concept is defined in a globalized society (Cresswell, 2015). Massey (1991) and other human geographers started to talk about places as an open hybrid of routes rather than roots. People or capital became more mobile and moved, not only inside their own country, but also between countries. So the definition of place as a centre of meaning, connected to a rooted sense of identity, was challenged by that mobility. Globalization is also gendered and ethnically identified, meaning that mobility is not only an issue of capital, but also other forms of social relations (Cresswell, 2015; Gruenewald, 2003; Hargreaves, 2004; Jones & Woods, 2013; Massey, 1991; Paasi, 2002).

3.1.1.2 The complexity of place

Humans live in a complex world, where the mobility of many people is the reality of the modern lifestyle. Perhaps, because of that complexity, place might be thought of as more important for humans than it was in prior decades. Places mean boundaries and also rootedness, which seem to be important in a contemporary society (Hargreaves, 2004; Gruenewald,

2003; Johnson, 2012). The search for place has a new name, i.e. 'heritage', meaning to find roots in the past. According to Horlings (2015) and Paasi (2002), an emphasis has been on creation of a sense of place through the place history and memory and heritage are used in the production of place. Gruenewald (2003) and later Johnson (2012) state that the past history of a place is something that binds people together, often through something to be proud of that happened in a place, whether place is subjective or objective. That sense of place is often used by national politicians when they seek to create a national sense of place, and by local politicians when they try to make politically constituted regions more place-like (Cresswell, 2015; Gruenewald, 2003; Massey, 1991; Paasi, 2002).

Place is not only a location in the world, it also frames our ways of seeing and understanding the world. Place is not just about what exists, but more fundamentally about epistemology, or how we know things. In this context it is appropriate to mention the concept of epistemological pluralism, which accepts and harmonizes knowledge complexity from both academic and local knowledge. The knowledge of a place, its past, memory, the heritage that each place has created, and what people in a place know about various things of that place – *local knowledge* - also has a value. This collective knowledge is what helps to create a sense of place for the individual who lives in a place, and the roots that bind him or her to that place (Bowers, 2008; Cresswell, 2015; Gough, 1999; 2012; Greenwood, 2009; Gruenewald, 2003; Shiva, 1993; Somerville, 2010).

Place is pedagogical (Bowers, 2008; Edvardsdóttir, 2013; Gruenewald, 2003; Stevenson, 2008) and by introducing place-based education 'will address such questions as how to develop sustainable communities and places' (Somerville, 2010, p. 326). Gruenewald (2003, p. 621) states that 'place makes us'. Place is where our identity and our possibilities are shaped and 'places teach us how the world works and how our lives fit into the spaces we occupy' (Gruenewald, 2003, p. 621)

Formal education often neglects to take into the account the importance of how place affects our lives, our culture, and how we value things and see the world. It is the knowledge that each place has created, that inhabitants in a place have about various things of that place, what is called 'the local knowledge'. In the case of rural development plans, local people are not consulted and local knowledge is questioned and not valued by outsiders (Bowers, 2008; Edvardsdóttir, 2013; Greenwood, 2009; Gruenewald, 2003; Johnson, 2012; Shiva, 1993; Somerville, 2010).

Place and space concepts have many facets, but because of the knowledge and educational focus in this thesis, emphasis will be on the pedagogical meaning of the place concept.

Before starting to put the above concepts into the context of the theoretical framework of the thesis, it is necessary to set the scene for the research and introduce the three research areas, their locations, landscape, history, and culture.

The sub-sections 3.3.1 to 3.4.2 are reproduced from my article *Place and space for women in a rural area in Iceland* published in *Education in the North* in 2013 (Appendix 1).

The place and space as pedagogical concepts mean that places influence people, shape their identity, and offer possibilities. Therefore place-based education and place-based approaches help develop sustainable communities and places (Edvardsdóttir, 2013; Gruenewald, 2003; Horlings, 2015; Johnson, 2012; Somerville, 2010). This approach can be said to be 'the new localism' as it is also becoming a part of a movement in response to globalisation, where

it seeks to make more explicit the connections between global capitalism and the devastating impact of economic exploitation and cultural oppression in local communities (McInerney, Smyth & Down, 2011, p. 5)

There are several dimensions of the place-based approach which are helpful. The ecological dimension of place, especially the discourse of eco-feminism which claims 'that historical patterns of domination and control over women are connected to the patterns of dominations over the land' (Gruenewald, 2003, p. 635), or in the case of fishing communities in Iceland and Scotland, the sea (Buckingham, 2004; Gruenewald, 2003; Leach, 2007; Shiva, 1993; Twine, 2001; Williams & Millington, 2004). The perspective of the eco-feminist political economy reveals women's status in male-dominated economic systems, which tends to value men's work more than women's (Buckingham, 2004; Langley & Mellor, 2002; Leach, 2007; Mellor, 2006). The sociological and political dimensions of place, which emphasise power relations and the acceptance of the social space, can be helpful in understanding these relations at the political level (Gruenewald, 2003; Langley & Mellor, 2002; Leach, 2007; Mellor, 2006). It is very important to consider how education can address this difference in choices according to gender. For this research the focus is on higher educated women in rural

areas and their role as place-makers in rural development. Gruenewald (2003) describes five dimensions of place that shape the development of a socio-ecological, place-conscious education. Those dimensions are: 1) the perceptual, 2) the sociological, 3) the ideological, 4) the political and 5) the ecological. In this study, in order to address issues of knowledge development in rural areas, the focus will be on the ecological, sociological and political dimensions of place (Gruenewald, 2003).

Theories of well-being concerning individuals and communities can shed some light on how local knowledge, along with scientific knowledge, can create sustainable and relevant knowledge of a particular place (Johnson, 2012). The well-being of people and communities or 'the good life' has often focused on economic welfare, linking economic growth in a place or a community to the well-being of its people (Dodds, 1997; Hopwood, et al., 2005). This is the way Western societies have most frequently evaluated sustainable life (Langley & Mellor, 2002; Sampford, 2010; Shiva, 1993).

3.3.2 The ecological dimension of place

The ecological dimension of place focuses on the relationship between the environment, the economy, and the well-being of people living in a certain place. This dimension challenges the modern economy and questions how it might damage or destroy the ecological system of human places and uninhabited spaces. Universities and educational institutions have emphasised growth in the global economy and environment, and that the well-being of a place and its people comes second. To work towards and maintain some equilibrium between the environment, economy, and social factors in a place, it is necessary to focus locally; this means to act in a sustainable manner in the place you live in, and take into account the local knowledge that can be found there (Buckingham, 2004; Greenwood, 2009; Gruenewald, 2003; Johnson, 2012; Leach, 2007; McInerney et al., 2011; Shiva, 1993; Twine, 2001, Williams et al., 2004).

Universities and higher educational institutions could cultivate a balance between scientific knowledge and the local knowledge of a place in order to educate and serve people in that particular place. They should not only be providers of knowledge, but also learners of 'place' (Johnson, 2012).

3.3.3 The sociological and political dimensions of place

People live in a place which reflects their culture and their identity. Humans frequently fail to recognise that and tend to take the social space they live in for granted, not thinking about why things are as they are, or whether they can be changed. Humans often do not think of a place as a cultural product which represents their choices, values, beliefs and decisions. The relationships between place, identity, and culture emerge in the culture, ideology, and politics of the place. By saying that people are place-makers, then people become conscious of themselves as place-makers and as participants in the socio-political process of place-making (Gruenewald, 2003; Johnson, 2012; Langley & Mellor, 2002; Leach, 2007; Mellor, 2006).

Education in a particular place provides opportunities for learners to participate meaningfully in the process of place-making, meaning that place-based education can make learners more conscious of the spatial dimension of social justice issues, such as democracy, equity, race and gender (Bowers, 2008; McInerney et al., 2011; Somerville, 2010; Stevenson, 2008). Education should not be such that it

limits the possibilities for democracy (and for place) because it diverts the attention of citizens, educators and students from the social, cultural and political patterns involved in place making (Gruenewald, 2003, p. 628). (Edwardsdóttir, 2013; 76)

The focus on the economy in a place has mostly been related to male perspectives (Langley & Mellor, 2002; Leach, 2007; Mellor, 2006; Proppé, 2004) and to understand how it can affect women's status and space in a place, eco-feminist theories will now be used.

3.4 Quality of life and well-being

3.4.1 Eco-feminism

Eco-feminism has been defined as a movement '...which argues that patriarchal oppression destroys nature in the name of profit and progress' (Humm, 1995, p. 73). Eco-feminists want '...a paradigmatic shift in patriarchal science, knowledge and technology, to a sustainable global economy...' (Humm, 1995; p. 73).

The discourse of eco-feminism is helpful when one wants to understand the relationship between humans and place, focusing on the

historical pattern of domination and control over women, and how that is connected to the domination of natural resources both on land and at sea (Mallory, 2013; Shiva, 1993; Twine, 2001) and more generally women's status in a society of a male-dominated economy (Langley & Mellor, 2002; Leach, 2007; Mallory, 2013; Mellor, 2006; Proppé, 2004). Women and nature have been constructed by patriarchal, capitalistic societies as something to have 'power over'. Looking at a place through an eco-feminist perspective offers a broad range of

social and ecological issues, including local economic livelihood, equity and social justice, resource depletion, ecological limits, cultural and biological diversity, marginalization and resistance, phenomenological experience (Gruenewald, 2003, p. 635).

Both men and women use the discourse of biological gender when rationalising gender segregation in a community or place; this discourse is about 'having power over'. The stronger this male dominated discourse, the more difficult it is for women to change the place they live in (Langley & Mellor, 2002; Leach, 2007; Mallory, 2013; Mellor, 2006; Proppé, 2004; Shiva, 1993).

3.4.2 The 'good life'

A key issue in discussions of sustainability is to find the balance between the 'good life' and respecting environmental integrity (Giddings, Hopwood and O'Brian, 2002; Hopwood et al., 2005). Dodds (1997) talks about four approaches to well-being; 1) well-being as a state of mind, 2) well-being as a human capability, 3) well-being as a state of the world and 4) well-being as the satisfaction of underlying needs. The first two approaches refer to the individual himself/herself, specifically what he/she can do if he/she is given the freedom within the place he/she occupies to live the life he/she chooses, and is satisfied with in general. The latter two approaches refer more to the place itself, or the community, and how this can create an environment of well-being for all inhabitants. Both the inhabitants in a place and the place itself must have a mutual understanding of what basic needs the place should be responsible for and provide. To find out if well-being is achieved within the place, measurable indicators are used. Such indicators are the same worldwide and are used to compare welfare and well-being of people, but each approach uses different standards and outcomes and do not work together (Dodds, 1997).

According to Skålens (2004) three different perspectives can be found on what 'the good life' or 'well-being' means for women. Those perspectives are: conservative, modern and alternative. The conservative perspective focuses on family and child-raising, and women who have this perspective tend to shape their life projects on the basis of that vision. Work and leisure are secondary to this family focus. They do get education but they often tend to study child-care work, social work, or teaching. When asked about their choice, they stress the possibility of combining work, family, and children. They also tend to have a traditional vision towards the labour division between men and women (Skålens, 2004).

The modern perspective focuses on career goals and women who have that vision model for their life projects on social success, career, and family in that order. Such women tend to study economy or management, tourism, and social science. They believe that higher education is imperative and their choice is based on the view that education will prepare them for the career they want to pursue. They want to manage a full-time career, to have children, and to have an active life (Skålens, 2004).

The third perspective is the alternative, which focuses on an open-minded environment, and women who have this perspective shape their life projects on choosing their life-style, even though it is not the traditional way of living. Their choices of career tend to lie in tourism, museum management, arts and crafts, and social work. Career is not number one, rather having a job that allows them to live a good life without work and/or family controlling their every move is the priority (Skålens, 2004).

Skålens (2004) also found three perspectives for men; the careerists, the equality-oriented men, and the adventure seekers. The careerists emphasise career prospects and focus on possibilities for self-development in future work situations. This perspective emphasises economy and income. The equality-oriented men want work they like, a career, and a family. However, they do not see themselves as family fathers on a full-time basis, or a house-father; their life prospects lie in their jobs. The third group are those who seek adventures. They are not interested in their careers, but want an exciting job where they have freedom to experience things that normal workdays do not offer (Skålens, 2004).

3.5 The frameworks/models used for analysing the problem

The aim of this thesis is to analyse the interaction of the knowledge society with rural development and find out what characterises the interaction of these two system. The framework is drawn mainly from social-ecological

resilience theory, particular the adaptive cycle, the main characteristics of which are the analysis of four stages of change in a system as it moves from the growth phase to the reorganisation phase. This framework is useful in understanding and analysing changes in systems.

Another model, not dissimilar to the adaptive cycle but with different origins, is triple loop learning, the main features of which are that development moves from a single loop with little development to a triple loop with a reflective phase.

In Chapter 5 the frameworks will be used to analyse events in recent times that took place in the Westfjords, East Iceland, and the Western Isles as a consequence of the advent of the knowledge society and major changes in rural development.

3.5.1 The adaptive cycle

According to Simmie & Martin (2010) adaptive systems are complex and have functions and relationships 'that are distributed across system components on a whole variety of scales, giving the system a degree of connectivity' (Simmie & Martin, 2010, p. 32). Below is a clarification of how the adaptive cycle works. It is important to have in mind that originally the cycle was used to describe functions in an ecological system.

The adaptive cycle (Figure 8) has four phases, including growth (r-phase), conservation (K-phase), release (Ω -phase) and reorganization (α -phase) of a single system in a loop. One cycle is one system (Dawley, Pike & Tomaney, 2010; Holling, 2004, 2009; Marten, 2001; Simmie & Martin, 2010; Walker et al., 2006; Walker et al., 2004).

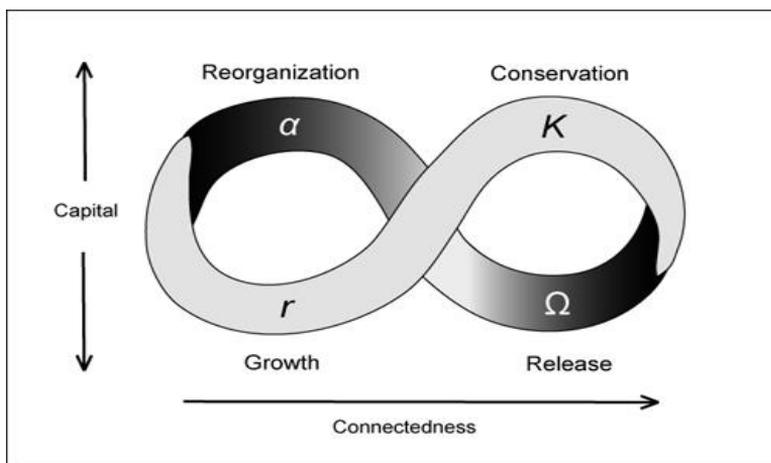


Figure 8. The adaptive cycle (from Gunderson & Holling, 2002).

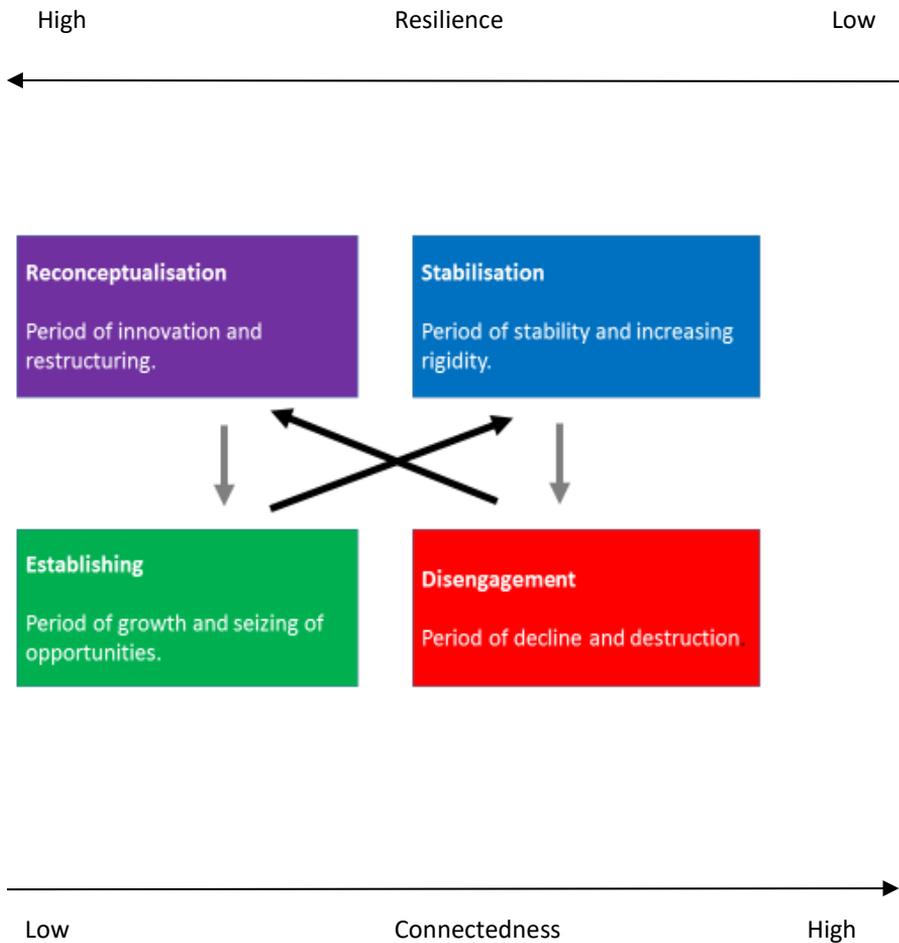
To explain how the cycle works, it is best to begin with the growth phase (the r-phase). Here, the development is fast and all resources that are available are used for profit, because new opportunities are presented, but only for a short time. Various parts in the system are loosely connected, the internal structure is weak and resilience is high (Dawley et al., 2010; Holling, 2004, 2009; Marten, 2001; Simmie & Martin, 2010; Walker et al., 2006; Walker et al., 2004), because 'as structure and connections among systems increase, more resources and energy are required to maintain them' (Walker et al., 2006, p. 2).

The next stage is the conservation or the K-phase, and that period can last for a long time. Here 'capital' is accumulated and stored. The internal structure becomes stronger and more fixed when long-term specialists outnumber short-term opportunists. Resources are isolated and functional abilities become limited. Relationships between players in the system become stronger and actors become secure in this mutual relationship. Unavoidably, instability increases and the systems become more firm and inflexible. At this stage the system is moving towards the next stage as cross-connection of various resources occur. This is a sign of how vulnerable the system is to disruption or shock (Dawley et al., 2010; Holling, 2004, 2009; Marten, 2001; Simmie & Martin, 2010; Walker et al., 2006; Walker et al., 2004).

When disruption or shock occurs, the system moves to the next stage, the Ω -phase or release. Here the cross-connected resources break apart. Internal structure and strong relationships dissolve, and resources become available to form new relationships. The system is broken and this can happen very fast (Dawley et al., 2010; Holling, 2004, 2009; Marten, 2001; Simmie & Martin, 2010; Walker et al., 2006; Walker et al., 2004).

New relationships will form in reorganisation or the α -phase. This is the time for innovation, where innovative resources can create new relationships, and re-organise the system. However, retention of former situations can guide the system towards a reorganisation that maintains or recreates some or all of the former system. In the end these new relationships will be tested as interactions with the external situation development (Dawley et al., 2010; Holling, 2004, 2009; Marten, 2001; Simmie & Martin, 2010; Walker et al., 2006; Walker et al., 2004).

For the purpose of this research I have decided to use the framework of the adaptive cycle adapted from Simmie and Martin (2010), because it is better suited when showing developments over time that are under scrutiny. The concepts in each stage of the cycle have also been changed and are now more descriptive and relate better to the development of the knowledge society and rural development.



Mynd 9. The development of distance learning in Iceland (Adapted from Simmie & Martin, 2010).

3.5.2 Triple-loop learning

By definition, human communities are inhabited by people. It is not enough only to understand how communities as systems learn, it is also important to understand how the individuals in those communities learn and how they can be active learners and practitioners in their communities. The reason for using triple loop learning theory is that it can help to explain how both communities and individuals can turn their learning into a transformational path, which is recognised as one of the

fundamental factors in creating resilient communities (Sriskandarajah, Bawden, Blackmore, Tidball & Wals, 2010).

Triple-loop learning is based on the idea of single- and double-loop learning, which was put forward by Argyris and Schön (1978). Single-loop and double-loop learning concepts are based upon a theory of action perspectives, and examines reality from the point of view of human beings as participants. The single loop evaluates and reflects on the learning performance and adjusts the course of action as a means to get a better performance, if needed. The double loop is added when people start to reflect critically on their own behaviour and identify the ways they contribute to the communities' problems, and by adding the triple loop, people transform and change how they act. As seen in Figure 9 the question people should ask themselves in the end is 'why do we do what we do?' (Mendle, 2013; Pahl-Wostl, 2009).

The three loops form a holistic framework on how learning processes move from outcomes, to reflections on those outcomes, to the transformation and change of those outcomes (Figure 9). By doing that, opportunities for both scientific knowledge and local knowledge are given, which is vital in the context of community development (Mendle, 2013; Pahl-Wostl, 2009).

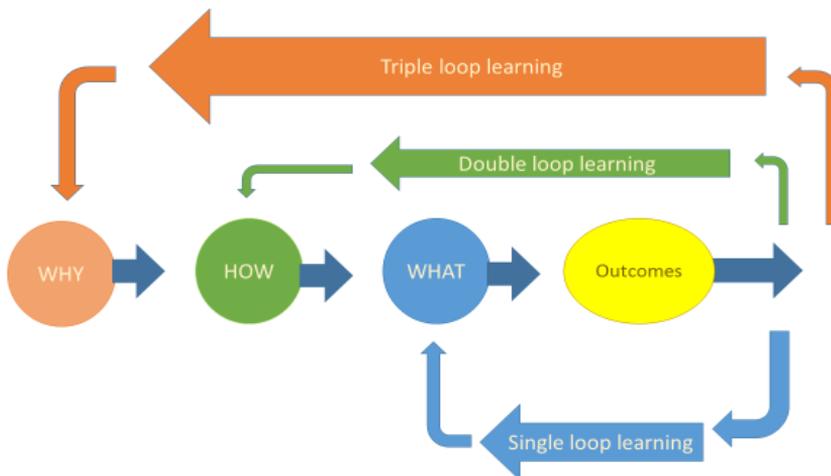


Figure 10. Triple-loop learning (Adapted from Serrat, 2013).

The main core in place-making is a transformation of individuals and communities. This chapter introduced and discussed various concepts of place-based approach that, with the system thinking of the resilience theory, can be a great asset in rural development. Creating resilient and sustainable communities is a system change and requires new thinking and actions that can help the transformation of the system. Communities as places, the well-being of people, the role of the knowledge society, which fosters epistemological pluralism of transdisciplinary knowledge, and an opportunity to reflect on knowledge and being, are all important factors if transformation is to be successful.

In the next section, the framework or the model that was used for analysing the problem of the interaction of the knowledge society with rural development, will be introduced and discussed.

3.6 Summary and discussion

This chapter introduced two constructs of paramount importance – resilience and place - as I search for interactions between the knowledge society and rural development. Although these two constructs originated each within a single discipline, they have been adopted and modified by other disciplines. They are thus useful for the problem I am trying to understand, which crosses several borders and is reconstructed in the process.

First, resilience was discussed with an emphasis on defining the theory and the concepts of vulnerability, adaptability, transformability, and resourcefulness. The adaptive cycle system approach can be used to show how the resilience theory can be put into practice.

How the resilience theory of a social-ecological system is used at the governmental level is being criticised because of the simplification of complex systems as regions and communities. The creation of resilient and sustainable rural communities seems to be practiced at international, national, and regional levels (EU, n.d.; Lindberg et al., 2012; Welsh, 2014), with emphasis on the responsibility of local communities for the success of this goal (Welsh, 2014). There is a flow between countries at international and national levels through OECD and EU policy documents, which then are the basis that national regional development plans rely on. Place-based rural development plans are based on the national development plans, so in practice they are top-down approaches, but are introduced as bottom-up approaches because they are referred to as place-based development plans (Althingi, 2013; Outer Hebrides Community Planning Partnership,

2013). The actions of a community are by local people inside a framework that the government has created. So, strengthening rural people as place-makers is crucial for the success of the place-based rural development plans. In this context inhabitants of a place must consider the three schools of sustainability, the weak, strong, and moderate, because their views will guide how and what kind of sustainable and resilient community will be created.

Various dimensions of place were outlined, with the focus on people as place-makers, from a gendered perspective bringing eco-feminism into the picture along with issues about what it means to live the good life, how scientific and local knowledge of epistemological pluralism can create transdisciplinary knowledge, and how the concepts of triple-loop learning form the framework that is used to describe and analyse how individuals and systems learn and work, the changes in each system, and the interaction between systems and between systems and individuals.

Creating sustainable and resilient communities in rural areas is a complex process that will take time, and problems will arise that must be solved. It is important to acknowledge this and to find the right tools to deal with complex situations in places where people live and work. Therefore, linking theories about systems and place creates a holistic framework for understanding, describing, and analysing the complex interaction inside and between the knowledge society and rural development, as well as the interaction between systems and places where people live.

In next chapter, the methodology and methods used in the thesis are discussed. The methodology and methods that were chosen are: contemporary historical review, historical discourse analysis, and a thematic approach to interview data. First, a brief discussion that rationalises the choice of methodology and methods is needed.

When reading and analysing official documents that told the story about the development of the knowledge society and rural development in a descriptive way, further discussed in chapter four, a contemporary historical review was used. The purpose of the analysis was to find the global, national and regional policy discourse that was dominant in each period of time, and how the discourse affected decision making. At this stage there was no need for a thorough analysis as the purpose was to tell the story of the events process and show a flow between stages in time. However, one must bear in mind that the chosen papers may reflect the

people's understanding of the events process, but the data that was chosen had a descriptive focus, not an analytical one.

As chapter four will reveal, the events process that was applied to the model of the adaptive cycle and looked at it from the perspective of the system thinking found that they showed similar patterns in the process and similar forces seemed to be at work. Even the development of the knowledge society showed similar process and the question 'why' and 'how' came up. In order to find some answers, official documents about the development of the knowledge society must be looked into. The documents that were chosen show the interaction of the knowledge society and rural development. The criteria as to analyse the policy discourse found in the documents, and what themes that relate to the role of the knowledge society in creating sustainable and resilient communities could be identified. The historical discourse analysis was chosen because it is a good method to use when analysing governmental policy and to find themes to reveal the dominant discourse.

Part of this research is to get the perspectives of the research area's inhabitants about the development of the knowledge society and rural development in their areas. For that purpose interviews were taken. What was under scrutiny was, firstly, whether getting a higher education degree through distant learning changed or expanded people's action space. The focus was mostly on women, but men were also included to see if there was any difference. Secondly, the focus was on whether the discourse found among inhabitants matched with the discourse found in the analysed documents. For analysing the interviews, the thematic approach influenced by grounded theory was chosen, because coding inhabitants' discourse themes that did not match with the themes found in the official documents was the research goal.

4 Methodology and methods

The main focus of this thesis is the interaction of the knowledge society with rural development and how this interaction appears in contemporary times, that is, over the last 40-50 years. However, it is important to have in mind that with its emphasis on the written and then the printed word, the church in the Middle Ages in Iceland laid the foundations of its own knowledge society (Pálsson, 2008). In addition, the parliament passed laws about land, labour, and freedom of movement, thus creating its own unique strategies for rural development (Hall et al., 2002). In the 17th century it was decided that foreigners could not overwinter in Iceland, the fear being that their offers of work would lead to farm works moving to small settlements (Eiríksson, 2014). Ultimately in the late 19th century the policies on land ownership and new opportunities, along with a growing population in the countryside, natural disasters, and unpredictable weather conditions, led to a massive migration of Iceland to the central plains of Canada and adjoining states in the USA (Aðalsteinsdóttir, 2012).

Here in this thesis I will tell a much newer story, tracing and interpreting recent events, consulting selected official documents, and analysing the discourse among inhabitants in rural communities. In chapter 1 concepts were discussed, and the research questions and the three research areas were introduced. In this chapter I introduce the methodology and methods that were used to analyse various data. For example, data found in scholarly articles, official documents, and reports when writing the historical overview of the knowledge society. Data was also analysed from laying out three key events in rural development, and a thematic approach was used when analysing the interviews taken in the three research areas.

The knowledge society and rural development are looked at as two systems where the focus is on the characterisation of these two systems, and key features in the educational, social, and political discourse are identified. I also consider the extent to which the rural discourse in Iceland is similar or different from that of Scotland by looking into the growth in higher educational activities and changing emphases in rural development.

The expansion of the knowledge society and its interaction with rural development is the problem identified and will be answered using

historical research, historical discourse analysis, and a thematic approach to interview data. From my experience as a local politician I knew that most official documents about rural development, such as rural development plans, could be found at the Icelandic Regional Development Institute's website and that led me to further resources. I was also aware that the Ministry of Education, Science and Culture and the Ministry of Industry and Innovation had documents about the knowledge society and rural development which were useful in telling the story of Iceland's rural policies.

The official documents that were chosen for an analysis should reflect the general discourse at the time they were written. The purpose in studying the selected documents was to asserting what themes could be found in all of them, a red thread that characterises the governmental rural policy, and also what differentiated them. Interviews were taken with inhabitants in the Westfjords and East Iceland in Iceland, and in the Western Isles of Scotland. In all three of the settings I wanted see whether higher educated people, focusing primarily on women, became active place-makers in their communities after graduation. A thematic approach, influenced by grounded theory, was chosen to conduct this analysis. Therefore, official documents were chosen from a similar time frame as the interviews were taken to analyse these interactions (Figure 10)

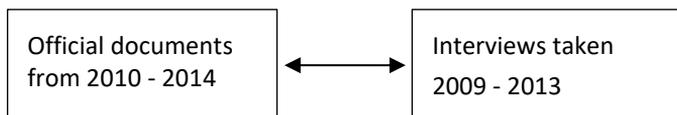


Figure 11. Juxtaposition of data from documents and from interviews.

The research was conducted over the years 2009 – 2016. The analysis of the official documents was conducted in 2011, and 2014. Interviews were taken in the Westfjords region in 2009 – 2010, and again in 2013, in the East Iceland region in 2012, and in the Western Isles in 2010.

The three research areas were not looked at as cases because the research focus was on the phenomenon, which is the interaction of the knowledge society with rural development.

4.1 Contemporary historical review

Contemporary history is used in this thesis to understand the present. Plans for development in Iceland were much discussed in the years after the Second World War and Iceland was optimistic that it could become a participant in the modern world (Kristinsdóttir & Macdonald, 2003; Ómarsson, 2008). In that context, education was looked at as one of the key features in Iceland's development towards well-being of the nation (Kristinsdóttir & Macdonald, 2003).

Historical research in education has been defined as

a process of systematically searching for data to answer questions about a past phenomenon for the purpose of gaining a better understanding of present institutions, practices, trends, and issues... (Gall, Borg & Gall, 1996).

I wish to trace the story of rural development, particularly in coastal areas, in two settings in Iceland and one in Scotland. First however, I will consider some issues of which the reader and research should be aware.

4.1.1 Issues in contemporary historical review

The main purpose of historical research is to shed some light on events in the recent past. Sometimes this is done in order to learn from failures so they will not be repeated, but also to understand successes and if they are worth repeating (Berg, 2009; Cunningham, 2012; Krull, 2007).

This thesis covers developments over many decades. It does this by going back to and analysing official documents as a means to understand the thinking about rural development that lay behind various projects that had received support. This historical methodology is appropriate because understanding the past can help the researcher in 'defining and evaluating alternative future scenarios...' (Gall, et al., 1996, p. 647). The historical research methodology that will be used is a revisionist perspective, which emphasises casting light on goals and effects in the past that appear to be unjust, but have continued nevertheless (Gall, et al., 1996).

It is important for a researcher to have a clear idea of what kind of historical sources he/she should look for to describe the phenomenon being researched. The researcher can use primary and/or secondary sources, but has to be aware of their credibility and state it. A primary source is an oral or written testimony from people who witnessed or

participated in the historical events of interests. A secondary source is when an individual, who was not present at the event, gives an account of it (Berg, 2009; Gall, et al., 1996). In the research for this thesis, both primary and secondary sources were used, meaning that official documents from the governmental system are primary sources, and journal articles, theses, and reports which base their discussion and interpretation on the official documents are considered to be secondary sources. The Icelandic parliamentary resolutions about rural development agreed to by the Icelandic parliament are examples of primary sources, and dissertations from various universities, reports, and journal articles where this rural development is analysed are examples of secondary sources.

Official documents, reports, and thesis are the type of sources that are called *grey literature*, which was defined by Makepeace in 1985 (in Okuroma, 2011) as 'the collective name given to material which carries a verbal or illustrative process, but not in the standard book, pamphlet or periodical format' (p. 790). These materials can be accessed through other channels than published literature, i.e. from organisations, ministries and companies's websites. These materials offer 'useful, factual and timely information' (Okuroma, 2011, p. 791), which can be helpful when looking into the development of a given topic. Many research projects and journal articles base their analysis on grey literature (Okuroma, 2011).

Evaluating the credibility of sources, especially grey literature, is a process that involves both external and internal criticism. External criticism is the process when the researcher has to decide whether the origin of a document corresponds to its actual origin (Berg, 2009; Gall, et al., 1996). Internal criticism 'involves evaluating the accuracy and worth of the statements contained in a historical document' (Gall, et al., 1996, p. 659). Of these two, internal criticism is more complex, because it includes the judgement and interpretation of the sources by the researcher (Berg, 2009; Gall, et al., 1996).

The revisionist lens in historical research involves an interpretation of viewing past practices 'as reflecting particular political, economic or other social forces and motivations...' (Gall, et al., 1996, p. 661). In this thesis various concepts and theories from different disciplines were used and defined, so a holistic picture could be developed.

4.1.2 Carrying out the review

The first step in carrying out a historical research review is to decide the social issues that are under scrutiny and then to decide how far back the researcher has to go in order to show the development of these issues.

The review was set up in a chronological way, beginning around 1970, dividing the development of the knowledge society into decades, and focusing on key historical events in the case of rural development. Many of the selected sources that focused on development had a chronological perspective and it seemed appropriate to use the same approach when working with the research areas. The researcher was well aware that issues and events crossed decades, but the researcher's guiding rule when facing that kind of challenge was to discuss issues and events that spanned over a decade later in each section, trying to create a holistic story.

To do this historical research about systems dating back to 1970, lots of different sources were gathered. The story told was about the interaction of the development of the knowledge society with rural development. This requires an analysis of theories, practices, and outcomes in order to identify the global, national, and regional flow of the policy that guided actions taken in the name of rural development. Therefore, sources from the governmental body, both at international, national, and local level in Iceland and Scotland were gathered. Also gathered were academic dissertations and reviewed articles from scholars doing research in the fields of the two systems, and materials found when searching for information from various institutional, public and/or private websites.

The sources that were used were found on the internet, especially the official documents which were hosted at the parliament, ministries, public institutions, and organisations' websites, along with academic dissertations hosted at online libraries and reviewed articles hosted at online scientific journals. Articles in newspapers about individual events that took place years ago could also be found online. There was no problem accessing wanted materials and there were no gaps in the materials, meaning that no events or a decades that were of importance for this research is missing.

A pertinent example of the historical research work about the global, national and regional flow of policy is the changes in theories about knowledge production from mode 1 to mode 2 in the 1990s and then later to mode 3. These changes led to the framework of the *Triple Helix model* as a way of linking universities, industry, and government, and soon became the new paradigm for universities (Caryannis & Campbell, 2012; Albuлесcu

& Albuлесcu, 2014). This theoretical framework became the new paradigm for the Icelandic university system around 2000, especially after the establishment of private universities that emphasised relationships with the industry. The theoretical framework behind the Triple Helix model became the backbone of the knowledge society's development, both in general and in rural development plans, and was used to rationalize the establishment of knowledge centres and research institutions (Althingi, 2002, 2006a, 2011). In recent years discussion about adding two more helices to the Triple Helix model is starting to dominate the discourse about knowledge production and the role of universities in society, and in a few years the Quadruple helix model and the Quintuple helix model will become the new paradigm at global, national, and regional systems levels (Caryannis & Campbell, 2012).

To tell the story of the development of the knowledge society and stories about key events in rural development from 1970 the researcher had to read many and various primary and secondary sources. Through this reading the researcher was able to choose eight official documents for further analysis so educational, social, and political discourse in Iceland and Scotland could be identified and juxtaposed with the interview data taken (Table 4).

All the gathered sources were categorised into the knowledge society and rural development. However, the researcher soon found out that primary and secondary sources tended to overlap in the above categories, meaning that sources discussing rural development would also discuss the knowledge society and vice versa. It became obvious quite soon that policies in the development of the knowledge society were interwoven into rural development policy as a tool to be used for further economic development in regions.

4.2 Historical discourse analysis

Those who pursue discourse analysis must first understand that to 'recognise the hidden assumptions and practices that form the rules of discourse formation' (Hewitt, 2009, p. 3) it is important to view the problem from the outside. Secondly, to understand patterns of power relations, a 'deeply reflexive approach to recognise the rules of formation' (Hewitt, 2009, p. 3) is needed. I chose to take a course in historical discourse analysis and found that it was indeed a challenge to look for hidden assumptions, to look at problems from the outside, and to be reflexive. It seemed to be a worthwhile challenge for looking at my problem.

4.2.1 Issues in historical discourse analysis

Discourse analysis is 'a research method which involves examining communication to gain new insight' (Hewitt, 2009, p. 2). Even though different discourse analysis approaches have been developed for various disciplines, the goal is the same; to reveal discourse and shed light on the materials that are to be analysed (Boronski & Hassan, 2015; Fairclough, 2008; Gústafsdóttir, 2013; Hewitt, 2009).

This thesis deals with governmental policy in rural development and the knowledge society. Public policy deals with political, economic, and social aspects of society, along with the environment that humans live in (Hewitt, 2009; Shortall, 2012; Turunen & Rafferty, 2013). Public policy brings to mind the actions of government, and to understand the policy it is vital to examine the activities of the government and those who govern. Public policy research deals with questions of the

legitimacy of government to take decisions on behalf of their population, the operation of democracy and the accountability of state actors (Hewitt, 2009, p. 4).

To sum up, the goal of this discourse research is to better understand the political, social, and educational discourse about the knowledge society system and its interaction with the rural development system. Because government policy papers were analysed, Foucault's historical discourse analysis was chosen. This methodology reflects some of Foucault's concerns with 'historical systems of reasoning and how power relations worked out in shaping the mentality of modern Western societies' (Jóhannesson, 2010a, p. 135) as well as Bourdieu's epistemic reflexivity and social strategies (Boronski & Hassan, 2015; Guðmundsson, 2012; Jóhannesson, 2010b).

Historical discourse analysis is useful in scrutinising governmental policies, because 'of how it connects to political issues and the emotions of the researcher(s)' (Jóhannesson, 2010a, p. 143). The approach can help the researcher to understand historical and political legitimating principles, to observe other possibilities, or to understand why practices and policies that may seem logical are not politically or practically valid (Gústafsdóttir, 2013; Jóhannesson, 2010a; Turunen & Rafferty, 2013). Its practical use can be summarised as follows

Historical discourse analysis helps us to understand the interplay between the relational and positive power of internalising discourse on the one hand, and power-over, or negative power exercised through various agencies and institutions, on the other (Jóhannesson, 2010a, p. 146).

A researcher can use historical discourse analysis as a tool to help reveal patterns in the political texts found in government reports, to enable these texts to be analysed in that context, to understand patterns of meaning, and to better understand how the words and structure reflect the perceived power of the political system.

The most vital concepts to look for in historical discourse analysis are discourse, discursive themes, and legitimating principles, which are interwoven concepts, historical conjuncture and normalizations. They form the dominant discourse in the analysed document. Power structure, silence, and social strategies are also important features to look for in the analysis (Gústafsdóttir, 2013; Jóhannesson, 2010b; Turunen & Rafferty, 2013).

A historical discourse analysis, can be based on the following five steps, (Jóhannesson 2010b)

- Select an issue or an event.
- Determine if the material is relevant to throw light on the issue or the event.
- Analyse the documents, identifying the (above) concepts.
- Analyse the struggle and tensions in the discourse.
- Identify the historical conjuncture of the discourse (p. 254 – 257).

Discourse has been described as a process. Those who are part of the discourse produce and reproduce this process with their conscious or unconscious practices and utterances. Discursive themes appear in the discourse, when some things keep coming up repeatedly. They form certain patterns that are 'shaped and reshaped in the social and political atmosphere of the past and the present' (Jóhannesson, 2010b, p. 252). In the end, those patterns become the dominant discourse and are the historical and political legitimating principles of what is appropriate or safe to say at certain moments or in certain places. Some ideas and practices

gain more legitimacy than others and it is vital to understand the interplay between historical and political conditions and the arguments for those ideas and practices. Here, historical conjuncture is supposed to capture and explain what happens in particular circumstances. It is not easy to see beforehand which ideas and practices will be able to coexist 'because epistemological roots of ideas usually do not mean much when older and newer ideas and practices compete for legitimacy' (Jóhannesson, 2010b, p. 253). The normalization refers to situations when the dominant discourse has become legitimated, the ideas and practices have been accepted as the professional truth and other ideas might be silenced (Gústafsdóttir, 2013; Jóhannesson, 2010b).

This approach is useful when revealing the discourse that has become a legitimating principle, the historical conjunction and the power relations in the policies of both the knowledge society system and the rural development system.

Here, an example of how historical discourse analysis works is chosen for demonstration, where the issue developing the knowledge society as a source for increasing rural population is explored. Official documents about the knowledge society, rural development, and population over the research time period are identified and analysed. In the analysing process, discursive themes about this link between the knowledge society and the rural population come up repeatedly in the discourse. These themes are about increased jobs for higher educated people, and the belief that people who get a higher education degree will start something new that creates jobs. Because these discursive themes keep coming up in various documents, they become historical and political legitimating principles which rule the discourse. Over time, the legitimating principles become the historical conjunction which policy and practice is based on. This discourse is used to rationalise further development of the knowledge society in rural areas even though the basis for the development, an increase in rural population, did not seem to be the reality in rural areas.

4.2.2 Using historical discourse analysis

The research goals are to understand whether and how the knowledge society interacts with rural development. Therefore, documents reflecting official policies on higher education, research activities, and rural development in the Westfjords, East Iceland, and the Western Isles of Scotland were selected and will be subjected to historical discourse analysis.

After reading various official documents, eight key documents were selected for further analysis.

The documents were prepared for various ministries and associations by committees or working groups nominated by ministers. The historical discourse analysis approach can help reveal the contradictions found in the documents, and the consequences of unchallenged current ideas and discourse about the knowledge society and rural development. The actions taken in rural development are likely to be based on the dominant discourse found in them. The documents that were analysed are:

Table 4. The analysed documents

Nr.	Year	Name of the reports	Responsibility
1	2010	A progress report about knowledge centres in Iceland (in Icelandic)	Ministry of Education, Science and Culture
2	2010	Revision of the economy support system (in Icelandic)	Ministry of Industry and Innovation
3	2011	Iceland 20/20 – An advance for the economy and society (in Icelandic)	Prime Minister’s Office
4	2013	Iceland 20/20 – The Westfjords region (in Icelandic)	The Association of the Municipalities of the Westfjords
5	2013	Iceland 20/20 – East Iceland region (in Icelandic)	The Association of the Municipalities of East Iceland
6	2014	Regional development plan for 2014 – 2017 (in Icelandic)	Althingi 2014 (parliamentary resolution)
7	2011	Forward together – Single Outcome Agreement 2011 - 2013	The Outer Hebrides Community Planning Partnership
8	2013	Forward together – Single Outcome Agreement 2013 – 2023	The Outer Hebrides Community Planning Partnership

Report 1 about the knowledge centres in Iceland deals with the development of higher education and research activities in rural areas. Report 2 about the economy support system evaluates the efficiency of the economy support system in rural areas and suggests changes. The development plan (Report 3), *Iceland 20/20*, emphasises knowledge, sustainability and welfare for the economy and communities. The development plans for the Westfjords (Report 4) and East Iceland (Report 5) regions focus on the regional strengths, and the Outer Hebrides Community Planning Partnership regional development plans (Reports 7 and 8) in the Western Isles aim to create sustainable, resilient communities. The regional development plan for Iceland 2014 – 2017 (Report 6) does not mention the knowledge society, but focuses on the reinforcement of economic activities (Althingi, 2014; Ministry of Education, Science and Culture, 2010; Ministry of Industry and Innovation, 2010; Prime Minister’s Office, 2011; The Association of the Municipalities of the Westfjords, 2013; The Association of the Municipalities of East Iceland, 2013).

After reading the documents, they were analysed using the methodology discussed by Gústafsdóttir (2013) and Jóhannesson (2010b). Firstly, the document’s structure, the construction of the language, and the text as a whole was scrutinised. Secondly, the discursive themes about the knowledge society and rural development were identified. Thirdly, I identified and evaluated whether and how those discursive themes had become legitimating principles ruling the discourse. Fourthly, those legitimating principles that had become historical conjuncture were identified. It was found that five themes in the Icelandic documents and four themes in the Western Isles documents dominated the policy and actions in rural development. The power structures uncovered in the documents were also highlighted. This discourse will be presented further in the chapter on the research findings.

Those two research approaches – contemporary historical review and historical discourse analysis – are suitable for the research purpose intended here, which is to analyse the interaction of the knowledge society with rural development.

4.3 Generation of interview data

Historical discourse analysis reveals the underlying discourse found in official data and the policy that dominated for the relevant years. But as a means to understand how official policy affects people, the researcher

decided to use a thematic approach in the analysis of the interviews and extend the discourse found in the documents. Using such an approach allows the researcher to find themes and clarify whether they match the discursive themes found in the analysed documents. Identifying similar themes at the governmental level and among inhabitants suggests that the discourse among them might strengthen the legitimacy of approved rural development policy.

4.3.1 Aspects of thematic approach under the influence of grounded theory

Over the years quantitative research methods have been dominant in much of the social sciences and politics, and at first the emerging qualitative research methods were not seen to be scientific enough (Charmaz, 2009; Hammarsley, 2006; Kvale, 1996). It was a widespread misbelief that methods which contain

a unitary method of systematic observation, replicable experiments, operational definitions of concepts, logically deduced hypotheses, and confirmed evidence (Charmaz, 2009, p. 4)

were the right methods to use for research in all disciplines. It is the nature of the research that guides what kind of research methods are used. I wanted the voices of the participants to be heard, therefore qualitative research methods were appropriate. Qualitative research methods, which are transparent and methodically done based on evidence and trustworthiness, involving credibility, dependability, and authenticity built into the research (Elo et al., 2014; Yin, 2011).

Before starting to take the interviews it was necessary to decide what kind of coding method suited the problem. Since identifying themes in the interviews was the goal, in order to look for connections with the discourse analysis, the researcher decided to use the key aspects of In Vivo coding which is helpful when identifying themes. In Vivo coding is a method that is used in grounded theory (Charmaz, 2009; Kvale, 1996; Saldaña, 2010). According to Charmaz (2009), grounded theory methods have their own logic and offer systematic strategies for qualitative research practice and can generate theory. Qualitative inquiry is moved into the realm of an explanatory theoretical framework, 'thereby providing abstract, conceptual understandings of the studied phenomena' (Charmaz, 2009, p. 6).

Generating theory was not the goal of this research. Grounded theory as a whole was not suitable in this case, but because grounded theory is flexible and allows the researcher to follow leads that come up, the theory was influential in the coding process.

4.3.2 Using the thematic approach – In Vivo coding

The first step when analysing interviews is to code the data, which is the 'first step in moving beyond concrete statements in the data to making analytic interpretations' (Charmaz, 2009, p. 43). When coding, the researcher names 'segments of data with labels that simultaneously categorizes, summarizes, and accounts for each piece of data' (Charmaz, 2009, p. 43). Appendix 3 gives good examples of how this was done.

In Vivo coding was also an appropriate method because the researcher wanted the voices of inhabitants to be heard. In Vivo coding interviews are transcribed with the participants' actual words, which can be helpful in identifying whether the structure of the language used by participants is similar to the structure of the language used in the analysed official documents (Charmaz, 2009; Kvale, 1996; Saldaña, 2010).

A primary reason for choosing In Vivo coding from the grounded theory approach when analysing the interviews, was that data could be collected and analysed at an early stage in the research process.

The goal was twofold; firstly, to investigate whether the inhabitants who were interviewed had a similar or different discourse about the knowledge society and the rural development systems, than the discourse identified in the official documents. Secondly, to find out whether and how that discourse affected the ability of people to become place-makers in their own communities, with an emphasis on the status of higher educated women and their place in their own communities. Open-ended, semi-structured questions were chosen for the interviews (Appendix 4), so that there was an opportunity to respond and go even deeper into issues that arose in each interview.

When taking interviews, the researcher's goal is to understand the topic, and those who were interviewed had experiences to shed light on the topic. Open-ended, semi-structured, focused questions allow unanticipated statements and stories to emerge and gives the researcher the opportunity to respond to what comes up in the interviews (Charmaz, 2009; Fetherston & Kelly, 2007; Kvale, 1996).

The researcher must be aware of his/her position in the research. His/her pre-knowledge of the topic must not be apparent and he/she must come to the interviews open-minded, looking at things from the outside. Class, age, race, and gender are issues that can have an effect on the interviews, so the researcher must consciously not let those issues interfere with the interviews (Barber, 2012; Charmaz, 2009; Fetherston & Kelly, 2007; Kvale, 1996).

The participants matched the criteria that had been set regarding a broad age range and a distribution across the three research areas. Each participant was sent a letter by e-mail, asking for their participation, introducing the aim of the research, and the research questions. After they agreed to be interviewed, they were sent some topics for discussion and given some time to prepare themselves for the interviews. The participants chose the location of the interviews, usually either at their homes or workplace. The interviews were semi-structured. An emphasis was placed on a relaxed atmosphere during the interviews and the participants were encouraged to feel free to say whatever they thought was relevant. The participants discussed, among other things, their background, the communities where they lived, matters concerning equality, higher educational studies and research activities, natural resource management, regional development, the knowledge society's development, sustainability, and gender issues. Each interview took about one hour and was recorded and transcribed. Real names are not used and there is nothing in the data presented that shows their real identity.

Thirty-five interviews were conducted, seventeen with women and twenty-three with men. In the Westfjords region, fifteen interviews were conducted, between November 2009 to June 2010, and again in December 2013. There were ten interviews in East Iceland, conducted in the period from May 2011 to October 2012. The Western Isles was visited from September – December 2010 on an Erasmus placement grant and during that time ten interviews were conducted.

Table 5. The number of participants in the three research areas

Region	Dates	Number of women	Number of men
Westfjords	2009-2010, 2013	9	8
East Iceland	2011-2012	3	10
Western Isles	2010	5	5

In all three regions, those who were interviewed were local politicians and mayors, managers and staff of local organisations working in rural development, or the labour, cultural and knowledge society sectors, many of whom were higher education graduates. Both women and men, who had used distance learning methods or face-to-face learning while living in their communities, were selected for interviews. The reason for the gender imbalance in the number of participants in East Iceland is that women were less willing to talk to me, at least they did not respond to my email to the same degree as men and those who were in charge in the field I was interested in were mostly men.

Information about the Westfjords participants was obtained through the University Centre of the Westfjords. Because the researcher had lived in the region and was a local authority member, personal knowledge was useful in identifying local politicians and managers and staff of public institutions working in the field of regional development and/or the knowledge society who were interviewed in the Westfjords area. In the East Iceland region, information about participants was obtained through Austurbrú, an organization that is a “One-shop-stop” in East Iceland. In the Western Isles of Scotland, discussions with academic staff at the university helped to identify key participants to be interviewed. There were no differences in response rates between the Icelandic and Scottish participants.

The researcher had in mind when choosing participants to be interviewed that participants who were linked to politics or were managers for official organisations could be either an advantage and/or disadvantage for the research. Key persons in local communities can be of advantage because they have good knowledge about various issues regarding the

development of their areas. They have been part of policy making, e.g. taken either at national or regional level. That can also be a disadvantage however, because by doing that they have become part of the governmental body and are involved in the policy making process and tend to rationalise, unwittingly, their involvement of the decision making as being good for their areas. In order to mitigate these disadvantages, the researcher encouraged the participants to speak freely and honestly about the issues and restated that nothing they said could be related to them.

After each interview the transcripts were coded. In vivo coding was used, and this is a form of verbatim coding (Charmaz, 2009; Kvale, 1996; Saldaña, 2010). This enabled detailed analysis of the data. The goal was to let the interviewees' own voices be heard, so special attention was given to their words and phrases. The guiding light was to keep track of codes that were inspired by the participants, rather than generated by the researcher (Kvale, 1996; Saldaña, 2010). Themes in each interview that were similar to the discursive themes found in the analysed official documents were identified and then grouped together to formulate answers to the research questions (Charmaz, 2009; Kvale, 1996; Saldana, 2010). Appendix 3 gives an example of how the coding was conducted. The themes that could be identified in all of the interviews were the knowledge society (meaning university studies and research activities), the communities, regional development, natural resource management, employment and economic issues, gender issues, and social justice. In some interviews, issues about culture and social factors, sustainability, and the role of universities in regional development were also identified, along with the question of nationalism or a sense of place.

The themes were also used to identify the discourse about participants' experience of living in a rural community from the perspective of place-making. For that, special attention was given to the discourse about the reinforcement of the knowledge society to see if that had changed the status of those who had obtained a higher education degree.

4.4 Quality criteria

4.4.1 Scientific and practical values of the research

The scientific value of this research is significant. It does not appear that any educational research in Iceland has used systems thinking as a framework for researching rural development and the knowledge society. The application of adaptive cycles and socio-ecological theories will create

new opportunities for understanding discourse. Not much research is available on the role of higher education or research activities in Icelandic rural development, although this has for many years been a policy priority (Althingi, 2002; 2006; 2011).

In Iceland, the governmental policy about regional development comes from the Ministry of Industry and Innovation, and there the focus has been on the role of the knowledge society system as a job producer and an economic driver to increase the quality of life of the inhabitants in rural areas. However, higher education and research policy falls under the Ministry of Education, Science and Culture, and focuses on knowledge production and high standards of quality and competence in education and research (Althingi, 2002; 2006; 2011; Ministry of Industry and Innovation, 2010). There appears to be a mismatch in the governmental policy, which can have the effect that related systems might work against each other and create a collapse in one or more systems.

Women's participation in rural development is especially relevant to this study, since today more men live in the rural areas than women. In the research context, theories about eco-feminism and place-based pedagogy are used to understand whether getting a higher educational degree changes women's place and space in their communities, and how that affects the rural development system.

Rural development and the knowledge society in the Western Isles of Scotland shows different perspectives and approaches towards some of the above issues (Outer Hebrides Planning Partnership, 2013), which is helpful to reveal the discourse about the rural development system and the knowledge society, and to understand the difference in the perspectives and approaches that the Westfjords and East Iceland regions, and the Western Isles use to strengthen and reinforce the areas.

Some research (Chatterton & Goddard, 2000; Hedin, 2009; Nielsen 2010; Rinne & Koviula, 2005; Välimaa & Hoffmann, 2008) has found positive relations between higher education and research activities with rural development and economic growth. Various reports done by ministries have been written (Althingi, 2002; 2006; 2011; Ministry of Education, Science and Culture, 2010) about these positive relations. No theoretical research has yet been done in Iceland however, and local policies has been informed by research of similar situations abroad, i.e. reduced population in rural areas, the use of higher education and research activities to prevent this, and whether the strategies used by other nations have succeeded.

When combining matters such as the knowledge society, rural development, and gender issues in one research project, the value of the research could be significant for further analysis of this problem which is indeed a *wicked problem*, which are problems that cannot be solved by straightforward measures and/or by just authority (Head & Alford, 2013; Kolehmainen et al., 2016; Rittel & Webber, 1973). Rural issues are wicked problems and too often governmental actions that are believed to solve rural problems once and for all have been introduced (Kolehmainen, et al., 2016).

4.4.2 Ethical issues

It is important that conclusions drawn from research are valid, and that the integrity of the methodology used in arriving at those conclusions is beyond reproach (Gallagher, 2005). Some researchers claim that ethical guidelines or principles should not be so strict that they restrict the freedom of the researcher to uncover the truth, which can help in understanding the world we live in (Gallagher, 2005). The dilemma here is how the researcher can both uphold ethical guidelines and at the same time uncover the truth and benefit those involved.

One thing to understand is, as Gallagher (2005) says, since:

all research is carried out within a particular cultural, social and political climate means that to some degree this inherent climate will have an extraneous influence, both epistemologically and ontologically, on the overall research process and resultant findings (Gallagher, 2005, p. 12).

The values and beliefs of the researchers are also issues that are important to consider when working on research. This research is carried out in an economic, cultural, social, and political rural context, and the researcher's previous experience as a scholar, politician, and a resident in a rural community, and her personal view of life, will reflect this. The challenge is to understand the effect this might have on the conclusions of the research findings.

Before starting an interview, the interviewees were reassured that their identity would not be revealed if that was their request. They could also withdraw if they wished.

Another issue was related to the researcher's perspective as a feminist, and her awareness of how feminist views will affect the findings. However,

this is not a feminist research study, although some feminist theoretical approaches have been considered, especially when looking at the status and place of higher educated women in a rural setting. To broaden the perspective of the study, higher educated men were also interviewed.

The researcher was fully aware of those issues and kept them in mind during the work, not letting those views and beliefs affect the trustworthiness of the findings. I have also made sure to have theoretical background and research studies to support the perspective that I brought to the research, including feminist theories, the resilience theory, theories of place and space and the triple-loop learning. At the beginning of the study information about the research was sent to The Data Protection Authority.

The conceptual frameworks of this thesis, including resilience theory and place-based approaches, are also discussed and put into the context of various concepts, key events, and developments related to that framework.

As the work on the project developed over time events in the development of the knowledge society and rural development meant that the research was calling for other kinds of knowledge. In the beginning, the researcher had a view of knowledge production reflecting views held at the early stages of the changes addressed in the thesis. As the project developed, the researcher's understanding and analysis led to the consideration of the value of other forms of knowledge, and a need for epistemological pluralism, which combines scientific and local knowledge in trans-disciplinary research projects.

4.5 Summary and discussion

This chapter gives an overview of the methods that were used when analysing data and some related methodological issues. The analysis was conducted in three stages and three methods were chosen. They are, first, a historical research method when analysing various data. This gives an overview of the development of the knowledge society and rural development from 1970. Secondly, historical discourse analysis was used when analysing chosen official data conducted at the political level to find common discursive themes that reflected the policy discourse about the knowledge society and rural development. Third, a thematic approach using the In Vivo coding method was used when analysing the semi-structured interview transcripts in order to identify similar themes found in the official documents, and to let the participants' voices be heard.

The methodology and methods used in this thesis are qualitative methods. Qualitative research methods work particularly well with small samples, Hammersley (2006) emphasizes that everything should be measurable, and by doing so society is looked upon as a machine

in which all the various parts of a national society are treated as designed to serve one another, and as capable of being re-engineered so as to maximise the performance as of the whole (Hammersley, 2006, p. 85).

He also states that this is frequently done to serve the political system, which promotes this measurement as a key for society to be successful.

This is the basis for what has become a standard argument in current political discourse; that there needs to be continual improvement in the performance of all institutions, so as to ensure national success, or even survival, in the global economy (Hammersly, 2006, p. 85).

In the context of the historical discourse analysis method and the thematic approach chosen for this research, the weakness in using historical discourse analysis lies in the fact that analysing a text can give an understanding on certain phenomena, but to enhance this understanding, it is necessary to use it 'in conjunction with other methods of analysis' (Fairclough, 2008, p. 15). Kvale (1996) talks about ten internal critiques of interview research (p. 292) that critics use when discussing the value of interview research. One argument says that interview research is, for example, individualistic, intellectualistic, and insignificant. However, interviews are often used in combination with other research methods, 'which will provide a more multifaceted view of the phenomena investigated' (Kvale, 1996). So using these two qualitative research methods, discourse analysis and thematic coding of interviews, in combination minimizes the weaknesses of each method.

To understand human behaviour, 'the knowledge of the settings in which that behaviour takes place' (Pinch, 1998, p. 565) is necessary and should be taken into account in any evaluation process (Hummelbrunner, 2007). The research goal, to analyse the story of the interaction of the knowledge society with rural development, and the perception of people involvement from different angles, and therefore make the understanding of this interaction more complete. To better understand this interaction, it

was important to visit and spend time in each of the three places, the Westfjords, East Iceland, and the Western Isles.

The knowledge society, particularly higher education, distance learning, and research activities provided by the university sector, has been developing since 1970 and has had an impact on rural development. In the next chapter emphasis will be on this development, and discourse in general. Then the development of the knowledge society and discourse in Iceland will be addressed, and finally this development in Scotland and the Highlands and Islands will be discussed.

5 The knowledge society and rural development

Western society has emphasized the relationship of knowledge to increasing economic prosperity and has made the availability of knowledge a key goal. To reach this goal, there has been a focus on the reinforcement of higher education and research activities. An increased number of people are pursuing degrees in higher education and the roles of universities have expanded (Collini, 2012; Fitzimons, 2006). As societies change, the concept of the knowledge society faces new demands, which can be linked directly to ideological changes in societies, e.g. the women's movement in the late 1970s, the fall of communism and growth of capitalism and neo-liberalism in the 1980s, and globalization in the 1990s (Keyne, 2001; Stimson & Stough, 2008). Neo-liberalism emphasises open, competitive and deregulated markets and 'represents the optimal mechanism for economic development' (Baker, 2015, p. 191). In the context of rural development it meant a withdrawal of state interventions in rural areas (Baker, 2015).

In this chapter the development of universities and the knowledge society in general, in Iceland and the Highlands and Islands of Scotland, the Westfjords and East Iceland and the Western Isles since 1970 will be introduced. This is a descriptive discussion, which has the goal of telling the story of this development with a focus on bringing into the light the interaction of universities and the knowledge society within rural development. A discussion about higher education from a gender perspective is also put forward, where the emphasis is on place-making for higher educated women. Later in the thesis higher educated men's perspectives will be revealed to see if there are any gender differences in place-making. Finally, an overview of two key events in the rural development in Iceland, and one in Scotland, will be discussed. The development of the knowledge society and these two key events will be put into the context of the social-ecological resilience theories and place-based approach, using the adaptive cycle framework model as a way of describing and analysing the events development. Population development in the Westfjords and Iceland linked to historical events and projects will also be discussed using the adaptive cycle framework model.

5.1 Developments in universities from 1970

The European university system is based on the 'Humboldtian Idea of the University' (Albulescu & Albulescu, 2014; Collini, 2012; Nybom, 2003). This idea, which came forward in the early 19th century, rested on five cornerstones, the university and education, the holistic nature of knowledge, the primary value of research, a national culture dominated and distinguished by higher learning, and the promotion of higher learning, science and development as the core obligation of the central state (Albulescu & Albulescu, 2014; Collini, 2012; Nybom, 2003; Rinne et al., 2005). These cornerstones are still fundamental today, because teaching and research are the basis for a university system. Rinne et al. (2005) stated that the European university

has been characterised as insisting on a distinction between theory and practice, elitism, an emphasis on autonomy, and aloofness which showed in a tendency toward becoming an ivory tower institution (Rinne et al., 2005, p. 97).

Not even globalization and the knowledge society have been able to change this, even though changes in the university system have taken place. These five cornerstones above are still the foundation on which the system rests (Albulescu & Albulescu, 2014; Collini, 2012; Nybom, 2003; Rinne et al., 2005).

Until 1980, the core activities of universities were teaching and research. With respect to teaching, the role of universities was to provide the public with a practical education. The educational objective was to educate people toward certain occupations and therefore the skills and knowledge that the individual had gained at the end of his/her education were clearly defined (Collini, 2012; Fitzimons, 2006). But this teaching function was initially offered only to the 'national élite of politicians, industrialists, the clergy, and civil servants' (Chatterton & Goddard, 2000, p. 484), preserving the status of the élite in society (Chatterton & Goddard, 2000). Research emphasised the production of basic knowledge for the academic community. It can be argued that universities monopolized knowledge production and kept it inside the élite circle of the academy (Chatterton & Goddard, 2000; Rinne & Koivula, 2005; Välimaa & Hoffmann, 2008).

Since 1980, the role of universities has changed. This is mostly due to political and technological changes, including neo-liberalism, globalization and the creation of the World Wide Web, which started to have an

influence after 1980 (Albulescu & Albulescu, 2014; Stimson & Stough, 2008; UNESCO, 2005; Välimaa & Hoffmann, 2008).

These changes have influenced the higher education system with the Bologna Declaration, which was signed in 1999 by 29 ministers of higher education in Europe. Neave (2003) talked about the three faces of Bologna; the technical aspect, the political aspect and the evolving relationship between national and superordinate communities. The technical aspect refers to the homogenous degree structure from the bachelor's through to the doctoral level in all higher education systems in the European Union. The political aspect refers to the policy of common practices, standards, competition, and the efficiency that was built into the higher educational system of Europe. Finally, the evolving relationship between national and superordinate communities refers to the identity of the individual university; that is, does a university identify itself with the international community and Europe, the national community or the regional community to whom it is accountable? (Neave, 2003).

The Bologna Declaration has made it easier for students to get their study accredited in universities across Europe. The system and the curriculum is broadly similar everywhere and therefore it should be easier for students to take individual courses wherever they choose. The Bologna model is set up as a three year Bachelor degree, followed by a Masters after five years and a doctorate after seven to eight years. This is a standardised credit unit system that countries have agreed upon and put into their university policy. It stimulates cross-national student traffic, and enhances the employability of students because the qualifications are comparable and transferable (Collini, 2012; Neave, 2003).

With the Declaration, political influence did increase, because it was the politicians who signed the Declaration and decided what should be included and what should be left out. Efficiency, competition, quality and standards were methods that were agreed upon and had to be included in the policies of universities. Now universities have similar framing about the study opportunities that they offer and the creditation system is comparable (Collini, 2012; Neave, 2003).

University research has also undergone changes. With the Lisbon Strategy from 2000, more cooperation between the public and the private sector in the field of research has been emphasised. One aim has been to develop and strengthen knowledge-based economies both at national and regional levels. Universities and higher educational institutions are looked upon as key players in regional development, especially in rural areas (Albulescu & Albulescu, 2014; Chatterton & Goddard, 2000; Hedin, 2009; Peer and Penker, 2014; Välimaa & Hoffmann, 2008). Emphasis has been on

regional innovation by bringing together the private sector, universities, business and financial support. Funding for research projects must meet regional criteria and if those projects do not meet collaborative criteria it is difficult to get funded. As a result, for many research institutions, there is a problem getting project funding unless the projects fits within these policies context (Chatterton & Goddard, 2000; Hedin, 2009; Heng et al., 2012; Peer & Penker, 2014; Välimaa & Hoffmann, 2008).

UNESCO, European Union and various governments support these changes by pointing out the importance of higher education and research activities in national, regional and rural development (Albulescu & Albulescu, 2014; Chatterton & Goddard, 2000; UNESCO, 2005; Rinne & Koivula, 2005; Välimaa & Hoffmann, 2008). That is done in the name of economic growth and better standards of living, claiming that regions must be competitive and measure up to national criteria. Higher education and research are tools that are used to strengthen a nation's status. Universities are one of the key players used for that purpose, and universities collaborate because this is an important source of potential funding (Albulescu & Albulescu, 2014; Chatterton & Goddard, 2000; Heng et al., 2012; Peer & Penker, 2014; Rinne & Koivula, 2005; UNESCO, 2005; Välimaa & Hoffmann, 2008).

As a means to fulfil society's demands on being a key player in regional and rural development, universities are, increasingly, using technological progress as a foundation for economic prosperity. Numerous Western universities have opened branches in other countries or further developed distance learning to extend their reach. (Duke, 2002). Distance learning is another method that universities can use to increase their student body. It is marketed as a flexible option for study which can meet each individual's demands and needs (Collini, 2012; Duke, 2002).

Distance learning in universities can be viewed as both an opportunity and a threat. Universities face the change from being an élite and independent institution, to some kind of 'side' institution in a universally organized education system, closely connected to both economic and social foreign policy (Duke, 2002). It would seem to be imperative that universities rethink their place in light of world changes such as globalization, developments in technology, and increasing information flow (Albulescu & Albulescu, 2014; Collini, 2012; Mason, 2003). In the light of education and research, which are universities key roles, then information and communication technology has expanded university choices about how to organize higher education, e.g. with online learning options versus face-to-face teaching and learning (Mason, 2003).

5.2 Higher education and gender

University activities in rural Iceland were begun to promote economic growth, to stem the out-migration from rural areas, and to create more jobs for higher educated people. Gender issues have proved to be important factors in higher education in rural areas.

Increasingly, women have taken steps towards a higher education degree. Women and young people are more likely than other groups to move from rural areas to more urban ones, and some evidence points to the fact that those who move are the ones with a higher education degree (Faggian, McCann & Sheppard, 2007).

More men were enrolled in university studies in Iceland until 1995, when women started to outnumber them and the gap has widened (Table 6).

Table 6. The rise in number of university students in Iceland from 1975.

	1975	1985	1995	2005	2013
Total	313	4.807	7.475	16.626	19.836
Males	163	2.324	3.073	6.190	7.449
Females	150	2.483	4.402	10.436	12.390

(Statistics Iceland, 2015e; 2015f).

Women worldwide have taken advantage of using distance learning more than men to study from their hometowns (Kwapong, 2008; Müller, 2008). In 2005 in Iceland there were 4.005 students registered in on-line learning at the university level, and 2.899 were women. In the Westfjords area 193 students were enrolled in higher education studies, 154 women and 39 men. In East Iceland, 212 students were on-line learning students, 163 women and 49 men. Since then the gap between the sexes has been stable irrespective of increase or decrease in the student population. This has happened at the same time as colleges have gotten higher education status, mostly in the field of study line where women have dominated, such as primary school teachers and social pedagogues (Statistic Iceland, 2016g; Jóhannsdóttir, 2008). Table 7 shows this development in distance learning students over a period of time.

Table 7. The number of distance learning students in 2005, 2009 and 2013.

	Iceland	Westfjords	East Iceland
2005			
Total	4.005	193	212
Men	1.107	39	49
Women	2.899	154	163
2009			
Total	6.588	215	349
Men	1.844	67	74
Women	4.744	148	275
2013			
Total	4.039	115	224
Men	1.614	45	71
Women	2.425	70	153

(Statistic Iceland, 2015g)

The decline in population in the Westfjords and East Iceland has been continuous ever since the transferable quota system was established in 1991. The same can be said about other coastal communities around the Atlantic Ocean, such as the Western Isles (Karlsdóttir & Ingólfssdóttir, 2011). More men live in rural areas than women (Icelandic Regional Development Institute, 2006b; Karlsdóttir & Ingólfssdóttir, 2011). The population in the Westfjords in 2015 was 6.970, with 3.415 women living in the area and 3.555 men. In East Iceland, 12.496 inhabitants live in the area, 5.915 women and 6.581 men. The gender gap in East Iceland is greater than in the Westfjords. (Statistic Iceland, n.d.). This reduction in women over time could lead to a gender imbalance in rural areas, a concern recognized by the authorities both in Iceland and the Scottish Western Isles (Icelandic Regional Development Institute, 2013; Outer Hebrides Community Planning Partnership, 2009).

What is also vital to have in mind in this context is that

during the era of neo-liberal economic policies, the state's social welfare role has been reduced and an optimistic discourse on the 'strength' of the individual governs (Karlsdóttir & Ingólfssdóttir, 2011, p. 164).

One part of this research involves adopting a gender perspective from the perspective of the individuals who pursue higher education in rural areas, mainly women. This trend arises from the demands from rural inhabitants about having an access to higher education and the emphasis governments have put on the importance of higher education in rural areas in recent years (Icelandic Regional Development Institute, 2001, 2005, 2009). The main reason for choosing to focus on gender in this thesis is to investigate if getting a university degree changes the place, space, and status of women who choose to stay, live, and study in rural communities.

Women want to live in more diverse and populated communities because there are more jobs and more diverse job opportunities for women in urban areas, and it seems that socially they feel more comfortable there (Edwardsdóttir, 2013; Karlsdóttir & Ingólfssdóttir, 211; Proppé, 2004; Verstad, 2001). Some women who have moved away say that 'services and facilities, living environment, livelihood and social life were better after the move' (Karlsdóttir & Ingólfssdóttir, 2011, p. 168). Men, women, the community, and the authorities maintain the dominant gender roles (Pini, Moletsane & Mills, 2014; Proppé, 2004; Sheridan, McKenzie & Still, 2011). Even though women feel that they should have the same opportunities and rights and that the responsibility of the household should be shared equally between sexes, the Icelandic reality seems to be different. In rural areas women have more responsibility for the household and have limited space and fewer other opportunities than men (Edwardsdóttir, 2013; Proppé, 2004), especially now as the trend in rural areas seems to be that when job opportunities decline, the men seek jobs outside their communities, leaving women 'shouldering the responsibility for child-care and taking care of the home, along with their formal work-related issues...' (Karlsdóttir & Ingólfssdóttir, 2011, p. 176).

A similar pattern is to be found in the Western Isles. More women leave the rural areas of the isles, along with young people. This has been a worry for the authorities in the Western Isles, who have stated that such a continuing loss of part of the population could lead to a gender imbalance on the island and that the problem should be addressed (Outer Hebrides

Community Planning Partnership, 2009; 2013). Because of the loss of jobs in the Isles and a homogenous employment market, men have left the islands frequently to work off-shore, leaving their family behind. With the men absent, women have to take even more responsibility for the household than before. That limits their space and opportunities to function in other areas of society (Outer Hebrides Community Planning Partnership, 2009; 2011). Proppé (2004) claims that if people experience a constant mismatch between their own ideas and reality, it is more likely that those people will leave the community. Men's work away from home could also lead to a situation of permanent out-migration (Karlsdóttir & Ingólfssdóttir, 2011).

According to research on resource management (Dowling, 2011; Edvardsdóttir, 2013; Karlsdóttir & Ingólfssdóttir, 2011; Proppé 2004) women do not have access to decision making in fishing communities, especially in the fishing industry. Icelandic women have weak access to the independent transferable quota system, meaning that the men own the boats, and the quota that goes with them. Men are fishermen who catch the fish, while women work at the fish plants. Women are in the minority as boat owners, and are therefore excluded because they do not own the quota. Research has shown that overall women are rendered powerless in the management of resources. The fishing industry is a male-dominated field, minimising women's power and opportunities to take part in the discourse and act in that field. The discourse is male dominant, limiting women's access to a discussion about the system, and overlooking women's interests, the effect the system has on them, their attitudes towards it, and how they experience it. Research (Byrne, Duvvury, Macken-Walsh & Watson, 2013; Pini et al., 2014; Sheridan et al., 2011) has also shown that other sectors, such as the agricultural or business sector show the same reality.

It is not only in Iceland that women's space for power, decisions and action is limited. In a discussion by Pini (2006) about women in local authorities in rural Australia, she finds that women in local authorities do not have the same access to power as men, because of political inexperience, no access to a network, and a lack of support from institutions and communities. Women's action space is limited by the male discourse, which the whole community maintains. The female discourse is not heard and women's opinions are given less importance (Edvardsdóttir, 2013; Karlsdóttir & Ingólfssdóttir, 2011; Pini, 2006; Sheridan et al., 2011).

Research evidence shows that women frequently decide on the family place of residence (Bjarnason & Thorlindsson, 2006; Edvardsdóttir, 2013;

Ní Laoire, 2007; Pretty, Bramston, Patrick, & Pannach, 2006; Rye, 2006), so it is important for communities to listen to the voices of women. A sustainable, resilient community must think about their inhabitants, not just about the economy and the environment, but also the social and cultural factors, which are often minimised when talking about strengthening communities in rural areas. In current policy, the emphasis is on creating jobs and looking at the economic effects that this creates. The role of the knowledge society in community development needs to be considered more carefully, not least by the communities themselves.

5.3 Changes in knowledge production and increased role of universities in regional development

When looking at national, regional, and rural development, and the knowledge society's development in Western societies, the interplay between these systems has been based on the theories and practices that dominate Western actions in any given time. In the 1970s, the Western states used top-down models to govern development, at national, regional, and rural levels. Control was centralized and the State had great influence in the economic and social sectors through funding and intervention at all levels. The universities were élite institutions funded by the state, servicing their needs the state required by graduating people with the education that was needed for the society. At that time, the research activities were mostly basic research done by and for academia (Chatterton & Goddard, 2000; Collini, 2012; Fägerlind & Strömqvist, 2004).

In the 1980s when neo-liberal theories began to have an influence, Western States began to withdraw from previous intervention models, and methods from the private sector began to be implemented in the public sector. Universities had to run their organizations in an open market where efficiency and competition guided the business operation and were required to show results to get funding. Universities had to move from the 'élite student' policy into a policy that allowed access for everybody that had appropriate qualifications to enter universities, and work with outside bodies in research projects (Chatterton & Goddard, 2000; Collini, 2012; Fägerlind & Strömqvist, 2004).

After the 1990s, emphasis on regional growth, technological changes, and globalization led to more emphasis of Western states on the knowledge society. The belief that the knowledge society and the knowledge-based economy were the keys to national and regional economic growth and prosperity, increased the demand from the State

that universities should play a leading role in national and regional development. Knowledge gained more importance, because it is implicated 'in the social, cultural and economic wellbeing of societies' (Wheelahan, 2010, p. 88). In an attempt to understand and explain the development of knowledge production, researchers have identified three modes of knowledge (Wheelahan, 2010; Caryannis & Campbell, 2012).

The shift of knowledge production from mode 1 to mode 2 was defined and discussed by Gibbons, Limoges, Nowotny, Schwartzmann, Scott and Trow in 1994. Mode 1 is the traditional knowledge production and is disciplinary based inside the university system; mode 2 is trans-disciplinary, social and economic contested and focuses on 'knowledge application and a knowledge-based problem-solving' (Caryannis & Campbell, 2012, p. 3) and mode 3 is a sustainable system that has holistic perspectives of the environment, economy, society and culture (Caryannis & Campbell, 2012). It can be said that mode 1 is a knowledge production for the sake of knowledge but mode 2 and 3 produce knowledge for the society and its economy. One must not look at this development from the perspective of one mode replacing another, but as a supplement.

These knowledge production modes have been put into the context of the *Triple helix*, the *Quadruple helix* and the *Quintuple helix models*, where mode 1 and 2 are seen as the *Triple helix model* and mode 3 as the *Quadruple and Quintuple helix models*. The *Triple helix model* is the core model, bringing universities, industries, and governments together in knowledge production through cluster forming and innovation where codified knowledge is in the foreground and is the dominant model used in rural development. This is the model that is dominant in universities and the knowledge society's operation. (Caryannis & Campbell, 2012).

When the *Quadruple helix model*, representing the 'media-based and culture-based public and civil society' (Caryannis & Campbell, 2012, p. 13) is added to the Triple helix model, the culture, values and life styles of the public plus local knowledge become part of the helices framework. The *Quintuple helix model* brings in the 'perspective of the natural environments of society and the economy for knowledge production and the innovation system' (Caryannis & Campbell, 2012, p. 17). The *Quintuple helix model* can be seen as a framework for transdisciplinary analysis of sustainable development and social ecology. It approaches knowledge production from a holistic point of view, where environmental, economic, social, and cultural aspects are validated (Caryannis & Campbell, 2012).

This change from mode 1 to mode 2 has led to an increased number of students entering universities and research activities that are more connected with the national and local surroundings. With these changes a third task was added to the university system, along with teaching and research, which was co-operation with both national and local society, and regional and rural development, with an increased emphasis on the knowledge-based economy (Albulescu & Albulescu, 2014; Beerkens, 2008; Chatterton et al., 2000; Collini, 2012; Heng et al., 2012; Peer & Penker 2014; Rinne & Koivula, 2005; Välimaa & Hoffmann, 2008). Today universities are seen as major players in national and local economic prosperity and the nation's future and economic growth is thought to be realized partly through higher education, research, and innovation (Albulescu & Albulescu, 2014; European Foundation for the Improvement of Living and Working Condition, 2005; Peer & Penker, 2014; Pick, 2006; UNESCO, 2005).

In recent years mode 3 has gained attention, because it better captures the idea about the universities' role in forming a knowledge production system, where people, culture, and technology are the basis. Mode 3

is based on a system-theoretic perspective of socioeconomic, political, technological and cultural trends and conditions that shape the co-evolution of knowledge with the knowledge-based and knowledge-driven, gloCal (globalization and location) economy and society (Carayannis & Campbell, 2011, p. 336).

Mode 3 aims at being a sustainable system that has holistic perspectives of the environment, economy, society and culture in its attempts at knowledge production (Carayannis & Campbell, 2011). This thesis argues that universities and the knowledge society must add the Quadruple and Quintuple helices to their operations to fulfil the role of being key players in global, national, regional, and rural development.

In the next section, the development of the knowledge society, with emphasis on university activities, and the interplay between the knowledge society and rural development in Iceland and Scotland from 1970 will be discussed.

5.4 The development of the knowledge society in Iceland and Scotland from 1970

5.4.1 Iceland

The period from 1970–1990 was characterized by a certain stagnation in Iceland with respect to university activities; including higher education and research. In 1990s neo-liberal theories, which emphasise marketization, efficiency, privatization and competitiveness, globalization, with its flow of technology, capital, knowledge, people and values and technological changes, such as the creation of the World Wide Web, became influential. The system became homogenous when colleges received university status and the number of students entering into higher education increased. (Table 6). These external influences had great impact on the knowledge society system in 1990s, with increasing number of universities being established, especially in the private sector. Universities were now competing for students and capital.

According to Icelandic law, which came into effect July 1st, 2006, a university is

an independent educational institution which conducts teaching, research, conservation and search for knowledge, and creativity in the fields of science, education, technology or arts (Althingi, 2006, p. 1).

It continues: 'The role of Higher Education Institutions is to contribute to the creation and dissemination of knowledge and skills to students as well as society in general' (Althingi, 2006, p. 1). The 2006 law is more inclusive than the law from 1998, which stated that the university's role is to work for the community and to strengthen its infrastructure and the status of Icelandic society in general (Althingi, 1998). The university laws from 1998 gave private parties permission to establish universities with the approval of the Ministry of Education, Science and Culture (Althingi, 1998).

Four of the seven universities in Iceland are state universities: the University of Iceland, University of Akureyri, Agricultural University of Iceland, and Hólar University College. The latter three are based in rural areas of Iceland. Two of the private universities, Reykjavík University and the Iceland Academy of the Arts, are located in Reykjavík, and Bifröst in the western part of the country. No universities are located in the Westfjords or East Iceland (Jónasson, 2004). Figure 11 shows the location of the seven Icelandic universities and Table 8 show this academic drift.

Only a few colleges provided secondary education in the 1970s, but their number increased as time passed, and now there are about 36 secondary colleges operating all around Iceland that offer both academic and vocational studies (Menntagátt, n.d.). Some of them offer courses at university level, mainly vocational courses that are closely linked to the economy, and these have the same entrance qualifications as in universities. That indicates a drift towards the higher education sector (Jóhannsdóttir,

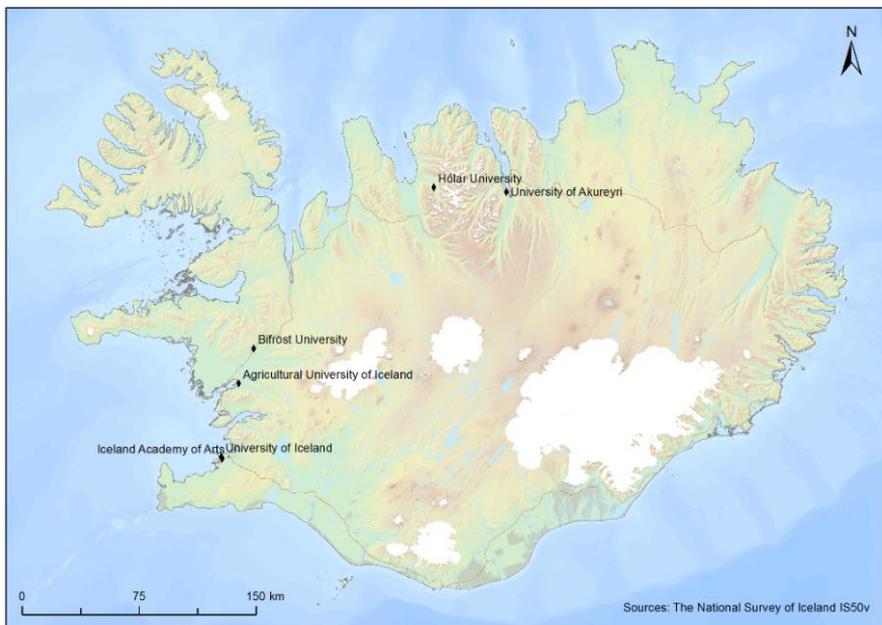


Figure 12. Universities in Iceland.

2008). An example is the development of agricultural and fisheries studies, but while agricultural studies have moved from the secondary level to university level, studies such as marine engineering and navigation that are related to maritime training have remained at the secondary level (Technical college Reykjavík, n.d). However, natural resource sciences, related to fisheries management are taught at university level at the University of Akureyri (University of Akureyri, n.d.) and studies of environment and natural resources are offered at the University of Iceland at postgraduate level (University of Iceland, n.d).

Table 8. The academic drift in the university sector in Iceland since 1970.

Institution	School	University	1970 – 1990				1991 – 2014			
			Research	BA, BS, BEd	MA, MS, MEd	Ph.D	Research	BA, BS, BEd	MA, MS, MEd	Ph.D
University of Iceland (UI)	1911	1911	yes	yes	yes	yes	yes	yes	yes	yes
Iceland University of Education (IUE)	1908	1971	yes	yes	no	no	Merged with UI 2008			
University of Akureyri (UA)	1987	1987	no	yes	no	no	yes	yes	yes	no
Iceland Technical School (ITS)	1964	1973	no	yes	no	no	Merged with RU 2005			
Reykjavik University (RU) Private	1998	1998	no	no	no	no	yes	yes	yes	yes
Iceland Academy of the Arts (IAA)	1932	1999	no	no	no	no	yes	yes	yes	no
Agricultural University of Iceland (AUI)	1947	1999	no	no	no	no	yes	yes	yes	yes
Bifröst University (BU)	1918	1994	no	no	no	no	yes	yes	yes	no
Hólar University (HU)	1881	2003	no	no	no	no	yes	yes	yes	no

(Jónasson, 2004; Jóhannsdóttir et al, 2013).

The development of a knowledge society did not become an issue in rural development until after 1990. A possible reason is that because of the quota legislation in fisheries in the 1990s, the industry faced difficulties which led to out-migration from these areas (Andrésdóttir, 2013; Hall et al., 2002; Icelandic Regional Development Institute, 1999). Theories about endogenous growth and theories about the knowledge-based economy as a key to regional growth, prosperity and well-being, started to have an influence on rural development plans after 1990 (Albulescu & Albulescu, 2014; Chatterton & Goddard, 2000; Fägerlind & Strömqvist, 2004; Heng et al., 2012; Peer & Penker, 2014).

Iceland's rural areas have, since 1990, been moving from a primary production society to a knowledge-based society and therefore higher education and research activities matter when considering rural development policies. There has been a decrease in agricultural and fisheries occupations, as in other market societies, and such evolution is mostly observed in urban areas, with the growth of cities as a main characteristic of market societies. One of the consequences of this is migration from rural to urban areas and many people prefer to reside in urban areas because they value the diverse opportunities available there (Andrésdóttir, 2013; Icelandic Regional Development Institute, 2006b).

Ever since 1999 the development of the knowledge society has been an issue in various ways in Iceland's rural development plans. However, it is interesting that in the rural development plan for 2014-2017, nothing is said about the knowledge society (Althingi, 2014).

In previous rural development plans, the knowledge society was to be built up in rural areas using both public and private partnerships, meaning that a *Triple helix model* was to be encouraged, where universities, research institutions, private firms, and national and local authorities worked together to create the knowledge society. The emphasis was on higher education and research activities that encouraged innovation in rural areas, creating learning regions. The goals were to create economic growth, increase jobs for higher educated people, and stop out-migration. (Althingi, 2002, 2006a, 2011; Icelandic Regional Development Institute, 1999).

One of universities' roles is to reach into the whole community (Althingi, 2006). It is therefore necessary to examine whether and how universities have contributed to the reinforcement of higher education and research activities in Iceland, according to mode 3 knowledge production and to the *Quadruple helix* and the *Quintuple helix model*. Universities

have advanced their distance learning in higher education and today most universities in Iceland offer part of their studies through distance learning (Eðvarðsson, 2001). What is relevant here is that at first distance learning was on offer for students living in rural areas (Jóhannsdóttir, 2010). Today, irrespective of the place of residence, individuals have the choice to pursue an education through distance learning in those courses that are offered both as face-to-face learning and distant learning (Jóhannsdóttir, 2010). The University of Iceland encourages extensive research in rural areas through University Research Centres, based throughout Iceland (Ministry of Education, Science and Culture, 2010).

There are about 190 higher education knowledge or research institutions operating in Iceland’s rural areas today (Figure 12). Their funding comes from various sources, but most comes from the State, the local authorities, or private partners. Some research institutions are part of national research institutions, such as the nine University of Iceland’s Research Centres in rural areas, and the nine Natural History Institutes. Others are independent, e.g. The Icelandic Centre for Ethnology and Folklore (now one of University of Iceland research centres) and The Museum of Sorcery and Witchcraft (Ministry of Education, Science and Culture, 2010).

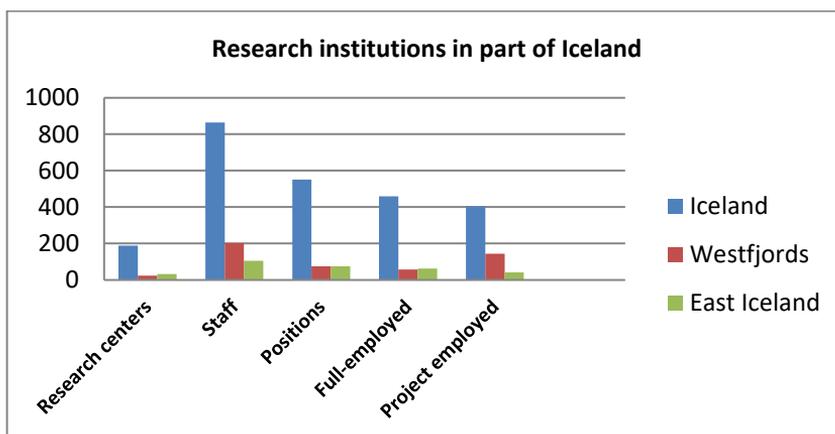


Figure 13. Research institutions in parts of Iceland in 2010.

In 2010, the Ministry of Education, Science and Culture formed a committee to look into the development of knowledge centres in Iceland. According to the report that was published the same year, the committee stated that economic and cultural effects of higher education and research

activities in rural areas in Iceland are: firstly, a growing number of students in rural areas, secondly, the rising level of education because it is more likely that people who graduate will settle in those areas and thirdly, that educational activities require highly educated people for various kinds of jobs. The knowledge society also increases the variety of jobs, innovation, and professionalism, which strengthens the employment sector and lifestyles, attracts more people to the area and creates connections and cooperation within and between areas. The knowledge society is said to have a positive effect on an individual's self-image and the area's image. Finally the economic effect the knowledge society creates lies in increasing tax money from communities, inhabitants, companies, and institutions. However, no references were given in the report that back up the above statements, so they seem not to be based on research (Ministry of Education, Science and Culture, 2010). These statements represent the committee members' opinions, or the governmental policy on what they believe the interaction of the knowledge society with rural development should be, whether it is the reality or not.

Higher education development in the Nordic countries has been considered as a policy tool which could boost rural development for many years. In a study on the contribution made by higher education to rural development, it was concluded that the following good practices have to be in place for optimal use of higher education institutions for rural development purposes (Hedin, 2009):

- a match between the education offered and the regional labour force demand
- project or problem based learning and student out-placement
- entrepreneurship programs
- an up-skilling and life-long learning approach (Hedin, 2009, p. 41).

The development of the knowledge society is believed to be the foundation for a powerful economy in rural areas and is strongly linked to economic growth, employment matters, and stopping out-migration. In this context, it is vital to consider whether out-migration can be stopped (or reduced/reversed) and whether higher education and research activities are the right tools to use. Perhaps it is more important to consider the knowledge society as a tool for the development of sustainable and resilient communities and the well-being of rural people instead of focusing on economic growth and number of inhabitants.

5.4.2 Scotland

Widening access to higher education and increased research activities has been government policy in Scotland for more than 20 years. In the 1970s, the Scottish university system was rather stable, with the four 'ancient' universities, which were established in the 15th and 16th century, along with four universities that were established in 1960s. The widening of access to higher education and increased research activities was the policy of the Conservative government in 1980s and 1990s, was the main issue in the policy of the New Labour government from 1997, and still is a key issue (Collini, 2012; Gallacher, 2006; Parry, 2006).

In a policy context the drivers for this development are neo-liberal theories, which focus on privatisation, marketization, deregulation, and competitiveness (Bachtler & Yuill, 2001; Keune, 2001). In the 1990s theories about endogenous growth at national, regional and rural levels became part of development plans, and since 2000 theories about place-based approaches have become influential (Forsberg & Lindgren, 2013; Margarian, 2013; Stimson & Stough, 2008). Globalisation and technological changes were also influential drivers in this context (Barca, McCann & Rodriguez-Pose, 2012; Stimson & Stough, 2008).

Before 1997, the Conservative government's reason for changing the university system was,

their desire to expand and change the higher education system to make it more responsive to the needs of the economy and to help create the conditions that would support economic development (Gallacher, 2006, p. 350).

A second reason for this change was 'the concern with demographic change and fears associated with the declining numbers of young people' (Gallacher, 2006, p. 350), while a third issue was social justice. When the Labour government came to power, no changes were made in this policy, apart from a greater emphasis on this policy and extending it to include an emphasis on lifelong learning. But the central driving force, the economic development rationale, did not change and remains at the heart of the knowledge society's development (Gallacher, 2006; Murray, 2011; Parry, 2006).

In response to these policy changes it can be argued that five main sectors can be identified within the Scottish higher education system. The first sector, which contains the four 'ancient' universities, provides full-

time undergraduate and post-graduate studies programmes and gets the most research funding. The second sector, the four universities from the 1960s, offers full-time undergraduate studies, but is also increasing students in post-graduate studies and its share in research. The third sector, the five post-1992 institutions, has established itself as a major provider of both full-time and part-time undergraduate courses. The involvement of these five institutions in post-graduate studies is increasing, but their share of research funding is limited. The fourth sector comprises the colleges that offer both further and higher education courses in both full-time and part-time modes. Their involvement in post-graduate studies and research activities is limited. The fifth sector is made up of the special colleges of art, drama and music, which offer undergraduate and post-graduate studies along with research in their specialist field of expertise (Gallacher, 2006).

The discussions relating to a university in the Highlands and Islands of Scotland, based in Inverness, started in the 19th century. After the Second World War relatively few people had university degrees and it was believed to be of utmost importance to increase this number of people in to take part in societal changes and the development of the country. After a debate about whether a new university should be established in Inverness or Stirling, the government voted for Stirling. The discussion of a university in the Highlands and Islands continued, but as the time passed, it became clear that establishing a traditional university in Inverness was not a priority (Hills & Lingard, 2003).

In the 1990s, the rural Highlands and Islands faced a continuing reduction of population, and voices for the establishment of a university in the region became louder. In 1991 a decision was made by the Scottish government to look into the possibility of establishing a university that would specifically serve the Highlands and Islands and bring into it all the colleges and research institutions in the region. A driving force in this decision was the advent of information technology and the internet, which made it possible for institutions at a distance to link easily to each other. In 1996 the Scottish government decided that funding should be made available for establishing The University of the Highlands and Islands (UHI). The main reason given for that decision was the possibility of moving Scotland from a production society to a knowledge-based society, and the traditional universities were considered too conservative to be the key players in that transformation (Hills & Linaard, 2003). In 2001 the UHI Millenium Institute was designated as a higher education institution, in

2008 it secured Taught Degree Awarding Powers, and in 2011 the UHI was formally awarded university status (Simco & Campbell, 2011).

The UHI consists of 13 academic partners located across the region (Figure 12). The Executive Office is in Inverness and is 'responsible for liaising with partners in matters to co-ordinate

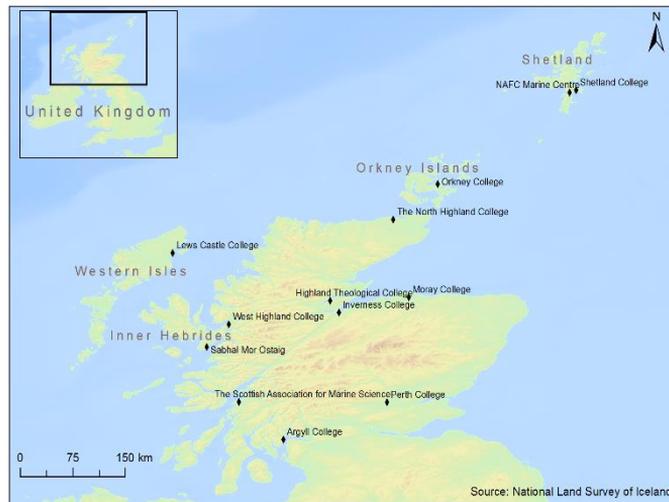


Figure 14. UHI partners

academic activities across the region' (Simco & Campbell, 2011, p. 3). Those activities comprise curriculum development, enhancement of learning and teaching, arrangements for quality assurance, and supporting the development of research, scholarship, and knowledge transfer across the region (Lews Castle College, 2013; Simco & Campbell, 2011; Tizard, Minty & Newton, 2001). The UHI academic partners are colleges which offer further and higher education at undergraduate and post-graduate levels, and are involved in research activities together with specialist teaching and/or research institutions. The UHI has a higher proportion of mature and part-time students than other universities in Scotland. It has had strong political support and has received funding from the Highlands and Islands Enterprise, the European Social Fund and the European Regional Development Fund among others. A key purpose of the university is to bring higher education opportunities to communities across the Highlands and Islands, which in turn will

- benefit from economic regeneration
- provide opportunities for community development
- celebrate the unique heritage of the region

- provide a viable alternative for young people who may have traditionally attended universities in the central belt of Scotland, but who wish to remain in their own communities for their higher education experience
- contribute to an improved demographic picture within the region, particularly in relation to the number of young adults in remote and rural areas (Simco & Campbell, 2011, p. 4).

The university is seen to be an important contributor in dealing with challenges such as increasing the population in the region, creating a knowledge economy and high value jobs, and assisting the creation of new and more ambitious businesses. It is not a virtual university, but offers courses both on-line and face-to-face. Students can also blend these learning methods together in their study (Simco & Campbell, 2011).

5.5 A closer look at the three research areas

5.5.1 The Westfjords

In 1970 a secondary school, which emphasised academic studies, was established in the Westfjords and based in Ísafjörður. In Ísafjörður, a secondary school, which emphasised vocational studies (mostly for boys) and a home economics school (mostly for girls) had been operating for some time (misa, n.d.) The process of founding an academic school had taken a long time, and the arguments for the foundation of a secondary school in the region were mostly related to rural matters. The Westfjords was facing out-migration, especially of young people. The importance of having a secondary school was used as a tool to stop this out-migration. The out-migration trend was such that first young people went away to urban areas for secondary school studies and later the parents followed. The school was also intended to increase the region's educational level and prepare young people for further studies, both at universities and technical schools. It was believed that if young people could get their secondary education in their home region, their roots in the area would be stronger and even if they went away for university studies, it was more likely that they would return (Skutull, 1970).

In 1974, several teachers at the secondary school in Ísafjörður founded an evening school, which aimed at giving people over 20 years of age the opportunity to take courses in languages and various leisure activities (Vísir, 2010). Adult classes had been established in some secondary schools

in Iceland, mostly in the Reykjavík area. Those classes were aimed at mature students who were on the job market, but wanted to get a secondary education and be qualified to apply for university studies. Those classes were taught in the late afternoons and in the evenings. In 1981 an adult class was established in the secondary school in Ísafjörður. The reason for doing so was because of pressure from the people themselves and as the headmaster said

adult classes have been very popular and many of those who have attended secondary education have graduated with the final exam of the secondary school system have attended university studies (Alþýðublaðið, 1981, p. 7).

The adult class was not run on a regular basis, only when there were enough students that wished to attend the secondary studies. In 1989 the secondary school established a department in adult education, which in the beginning focused mostly on courses in leisure activities. Gradually the operation grew and spread all over the Westfjords region. Icelandic language courses for foreign workers became the backbone of the operation (Mbl.is, 1997). As the operation grew, it became clear that there was great demand for education for adults that had not completed secondary education, and in 1999 The Westfjords Life Long Learning Centre was established. The goal of the centre was to reinforce education in the region, especially in adult education and life-long learning. The centre was also supposed to work in the field of higher education and distance learning (Haraldsson, 2009).

Distance learning, in which information technology was used, started in 1993 in the region, when the Iceland University of Education introduced a full-time B.Ed. study program training qualified teachers, and in 1998 the University of Akureyri offered a full-time B.Sc. study in nursing in the region. Since then, all Iceland's universities offer all or some of their studies through distance learning using computer-based study programmes, on-line conferences, or blended learning (Haraldsson, 2009; Jóhannsdóttir, 2010; Ólafsdóttir, 2004).

The University law from 1998 permitted the establishment of private universities and at the same time encouraged academic drift towards the university sector. That led to a wider demand from the Westfjords region that a state university which would base its activity on the area's strengths and specialities, would be established in the region. The same arguments were used for establishing a university as were used thirty years earlier

when the secondary school was established, namely the out-migration from the area, employment decreases in the agricultural, fishing and public sectors, low educational levels, and the need for mass higher education through distance learning. It was considered that a university would reinforce settlement in the area and promote Ísafjörður as a growth pole. A university with higher education and research activities was seen as a tool of rural development purposes (Althingi, 2005). After a debate about how increased higher education and research activities would be best met, the government decided in 2005 that a university centre would be established. The university centre's role was to take over all higher educational activities that had previously been under The Life Long Learning Centre, and those two institutions would operate separately. The University Centre was established as a non-profit organisation and operates on the basis of law nr. 33/1999. The Centre obtains most of its funding from the state through a contract with the Ministry of Education, Science and Culture (Althingi, 2005; University Centre of the Westfjords, n.d). The Centre's main role is to promote distance learning in the region and to find ways to design face-to-face course/courses at master's level based on the area's strengths and specialities. In 2008 a graduate course in coastal and marine management was established in cooperation with the University of Akureyri, who accredited the award since the University Centre does not have university status (University Centre of the Westfjords, n.d.).

Research has not been on the University Centre's agenda, although it has good relationships with the research institutions in the area (University Centre of the Westfjords, n.d.). Along with the Life Long Learning Centre and the University Centre, several research institutions operate in the region. They all work independently and are not hosted under any kind of an umbrella institution. Fourteen of those institutions are based in the northern part of the Westfjord region, five are based in the southern part and five in Strandir (Figure 14).

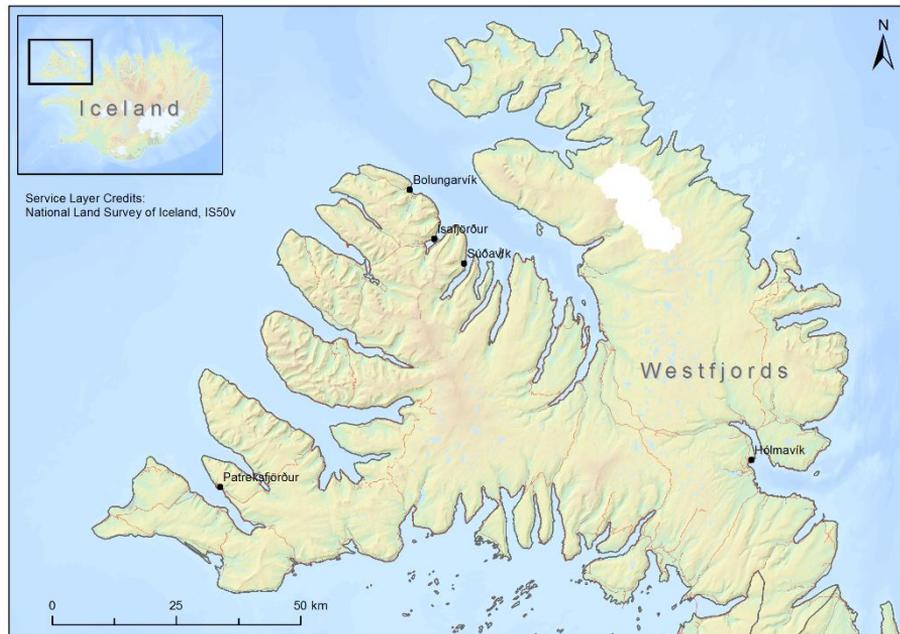


Figure 15. The location of higher education and research institutions in the Westfjords

The research institutions work in the field of education and knowledge creation, research and development, culture, service, and consultancy. Expertise lies in natural and environmental sciences, fishery sciences, culture, history and archaeology (Ministry of Education, Science and Culture, 2010). Table 9 shows the higher education and research institutions that operate in the area, their location, and when they were established. Most of the institutions were established after 2000 and the reason is mainly because of the emphasis that the government has put on the reinforcement of the knowledge society in the region, and that they were willing to fund establishments of various knowledge institutions and projects (Prime Minister's Office, 2008).

Table 9. The knowledge society in the Westfjords, locations and year

A knowledge institution	Location	Year
Junior College	Ísafjörður	1970
The Marine Research Institute	Ísafjörður (a branch office)	1976
The Natural History Institute	Bolungarvík, Patreksfjörður, Hólmavík	1997
The Westfjords Development Agency	Ísafjörður, Patreksfjörður, Hólmavík	1997
The Westfjords Life Long Learning Centre	Ísafjörður, Patreksfjörður, Hólmavík	1999
The Westfjords Forestry Agency	Þingeyri	2000
Museum of Iceland Sorcery and Witchcraft	Hólmavík	2000
The Multicultural and Information Centre	Ísafjörður	2001
The Icelandic Meteorological Office – Avalanches	Ísafjörður (a branch office)	2004
University Centre	Ísafjörður	2005
The Westfjords Marketing Office	Ísafjörður	2006
University of Iceland's Research Centre in the Westfjords	Bolungarvík, Patreksfjörður	2007
The Cultural Heritage Agency in the Westfjords	Bolungarvík (a branch office)	2007
The Innovation Centre in the Westfjords	Ísafjörður (a branch office)	2007
The Arctic Fox Centre	Súðavík	2007
The Cultural Office of the Westfjords	Hólmavík	2007
The Icelandic Centre of Ethnology and Folklore	Hólmavík	2008
The Growth Agreement	Ísafjörður	2008

(Ministry of Education, Science and Culture, 2010)

The main driver for this development is the state along with local authorities and their belief that knowledge creation is the answer to turn around the region's decrease in population and economy.

5.5.2 East Iceland

In East Iceland the knowledge society's development was a little different, since in 1919 a school in Eiðar was established to provide general education. That school provided education in agriculture starting in 1883, but expanded its function to become an important educational and cultural location for the region. The school operated until 1998, when it was closed due to changes in the educational environment (Mbl.is, 1999). In 1930 a home economics school (mostly for girls) was established in Hallormsstaður. For a while the state ran that school, but now it is run as a private institution with support from the state (Mbl.is, 2000; Vísir, 2014). In 1971 preparations for a secondary school in Egilsstaðir began and in 1979 it was established. The school focuses both on academic studies and vocational studies (Egilsstaðir College, n.d.). In 1986 another secondary school was established in the region, in Neskaupstaður, which focuses on vocational studies (Neskaupstaður Vocational College, n.d.).

Because of a long history of a general secondary education in East Iceland, the foundation of a secondary school in Egilsstaðir in 1979 and a secondary school in Neskaupstaður in 1986 can be considered the next step forward in developing the knowledge society. In 1988 a department of adult education was established at the vocational secondary school in Neskaupsstaður. The focus was on vocational courses, from one day to two weeks duration, and the goal was to provide courses in a student's hometown by teaching in various places in the region (Mbl.is, 1988). In 1998, the Life Long Learning Institution was established, which aimed at providing university studies in East Iceland and promoting lifelong learning and adult education. It aimed at

working closely with the secondary schools in East Iceland, universities in Iceland and other higher education institutions, the economy in the area and other stakeholders (Mbl.is, 1998, p. 1).

From the beginning, the emphasis was on distance learning, and in order for students to attend classes, video conference equipment was installed in every secondary school in the region. Even though the Life Long Learning Institution's target group was mature students, they also wanted

to introduce the possibility of distance learning for the secondary school students, and that technology made it possible to be a student in universities around the world without people having to leave their hometown (Mbl.is, 1998). By promoting access to higher education and life-long learning, the institution was believed to play a major role in rural development. The institution was seen as a field of cooperation between institutions that provided education, the economy, and local authorities. Its role was, on the one hand, to be the link between those who provide higher education, lifelong learning, and adult education in Iceland and, on the other hand, individuals, companies and institutions in East Iceland (Mbl.is, 2005).



Figure 16 The location of higher education and research institutions in East Iceland

In 2005 the Minister of Education, Science and Culture appointed a working group to investigate how to establish and run a university and knowledge centre in East Iceland. The approach in East Iceland was different from the Westfjords model, because from the beginning it was clear that one strong institution with learning centres located in the region was generally agreed upon. Such an institution would foster higher education, lifelong learning and research activities and in 2006 the Knowledge Net Institution was established (Ministry of Education, Science and Culture, 2005). The Institution's goal is 'to reinforce diverse development in the field of higher education, lifelong learning and research activities in East Iceland and to be the place, where cooperation in research, higher education and lifelong learning, international projects, innovation and development takes place' (Ministry of Education, Science and Culture, 2005, p. 5).

The former Life Long Learning Institution had fostered higher education lifelong learning and adult education, but now research activities were

added to the role of the Knowledge Net Institution (Ministry of Education, Science and Culture, 2005).

In a report published by the Ministry of Industry and Innovation (2010), there was a discussion about how the economic support system in rural areas could be simplified, more accessible and more efficient. A result was the establishment of one centre in each rural region, a so-called 'One Stop Shop' enabling all institutions in the region to participate. Those centres were a local authority responsibility so that 'active participation from the local people in economic development would be secured' (Ministry of Industry and Innovation, 2010, p. 5). The centres were to work closely with the economic players in the regions along with operating knowledge centres. The system was supposed to support the economy and increase the region's national competitiveness (Ministry of Industry and Innovation, 2010).

In *Iceland 20/20*, (2011), one of the proposals was the establishment of a 'One Stop Shop' in every region, under the responsibility of the Association of the Municipalities, in each region (Prime Minister's Office, 2011). Only East Iceland completed this task. Other regions, like the Westfjords region, did not manage to reach an agreement. In 2012, a One Stop Shop institution was established in East Iceland. Its headquarters are in Egilsstaðir, but branch offices are in Reyðarfjörður, Seyðisfjörður, Vopnafjörður, Neskaupsstaður, Djúpvogur and Fáskrúðsfjörður (Austurbrú, 2012).

The institution was intended to be the spokesperson for the development of the economy, community, public administration, higher education, lifelong learning, research, knowledge and cultural activities in the region (Austurbrú, 2012).

Most of the East Iceland research institutions are part of the One Stop Shop institution, but those who are not work closely with these institutions. There are several higher education and research institutions operating in the region. Their field of work is education and knowledge creation, research and development, culture and service, and consultancy, but with an emphasis on East Iceland's strengths and specialities. The institution's expertise lies in the fields of culture, forestry, environmental sciences, history, and archaeology (Ministry of Education, Science and Culture, 2010).

Table 10 shows the higher education and research institutions that are operating in the region, their location and when they were established.

Table 10. Knowledge society in East Iceland, locations and year

A knowledge institution	Location	Year
Junior College	Egilsstaðir	1979
The Development Centre of EI	Egilsstaðir	1983
The vocational secondary school	Neskaupsstaður	1986
The Natural History Institute of East Iceland	Neskaupsstaður, Egilsstaðir	1995
Center for Culture and History	Skrifuklaustur	1997
The Cultural Heritage Agency in East Iceland	Egilsstaðir (a branch office)	1998
The East Iceland Forestry Agency	Egilsstaðir	1999
The East Iceland Marketing Office	Egilsstaðir	1999
Soil Conservation Service of Iceland	Egilsstaðir (a branch office)	2000
The Cultural Office of East Iceland	Egilsstaðir	2001
The Knowledge Net Institution	Egilsstaðir, Reyðarfjörður., Seyðisfjörður, Vopnafjörður, Neskaupsstaður, Fáskrúðsfjörður	2006
The Growth Agreement	Egilsstaðir	2007
Mátís ohf	Neskaupsstaður (a branch office)	2007
University of Iceland's Research Centre in East Iceland	Egilsstaðir	2007
The Breiðdalur Centre	Breiðdalsvík	2008
The Innovation Center in East Iceland	Egilsstaðir (a branch office)	2009
Austurbrú – The One Stop Shop	Egilsst., Reyðarfj., Seyðisfj., Vopnafj., Neskaupsst, Fáskrúðsfj.	2012

(Austurbrú, 2012; Ministry of Education, Science and Culture, 2010).

Establishment of the East Iceland higher education and research institutions were distributed more equally over time than in the Westfjords

region. It seems that the knowledge society started earlier there, maybe because the foundation for some kind of a knowledge society was in place beforehand, with the school in Eiðar being the educational and cultural site in the area since its establishment in 1883. East Iceland managed to create a *One Stop Shop* institution, something that other regions have not been able to do in the same manner (Austurbrú, 2012; Prime Minister's Office, 2008).

In the next section, the development of the knowledge society in the Western Isles from 1970 will be discussed.

5.5.3 The Western Isles

One of the partners that form the University of the Highlands and Islands is the Lews Castle College, which is based in the Western Isles. The college was established in 1952 and is the only further and higher education college in the area. In the beginning, the college was run by the island's local authority. In 1993 it became an independent institution under the Further and Higher Education Act 1992 (Lews Castle College, 2013). The Lews Castle College main campus is at Stornoway, but the college runs three other campuses: the Benbecula Campus, where courses in Music, Gaelic language, and Health and Social care are offered face-to-face, the North Uist Campus, which offers face-to-face courses in Fine Art, and the Barra Campus, which is a learning centre that provides facilities to study on-line and through video conference equipment. The courses offered at the campus in Stornoway are in the fields of sustainable rural development, Gaelic language and history, engineering, construction and maritime studies, administration, business and computing, health, education, and hospitality. These courses are offered both as further education courses or undergraduate and post-graduate at higher educational level (Lews Castle College, 2013.).

The college hosts various research projects that are based on the island's specialities and strengths. These research projects are in the fields of marine energy, sustainability and sustainable living, archaeology, Gaelic language, pedagogy, meteorology, and climatology (Lews Castle College, 2013).

In a strategic plan for 2013–2017 a vision for the future of the college was put forward. The college's purpose is 'to deliver excellent learning and teaching, research and enterprise; locally, regionally, nationally and internationally' (Lews Castle College, 2013, p. 4). Several goals are identified on how to reach this vision. Among other things the college aims to increase its student population and continue to utilise and develop their blended learning approach so it would be relevant to student needs

and ambitions, and meet the needs of the economy and society. It also intends to sustain and develop high impact research, enterprise, and knowledge exchange activities in relationship with the area's economy, and ensure that the vision and purpose reflects the commitment and connection to these students, communities and other stakeholders (Lews Castle College, 2013).

Lews Castle College is an active partner in rural development strategy on the islands, with a key role in the *Single Outcome Agreement* for the Western Isles. By offering its courses on-line, face-to-face or blending those approaches, by running satellite campuses that offer higher education courses in remote areas, and by doing research that is based on the area's strengths, the college shows that it is a player in the rural knowledge society and in effort to secure sustainable development in the islands (Lews Castle College, 2013; Comhairle nan Eilean Siar, 2013).

5.6 Key events in rural development in Iceland and Scotland

When the secondary schools in Westfjords and East Iceland were established in the 1970s, it was believed that out-migration could be stopped and the possibility of students, even though they had to move in order to get a university degree, returning home after graduation would increase (Skutull, 1970). The same aspiration was in place when the stern trawler project was launched in 1971 and the knowledge centres and research institutions were established in the 1990s (Andrésdóttir, 2013; Hall et al., 2002; Icelandic Regional Development Institute, 1999). However, the aspiration towards the quota legislation in 1983 was linked to the environment and the transferable quota legislation in 1991 was linked to economy.

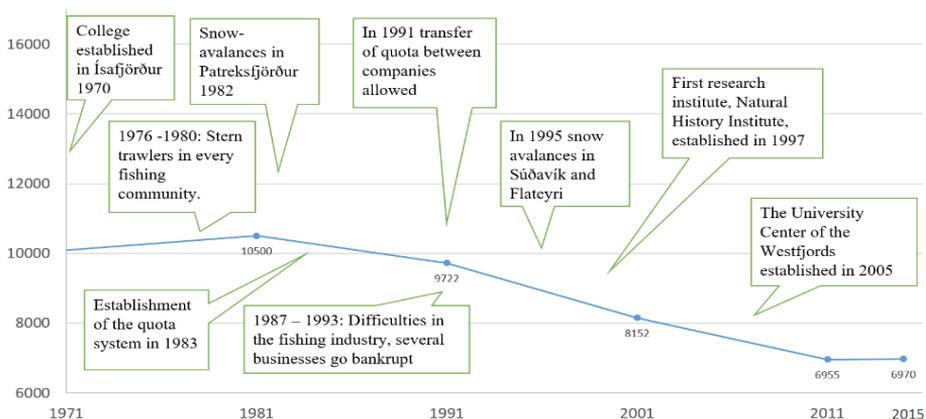


Figure 17. Population development in Westfjords related to projects and historical events since 1970

Figure 16 and 17 show population development in the Westfjords and East Iceland from 1970 linked to some historical events and launched projects. The goal in rural development is to increase rural population and as seen, some events and projects have more impact on that goal than others (Andrésdóttir, 2013; Hall et al., 2002; Herbertsson & Eypórsson, 2003; Ómarsson, 2009). Other events and projects have had different impacts that are more related to quality of life and well-being of rural inhabitants, but often they have not been measured by any standards, and need to be addressed..

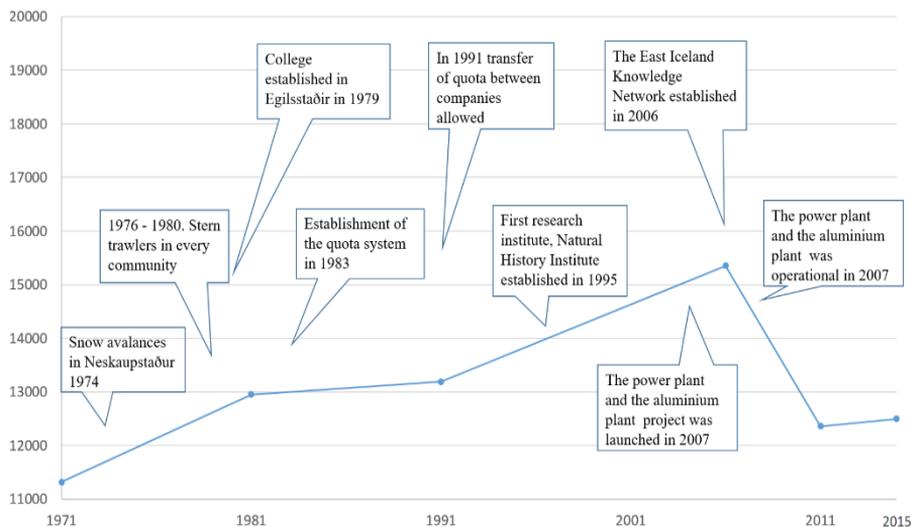


Figure 18. Population development in East Iceland related to projects and historical events since 1970.

In this chapter key events that influenced rural development in Iceland and Scotland will be introduced and discussed in a descriptive way, focusing on the global, national, and regional flow of policies that guided the actions agreed upon in the name of rural development. Those events are the stern trawler project in 1971, the quota legislation in 1983, and the transferable quota legislation in 1991 in Iceland. In Scotland the development of the Land reform act in 2003 will be under scrutiny. They are good examples of how projects that are agreed on at a governmental level interact with rural development, often in different way than expected.

5.6.1 Social and economic concerns: the stern trawler project in 1971

The stern trawler project was a state led project that aimed at strengthening rural areas. At that time there were neither formal rural development plans nor governmental institutions working on rural issues, which were dealt with at the governmental level (Herbertsson & Eypórsson, 2003). However, to understand why the project was launched, how it was executed in rural areas, and the consequences both in the short and long run, it is necessary to look at the global context in the 1970s, and how it influenced national and regional strategies and rural development.

5.6.1.1 Global context

The 1970s was characterised by upheaval in the global economy, due to the oil crisis in 1973 leading to unemployment in many countries. Regional policies focused on infrastructure development and employment. The belief was that public policy could alter conditions by directly supporting firms or attracting new jobs and investments into the areas where unemployment was high (Bachtler & Yuill, 2001; Keune, 2001; Margarian, 2013; OECD, 2010a; Pike, Rodríguez-Pose & Tomaney, 2006; Stimson & Stough, 2008). Due to the slowdown in the economic growth, '...with sluggish increase in productivity, inflationary pressures, restricted investments, persistent widespread unemployment and pressures on state budget' (Bachtler & Yuill, 2001, p. 9), the importance of regional policy diminished and the political agenda moved from active government economic intervention. There was a shift away from heavy public intervention towards privatisation, deregulation and liberalisation of markets, along with the removal of the gold standard (Bachtler & Yuill, 2001; Keune, 2001; Pike et al., 2006; Stimson & Stough, 2008).

5.6.1.2 National strategy

Fishing was the main industry in Iceland and fish accounted for nearly half of exports in the 1970s. Iceland exported fish products to Western and Eastern Europe, mainly Russia. Iceland had become a member of GATT in 1964, which had given them lower tariffs for marine products. But at the end of the 1960s, things started to change and the

limited success of negotiations in acquiring lower tariffs for Icelandic marine products at the same as tariff reduction was being enacted between the EFTA countries, made Iceland's foreign trade position considerably worse (Jónsson, 2010, p. 84).

Up until this point the Icelandic foreign policy had been to protect their independence by not taking part in any international cooperation that could threaten their independence. But if Iceland was to compete with other nations like Britain, Norway, and Denmark on the international fish market, the government had to rethink that policy. Iceland was also facing a reduction in the fisheries as herring fisheries collapsed due to overfishing. At the same time a fall in international fish prices occurred and the Nigerian market for dried fish closed (Jónsson, 2010; Róbertsson, 2009). That made Icelandic politicians realise that the country 'could not rely so extensively on the sector (the fishing sector) for employment and exchange earnings' (Jónsson, 2010, p. 84).

Britain had been a great importer of Icelandic frozen fish and

had for some time been subsidizing the fishing fleet and Iceland's expansion on the market could potentially lower the profits of the British operators, promoting demands for more subsidies (Jónsson, 2010, p. 87).

In March 1970, Iceland joined EFTA and was 'granted tariff and quota-free entry to the EFTA market for its manufacturing products and several fish products.....as well as woollen products' (Jónsson, 2010, p. 88).

Being an EFTA member improved Iceland's access to the European market and demand for Icelandic fish products increased. In response Icelanders had to fish more and to be able to do so they had to secure their fishing grounds, making sure that no other nations were fishing there too. In 1972, the Exclusive Economic Zone (EEZ) was extended from 12 miles to 50 miles, and to 200 miles in 1975 (Hall et al, 2002; Matthíasson, 2003; Jónsson, 2010).

Joining EFTA and expanding the EEZ had enormous effects in rural areas in Iceland. Before 1970, big fishing companies, which owned trawlers, were primarily found in densely populated areas, but fishing was mainly done by smaller vessels in smaller villages in rural areas. In 1971, the Icelandic government launched a project that aimed at increasing the capacity of the Icelandic fishing fleet by assisting fishing companies in rural areas to buy stern trawlers. The goal was to increase the economy both at a local and national level and to increase the population in rural areas (Andrésdóttir, 2013; Hall et al, 2002; Herbertsson & Eyþórsson, 2003; Ómarsson, 2009).

It was believed that because only Icelandic vessels were fishing inside the 200 mile limit, there was no need to regulate the fishing. The demersal catch increased until 1981 and fishing of capelin increased fivefold from 1970–1979. Fishing villages in Iceland got one or more trawlers and the government controlled the development of the fishing industry (Hall et al, 2002; Ómarsson, 2009).

The strategy was to distribute the trawlers and the building of freezing plants, where small fishing villages and rural settlements were the priority. (Herbertsson et al., 2003). That led to the growth of many rural villages; first came the trawler, then the freezing plant. After a while, harbours had to be improved and enlarged and the public sector, such as health and schooling, strengthened (Andrésdóttir, 2013; Hall et al, 2002; Herbertsson et al, 2003; Jóhannesson, 2003). The service industry grew because of a demand from the fishing industry. New residential areas were built and in one year, from 1973–1974, the population of the fishing communities increased by 8%. This trawler policy was run by the state and was the biggest rural development operation that had been implemented. For the first time the population flow was no longer to the capital area, but to the fishing villages around the country (Andrésdóttir, 2013; Hall et al, 2002; Herbertsson et al, 2003; Ómarsson, 2009). It was a top-down approach with decisions taken by the central government. The government was operating in line with global trends of state intervention for rural development. In the short term it had positive effects, but in the long run the negative consequences became more apparent and severe for rural communities.

In the 1970s, Icelanders were buying trawlers and building fish processing plants, believing both demersal and pelagic fish stock could support increased harvesting. By the end of the decade, research by the Icelandic Marine Research Institute showed that the Icelandic fishing fleet had become too large and most of the stock were over exploited. Something had to be done to prevent a collapse, as had happened to the herring earlier (Hall et al, 2002). Even though several species of the fish were being overfished, it was the cod that was in most danger of collapsing due to overfishing. The cod fishery was and is the backbone of Iceland's fishing industry and cod products were Iceland's main export commodity (Matthíasson, 2003).

5.6.1.3 Rural development – Westfjords and East Iceland

The stern trawler project was an important part in Iceland's rural development policy. The government decided where the trawlers should be located and where fish processing factories should be built (Andrésdóttir, 2013; Hall et al., 2002; Ómarsson, 2009).

From 1971–1979 86 trawlers were either imported or built in Iceland. Twenty-one of them were located in Reykjavík, Hafnarfjörður and Akureyri, where there was tradition and knowledge on how to operate large fishing vessels. The Westfjords got 13 trawlers and East Iceland 12, because the government had decided to make small rural villages a priority. But there was a limited capacity in these villages on how to operate a trawler business, and the infrastructure had to be built up and adjusted to these new circumstances (Hall et al., 2002).

The Westfjords had been suffering from out-migration for many years (Table 1). In 1963 the parliament decided on a regional development plan for the Westfjords, where the main goal was to stop out-migration. At that time very few specialists in regional development worked in Iceland, so it was decided to seek specialist advice from Norway. What surprised the Norwegian consultants was that there was little unemployment in the Westfjords and income was not lower than in other rural areas. They concluded that the out-migration was because the area could not offer the same kind of services and quality of life found in more populated areas (Ómarsson, 2009). The economy relied heavily on primary industries and people felt they lacked employment security and choices. The establishment of one or two growth poles in the area, which could offer diverse services and economic options was recommended. At the same time a good transport network had to be built to connect settlements in the Westfjords, and finally good transport links from the area were needed (Jóhannesson, 2003a; Ómarsson, 2009).

This growth pole idea did not get governmental support and the trawler policy was launched. It was a 'one-size-fits-all' policy, where all rural areas would get the same. The boost had its effect, because at the end of the 1970s the population in the Westfjords had grown (Table 1) (Jóhannesson, 2003a; Ómarsson, 2009; Statistic Iceland, n.d).

This 'one-size-fits-all' approach to rural development has reigned ever since and it seems that governments are afraid to adopt place-based development plans. In 2015 place-based development plans for the regions of Westfjords and East Iceland were agreed on and put into practice (The

Association of the Municipalities of East Iceland, 2015; The Association of the Municipalities of the Westfjords, 2015). It is a regional place-based development plan emphasising the regions as core units, but not each and every community and can be looked at with 'one-size-fits-all' plans.

East Iceland had not been suffering from out-migration to the same extent as the Westfjords (Table 2). There was no discussion, at that time, that a specific rural development plan was needed and East Iceland got the same 'one-size-fits-all' policy as other rural areas. The trawler project seemed to be a boost for the area, because by 1981 the population had increased (Table 2) (Hall et al., 2003; Statistic Iceland, n.d).

The Icelandic state has normally been enthusiastic about building up large-scale power-intensive industry which can utilize renewable energy from Icelandic rivers. In 1970s an aluminium smelter was built near Reykjavík by a Swiss company, and in 1973 the company asked the Icelandic government for cooperation to look into various large scale industry options. East Iceland was a potential place for such activities, because of its enormous rivers that could be harnessed for hydroelectric power. However, nothing happened and the discussion about an energy intensive industry in East Iceland kept on going for years (Ólafsson, Jóhannsson, Heiðarsson, Ingimarsdóttir & Sigurbjarnarson, 2006).

In 1975, Iceland expanded the EEZ to 200 miles. In 1976 the Icelandic Marine Research Institute published a report, known as the *Black Report* warning that if no actions were taken to rethink fishing practices the cod stock would collapse. Measures were introduced to reduce the catch but they all failed, so in 1978 the Association of the Municipalities of East Iceland proposed that a quota system should be introduced to manage the fisheries. The Association of the Municipalities of the Westfjords was against this. For several years there was a debate and those who favoured a quota system became more numerous, with the only real resistance coming from the Westfjords. They finally agreed on the introduction of a quota system in 1983 on the grounds that it would only be for one year, or while the cod stock was recovering. A year later, the Westfjords wanted to abolish the system, but there was no agreement on this (Hávarðsson, 2010).

The reason for the Westfjords being so against the quota system legislation lies in the fact that their main resource in the fishing industry is the cod, and at first cod was the only species to be brought under the quota system (Heiðarson, et al., 2007; Jóhannesson et al, 2010).

It seems apparent that the rural development policy in the 1970s in the Westfjords and East Iceland was based on the belief that state intervention in the form of implementation was the best solution for the rural areas. The trawler project individually had positive effects, such as creating more primary production jobs in the industry, but also negative consequences which became apparent in the 1980s.

5.6.2 Environmental and economic concerns: the development of the quota system

The adoption of a quota system and later a transferable quota system had enormous impact on rural areas. The next two sections discuss these impacts and sets it a global context, national strategy and rural development.

5.6.2.1 Global context

Until the end of the 1980s regional policy had focused mainly on investment aid and infrastructure support (Pike et al., 2006; Simson & Stough, 2008). That policy targeted lagging areas, mostly rural areas communities. Capital markets were spending more money than they had, which led to a stock market crash in 1987. A significant shift appeared in regional development plans, which in the 1990s focused on globalization, sustainable development and economic rationalism. With globalization came ideas about clusters, where firms who operate in the same business in the same region form partnerships and work together, even though they compete on the same market and borderless societies with demands for unrestricted movement of information, labour, and capital between countries. Sustainable development and quality of life considerations started to have an influence on regional economic development and planning policy. Economic rationality, emphasising public-private partnerships and national policy was to 'seek to facilitate conditions that would enhance the building of local capacity and capability in regions with a reliance on strategies of self-help' (Stimson & Stough, 2008, p. 10).

5.6.2.2 National strategy

By the beginning of the 1980s it was becoming clear that the 'input control' the state had implemented was not successful. Regulations about codless days for trawlers, a codless week for all vessels, and a ban on increasing the fishing capacity of the fleet did not reduce the fishing pressure on the cod stock. These efforts were not enough 'to keep the fleet's capacity in line with the yield capacity of the cod stock' (Matthíasson, 2003, p. 12).

Something else had to be done if the country was not to face a collapse in its fisheries and economy.

It was decided to move to 'output control' and a law introducing a quota system was passed in the Icelandic Parliament in 1983, and came into effect in 1984. It was acknowledged that the fish stocks were a limited resource, especially the cod, which had to be managed. Every vessel was allocated a quota based on their previous fishing history, and the transfer of quotas was limited. At first, it was only the cod fisheries that were managed by quota, but as time went by, other species were also put under the quota system. The system did not change much until 1991 (Andrésdóttir, 2015; Hall et al., 2002; Matthíasson, 2003).

The quota system had a great effect on rural areas, especially the fishing communities around Iceland. Suddenly the companies could not fish as much as they pleased, and supply of cod for processing was limited.

At the same time Icelanders had to reduce their fisheries and legislate the quota system, the price for fish products, mostly cod, Iceland's biggest export product, dropped on foreign markets. The fishing companies lost an enormous amount of money and the economy went into a recession. Stagnation in the Icelandic economy was a fact and can be related mostly to the reduced export and price of cod (Árnason & Agnarsson, 2005; Hall et al., 2002).

Much research has been done on why people have moved to the capital area over the years (Hall, et al., 2002; Ólafsson, 1997). All studies looking at the 1980s have reached the same conclusion. When the fishing industry was not growing anymore, people started moving from the fishing communities to the capital area (Andrésdóttir, 2013; Ólafsson, 1997; Ómarsson, 2009; Zoëga & Skúladóttir, 2002). In those communities everything had revolved around the fishing industry and when it failed, the communities faced a reduction in all activities. In the 1980s there was little economic innovation in the fishing communities, so when needed there was no real foundation for innovation in such places. Economic stagnation also meant that the fishing communities could not hold on to young people or bring new people in to the region (Ólafsson, 1997).

Ever since people first started to move from the countryside to the fishing villages in the beginning of the 20th century, and then later to move from the villages to the capital area, the state has tried various approaches to rural development to curb this movement. State intervention has mostly been financial. The state has established various kinds of funds to support

existing industries, primarily agriculture and the fishing industry (Jóhannesson, 2003b; Ómarsson, 2009).

The Icelandic state supported the fishing industry in various ways and continued to do so when the industry had difficulties because of the quota system and failing prices in the market. It was believed that this was a temporary problem and that the economic situation would get better. But as time passed, more fishing companies were struggling, more jobs were lost and rural people moved to the capital area. It became clear that a change in rural development strategies was needed (Andrésdóttir, 2013). The problem that rural areas faced was an economy that lacked diversity (Jóhannesson, 2003b; Oliversson, 1990).

In 1991 a change can be detected in the policy of state intervention and regional development when a new government decided to adopt a freedom of action policy and withdraw state interventions in all aspects of the economy. The policy was to increase the freedom of action in business, economy, and employment. An open economic system was considered to be the best way for Iceland and many state owned companies and institutions were privatised (Róbertsson, 2009).

With this new government policy, fisheries could no longer rely on state intervention, as they had become accustomed to. When the quota was allocated in 1984, it was based on the catch records of fishing vessels in the years 1981–1983. That meant that the distribution was rather equal around the country. In 1991 legislation was set that allowed fishing companies to sell, buy, or lease quota, and a system of individual transferable quotas was introduced. Now strong companies could buy quotas and concentration of the quota became a fact, with much of the quota coming into the hands of a few big and strong companies (Andrésdóttir, 2013). Rural areas in the Westfjords and East Iceland lost their quota, but the quota in North East Iceland and South Iceland increased (Hall et al., 2002; Icelandic Regional Development Institute, 1999).

Many rural areas suffered from job losses and out-migration, and most of the efforts in rural development were aimed at creating new jobs and reducing the out-migration. The emphasis was on alternative employment, which normally meant a large-scale industry (Althingi, 1999).

Western societies were moving towards a knowledge and service society that required knowledge and research, but in the Icelandic rural fishing and agriculture communities, the local labour had limited skills in those fields. The knowledge and service industry was bound to establish

itself where necessary labour skills and workforce were found, mainly in the capital area. A new rural development approach had to focus on diversifying the economy in rural areas and building on the initiative of the local people (Oliversson, 1990; Ómarsson, 2009).

Neo-liberal ideas, with reduced state intervention, started to have influence on regional development plans in Iceland in the beginning of the 1990s. At that time the discussion about whether the state should be involved in running the economy in rural areas or whether it should be in the hands of individuals to do so became apparent. Traditional rural development plans were said to 'build on political responses to economic problems and community development, where governmental measures had ruled the actions' (Róbertsson, 2009, p. 41). Now it was time to build on local people's initiative for the development in their home areas (Róbertsson, 2009).

5.6.2.3 Rural development – Westfjords and East Iceland

The 1980s were characterised by difficulties in the fishing industry in the Westfjords that had significant effects on municipalities. At that time it was common for local authorities to own shares in fishing companies. The investment in local fishing companies was to establish new companies or strengthen those which were already operating as a means to maintain the local economy. After the quota legislation, many of those companies were sold or the local authorities withdrew from the business. Running a fishing company with a limited quota became very difficult and many communities in the Westfjords had to put capital into the companies in order for them to survive. Some companies went bankrupt, leaving communities with heavy debts (Andrésdóttir, 2013; Ásgeirsson, 2012).

The rural development policy in the 1980s was that every region should get the same solution, irrespective of the geographical, economic or social situation. So the Westfjords, where the fishing industry was struggling, got no special state support in dealing with the new circumstances that the quota system brought (Jóhannesson, 2003).

In the beginning, the quota was tied to particular vessels and not transferable. Vessels became valuable and in order to sell the quota, companies had to sell their vessels. From the beginning, companies which were struggling did exactly that, except they were in the Westfjords. There, the fishing industry was always waiting for the quota system to be abolished. Some companies waited too long and finally went bankrupt and lost ships, quota, and processing plants. That led to job losses in the

communities, which were financially too weak to support the companies (Ásgeirsson, 2012; Hall, et al., 2002; Hávarðsson, 2010). People left and the population reduced (Table 1). At the same time the population in East Iceland showed a slight increase (Table 2).

A discussion about establishing an energy intensive industry sector in East Iceland continued at governmental level. In 1982 the Parliament agreed to give the government permission to found a corporation, owned mostly by the state, to build and run a silicon plant in Reyðarfjörður in East Iceland. The location was suitable for large-scale industry, the harbour was good, and it was believed that enough energy could be supplied from a hydroelectric power plant. This project was believed to be a big boost into the area's economy and it was estimated that the population would increase by 17%. This project never became a reality due to a lack of electricity, and because the price of silicon fell and it was no longer profitable to manufacture it (Ólafsson et al., 2006).

Difficulties in the fishing industry in the Westfjords and speculations about an energy intensive industry in East Iceland characterized the development of those areas in the early 1980s. In 1986 all the parties in Parliament established a multi-partied committee to discuss rural development policy and subsequent projects. Rural development policy was at crossroads, because of the establishment of the quota system (Ómarsson, 2009).

The 1990s was the decade of major changes in Iceland that significantly affected rural areas. Firstly, the ITQ system was introduced in 1991 (Andrésdóttir, 2013; Hall et al., 2002; Icelandic Regional Development Institute, 1999). Secondly, a government which favoured neo-liberal approaches came to power after the general election in 1991 (Róbertsson, 2009). Thirdly, executions of regional development plans were put into law in 1992 (Iceland Regional Development Institute, 2003) and fourthly Parliament agreed upon the EEA agreement in 1994 (Róbertsson, 2009; Sverdrup, 2010), which changed Iceland's economy enormously from a closed economic market into a global market where flow of capital, labour, and knowledge in a borderless world became Iceland's new reality (Róbertsson, 2009).

In 1991 the population in the Westfjords population decreased (Table 1) (Statistic Iceland, n.d.) with the age groups 0–4 and 25–39 below the national average. Those two age groups seemed mainly to be living in the capital area (Icelandic Regional Development Institute, 2004a) and more women seemed to be moving away from rural areas. In 1991, 398 more

men lived in the Westfjords than women, but by 2001 the gap had reduced to 208 (Statistic Iceland, n.d.).

The industry changes in Iceland had a negative impact on the Westfjords. These changes are said to be firstly, the legislation of the quota system in 1984 and the transferable quota system in 1991, which had the consequences that quota was sold from one fishing village to another. This left some villages with job losses and weak communities. Secondly, the bankruptcy of companies in the fishing industry (Andrésdóttir, 2013; Hávarðsson, 2010; The Association of the Municipalities of the Westfjords, 2007), and thirdly, major natural disasters in 1995. There was a significant loss of life, psychological trauma, and fear, along with difficult weather conditions and winters of heavy snow that had the most impact on population reduction (The Association of the Municipalities of the Westfjords, 2007). The reaction to a disaster and management of the situation makes many demands on local authorities. Their response is a measure of their strength and resilience.

Small communities were struggling to survive and some communities merged with a bigger one, believing that bigger communities were stronger and could provide better services to their inhabitants (Andrésdóttir, 2013; Icelandic Regional Development Institute, 2004a; The Association of the Municipalities of the Westfjords, 2007).

In 1991 the population in East Iceland had increased since 1981, but by 2001 the population had decreased again (Table 2). The age group 0 – 4 is below the national average, but the age group 25 – 34 is on a par with the national average (Icelandic Regional Development Institute, 2004b). In 1991, 484 more men than women lived in East Iceland, but by 2001 the gap had decreased to 404 (Statistic Iceland, n.d.).

For the first time since 1970 the population in East Iceland had decreased. Changes had also had negative impacts, and led to a similar discourse about this decrease in the population as in the Westfjords. The quota system and the transferable quota system were blamed. There were difficulties in the fishing industry, which especially affected smaller communities (Heiðarsson, et al., 2007; Jóhannesson et al, 2010). For many communities, fisheries were the main industry along with agriculture and forestry (Icelandic Regional Development Industry, 2004b).

Despite the state withdrawing from intervention in rural areas, the energy intensive industrial projects, led by the state, were still operational. The government stated that this policy was in no way linked to rural development and the goal was not to turn around the out-migration by

development. However, the local authorities' representative claimed that this policy was a response to out-migration (Ólafsson et al., 2006).

Several large-scale industrial projects were discussed, but none of them became a reality. In 1999, the Icelandic government, The National Power Company of Iceland, and Hydro Aluminium Corporation in Norway signed an agreement on the building of an aluminium plant in Reyðarfjörður in East Iceland. The aluminium plant would need a lot of energy and therefore the largest river in East Iceland had to be harnessed for electricity. After a few years of environmental assessments and negotiations with landowners both projects started in 2003, but in the meantime the Hydro Aluminium Corporation had withdrawn from the project and Alcoa took its place (Ólafsson et al., 2006).

The regional development plans emphasised a 'one-size-fits-all' strategy, with the focus on increasing economic growth by supporting innovative work and increasing the educational level in Iceland's rural areas. No special projects were agreed upon for specific places, and even the large-scale industrial projects were said to have nothing to do with regional development (Icelandic Regional Development Institute, 2009; Ólafsson et al, 2006).

This is a good example of the dualism in Iceland's rural development policy. In one hand there is a policy of 'one-size-fits-all' rural development plans for Iceland's rural regions, but on the other hand the politicians, both at governmental and local levels, claim that an energy intensive industry is something else and must therefore be dealt with at the governmental level.

5.6.3 Social and economic concerns on the Western Isles

In this chapter two key projects, the adoption of the LEADER programme and the Land Reform Act, will be introduced and discussed because both projects have had a big impact on rural development in the Western Isles. Its roots lie in Scottish history and therefore a brief historical descriptive discussion is necessary for an understanding of its impact on communities and inhabitants. But first it is necessary to introduce the policy framework, the local authority on the isles and how they operate in order to realise how decisions taken at a local level are affected by those taken at a national and global level.

The Western Isles is one of the 32 unitary local authorities in Scotland and is as such responsible 'for the provision of a range of public services'

(Scottish Government1, n.d., n.p). Each local authority is governed by a council, which is made up by councillors. The councillors are elected directly by the inhabitants of the area they represent and operate independently of central governments and are accountable to their voters for provision of services (Scottish Government1, n.d). Local authorities must take corporate decisions and 'there is no legal provision for decisions being made by individual councillors' (Scottish Government3, n.d., n.p). The Western Isles is one council area (Scottish Government1, n.d).

The public services the local authorities must provide lie in the range of public services such as education, social care, roads and transport, economic development, housing and planning, environmental protection, waste management, culture, and leisure services. Their power and duties come from many different piece of legislation, such as the Local Government Act from 1973 and the Planning Act from 2006 (Scottish Government3, n.d).

The Scottish Government works with local authorities and provides funding and the framework for accountability and performance (Scottish Government1, n.d). For rural areas the Rural Development Programmes 2014-2020, which is co-funded by the European Commission and the Scottish Government, reflects the 6 EU Rural Development Priorities and the Scottish National Performance Framework on rural development issues (Scottish Government5, n.d.). The programme bases its rural development emphasis on pillar 2 of the EU Common Agricultural Policy (CAP). The programme funds economic, environmental and social measures for the benefit of rural Scotland. The key purpose is 'to help achieve sustainable economic growth' (Scottish Government4, n.d., n.p).

Local authorities must, by law since 2003, work in partnership with other agencies, such as the health board, enterprise, policy, and fire boards to secure public service delivery in their area. Such a partnership is called Community Planning, and the local authorities are responsible for 'initiating, facilitating and maintaining Community Planning' (Scottish Government2, n.d., n.p.). So the Western Isles must form a community partnership in the isles. Together they work on place-based development plans called The Single Outcome Agreements, which are the policy and practices the partnership regards to be of utmost importance. The Agreements policy and practices refer to the Rural Development Programmes and gets funding from the Scottish Government and the EU, after being agreed upon by the Scottish Government (Scottish Government2, n.d; Scottish Government5, n.d).

5.6.3.1 *National and regional policy and practices*

The Western Isles have faced a reduction of population since the end of WW2. In a development plan called *Forward together–Single Outcome Agreement 2009-2010*, there was a discussion about this out-migration. This document was an agreement between the Western Isles organisations and the Scottish government about rural development on the islands, and was based on the LEADER programme ideology. To both the local and national authorities, the out-migration of young people and women is a concern, especially the loss of women, because out-migration in the Western Isles is much higher among women, and over 71% of in-migrants were male. This has led to a widening imbalance in the population (Outer Hebrides Community Planning Partnership, 2009, p. 11).

The goal of the Single Outcome Agreement was to create sustainable communities and 'population stability and growth is seen as an indicator of an area's well-being, and at extremes, an indicator of the future viability of communities (Outer Hebrides Community Planning Partnership, 2009, p. 11).

Single Outcome Agreement development plans have been agreed upon for the years 2011-2013 and 2013-2023. It is a partnership document 'for which the Council and Boards of the statutory and other public sector partners are accountable' (Outer Hebrides Community Planning Partnership, 2013, p. 38). Their vision was to create 'a prosperous, well-educated and healthy community enjoying a good quality of life and fully realising the benefits of our natural environment and cultural tradition' (Outer Hebrides Community Planning Partnership, 2011, p. 5) and the goal was to 'promote and improve the social, economic, and environmental well-being of the people of the Outer Hebrides and contribute to the achievement of sustainable development in Scotland' (Outer Hebrides Community Planning Partnership, 2011, p. 5).

Various priorities are identified, which were intended to be measured both locally and nationally, and on a regular basis a report is published in which these priorities and projects are evaluated to see if they have met the standards that were set. In the Single Outcome Agreement development plan for 2013-2023 the priorities address the isles population, a thriving economy, well-being of people, education for all, stronger communities, natural and cultural resources and high quality service to the people of the island (Outer Hebrides Community Planning Partnership, 2013).

The vision and priorities reflect those that can be found in reports from the Scottish government. In a report about rural development in Scotland, called *Speak up for rural Scotland*, published in 2010 by the Cabinet Secretary for Rural Affairs and the Environment, an emphasis was put on how to maintain sustainability in rural communities. Key issues identified were providing work and a place to live. It is not so much of an issue that young people leave their rural communities, because it is acknowledged that they should have the opportunity to experience something else in the wider world and to broaden their horizon. It is more important to have in mind that a thriving, resilient community will attract others, who are looking for a different quality of life, and will create opportunities that encourage people to return, bringing with them acquired skills and experience (The Scottish Government, 2010, p. 14).

In another report, *Our rural future*, which presents the Scottish government priorities for rural areas, the vision for a rural Scotland was for it to be sustainable, creating a balance between economy, environment and social factors (The Scottish Government, 2011).

The Single Outcome Agreement's vision and priorities emphasises sustainable development, where there is a balance between the environmental, economic, social, and cultural factors. It is a place-based development plan for the whole region, which emphasises the local assets to increase quality of life and the well-being of the Western Isles people. The development plan states that the island's resource is the people, and by investing in the human capital, an improvement in all aspects of sustainability will be achieved (Outer Hebrides Community Planning Partnership, 2013).

In rural development, the region is the core unit and all plans refer to that. From the perspective of looking at each community in a region as the core unit, the Single Outcome Agreement plans are 'one-size-fits-all' plans for all communities on the Western Isles and tend to look at all communities as homogeneous places, offering each community the same solutions.

5.6.3.2 *Land Reform Act – an overview*

The people of the Western Isles had traditionally looked at themselves as small farmers or crofters, who were forced into fishing as a means to survive when driven from their land in the 17th century (Rennie & Billing, 2015; Thomson, 2001). Since then, the people of the Highlands and Islands

have frequently sought ways to gain more control of the land (Bryden & Geisler, 2007; Rennie & Billing, 2015; Shucksmith, 2007).

In the 1970s, demands for the full abolition of feudal land law became stronger and a growing community movement began to develop a shared vision of the community ownership of land 'not only to address historical grievances but primarily to remove landlord obstructionism as an obstacle to rural development' (Shucksmith, 2007, p.7). This increasing awareness of community land buy-out had started long before the Land Reform law in 2003 was passed. More and more communities had sought to establish community trusts and many were given help to buy land. As a consequence, in 1999 a report was published 'recommending a fund to support community land purchases and the community right to buy' (Bryden & Geisler, 2007, p. 30). In 2000 the Scottish Land Fund was established and was initially capitalized by the UK-Lottery. The fund's goal was to assist rural communities to acquire and develop land and buildings on a voluntary basis (Bryden & Geisler, 2007; Rennie & Billing, 2015).

The Western Isles are crofting communities and with the Land Reform Act they were given the power to exercise a pre-emptive, or hostile, right-to-buy the landlords' interest in land under crofting tenure, where a majority of both crofters and the broader community are in favour, and where this promotes sustainable rural development (Shucksmith, 2007, p.7).

Under the Land Reform Act of 2003, communities were given the option to buy the land on which their communities were located. Highlands and Islands Enterprise established a Community Land Unit, whose role was to assist communities to draw up their plans for community land acquisition. The Scottish Land Fund had a role in assisting rural communities to buy and develop land and buildings for the general benefit of that community. What the communities did was to establish a democratic and locally controlled body (usually a company limited by guarantee) to acquire the land, draw up a business plan, and raise funding from gifts and loans to buy the land (Shucksmith, 2007, p. 7)

Most of the Scottish land reform activities have so far occurred in the Highlands and Islands, and that reflects the fact that the people of that area have led this land reform campaign (Bryden & Geisler, 2007; Rennie & Billing, 2015). According to Rennie & Billing (2015), more than half of the land area in the Western Isles is owned by Community Land Trusts. This has given the inhabitants the opportunity to develop strategic plans for the communities' development and also how to pay back the investment

loans. The people have obtained the power to take greater responsibility for the future of their communities with help from the governance framework (Rennie & Billing, 2015; Shucksmith, 2007).

5.6.3.3 The LEADER programme and its link to the Land Reform Act

In the 1980s the EU decided to start a programme, which in the Western Isles was called the Western Isles Integrated Development Programme (IDP). Later it helped to inspire the foundation of a Europe-wide programme called LEADER. In the Western Isles the LEADER programme was launched in 1991. One reason supporting this was a growing awareness of environmental issues and of overproduction in the EU agricultural sector. The LEADER programme was introduced as a place-based approach which 'uses local development methods which allow local actors to develop an area by using its endogenous development potential' (European Commission, n.d.). Through EU funds, rural areas that were seen to be lagging and needed support were identified across the EU. The LEADER programme was based on cooperation in the administrative system, both at governmental and local levels. Those involved in analysing the problems and the area's strengths and weaknesses, formed a plan aimed at solving the problems and reinforcing the area's economy. This eventually led to the formation of a so-called 'Single Outcome Agreement' for Regional Local Authorities. It is vital, according to the EU, to involve local partners in the work, because local knowledge is important when diagnosing the problems and seeking solutions (Bosworth et al., 2015; Shorthall & Shucksmith, 1998; Shortall & Shucksmith, 2001; Shucksmith, 2007).

The LEADER programme emphasised rural areas endogenous strengths to promote economic growth. It was a place-based approach, which used local experience and knowledge and assumed that nature, human capital and culture were fundamental resources for sustainable development (Bosworth et al., 2015; Stockdale, 2006). Shortall (2001) stated that the programme emphasised the development of rural areas' abilities to support themselves through capacity-building, community-based initiatives, animation and partnerships. Its goal was to empower rural people to take control over their own future and to promote bottom-up development strategies. At the heart of the LEADER programme was the importance of economic development as the main goal, although social and civic issues were also addressed. When evaluated it became clear that in practice communities focused either around issues concerning employment, work and business enterprise, or around issues concerning

quality of life such as health, youth, disadvantage, or the environment (Shortall et al., 2001, p. 126).

In the Western Isles the LEADER program was launched in 1991. The goals of the program were to build up a groundwork for development through organization and training. This framework was to maximize opportunities for rural development and enterprise, to reinforce confidence in the area's unique heritage and to use this as a springboard for positive projection of the area's identity, and to encourage inward investment and internal reinvestment to stimulate business growth and employment creation (Shortall et al., 1998, p. 80).

The emphasis was on internal factors to promote economic growth and create jobs. Heritage was one of the factors identified as the area's strength that could be used to reinforce the island's identity. The emphasis on using bottom-up approaches to development was novel at that time and 'the idea of stimulating communities and individuals to come up with their own ideas and solutions was new.....' (Shortall et al., 1998, p. 81).

The Land Reform project can perhaps be seen as a natural successor to the LEADER programme, because it is also based on the area's natural resources and the inhabitant's initiatives and work. It can be argued that even though those projects used bottom-up approaches, they used top-down approaches as well. The Land Reform initiative has used both approaches, because it is state authorized and has financially assisted communities (Bryden & Geisler, 2007; Rennie & Billing, 2015). The goals in the LEADER programme were set locally, but had to rely on EU funding which was a top-down approach but the implementation (or not) was as the result of engagement by the local people, which, in addition to locally raised funding, was the bottom-up part of the approach (Shortall et al., 2001).

5.7 Application of the framework/model

In chapter three, the theoretical framework, the resilience theory and the adaptive cycle used in this thesis were introduced and discussed. In this chapter the key events, introduced and discussed above, will be applied to the adaptive cycle model. The events are looked at as systems and the focus is on the development in them over a period of time. The development in the knowledge society, focusing on higher education through online learning and research and knowledge centres, the stern trawler project and the quota system and population development in

Westfjords and East Iceland, will be applied to the model. The Land Reform Act in Scotland and the Western Isles will also be put into the model.

5.7.1 The knowledge society in Westfjords and East Iceland

5.7.1.1 Higher education

The development of distance learning in higher education in rural areas in Iceland are described as follows: The beginning point is the year 1997 (Establishment). Four years had passed since higher education on-line course had been on offer for the first time, and at that time 540 students were registered as distant learning students. There was a growth in higher education activities in rural areas when an increasing number of students entered distance learning studies. In this phase the potential and connectedness are both low, but at the same time resilience is high. The number of students continued to rise, until it reached its peak in 2009 when the number of students was 6.588. This is the time when potential and connectedness were high, but resilience declined. These numbers started to decrease, and in 2013 the number of students were 4.039. Stabilisation was reached in 2009, which, in 2013, led to disengagement. Higher education activities through distance learning, organized as it was in the beginning, had run its course. This should have led to a system change, with reconceptualization taking over, with high potential, low connectedness and resilience increasing, so the system could re-organise. That seems not to have happened. The development and number of distant learning students in the Westfjords and East Iceland is similar to the whole of Iceland. When the student number increases, the same happens in the Westfjords and East Iceland, and when a decrease takes place, a decrease is also found in these two rural area. The gap between the two areas is also parallel with the area populations, but twice as many people live in East Iceland than in the Westfjords (Statistics Iceland, 2015). The decrease in student numbers indicates that the market for students who want to use the on-line learning method is saturated. Those who offer distant learning at a higher education level must ask themselves why that is. Is it because there are no more students who want to study on-line, is it because of the limited amount of courses offered on-line, or is it because on-line courses do not appeal to students? If universities and knowledge centres look at themselves as active players in rural development they have to start listening to the local inhabitants and the discourse about higher education studies.

To help and influence reorganisation, it is important to know the desirable way(s) for the system to develop. For that theories of epistemological pluralism and/or a transdisciplinary approach can be helpful in the reorganisation phase of higher education through distance learning as there may be several valuable ways of knowing, both from the scientific system and from the knowledge of the inhabitants in rural areas. Place-based approaches as a means to strengthen inhabitants place-making, must also be adapted. Figure 18 shows the development of the distant learning system using a framework of the four- phase adaptive cycle developed by Simmie and Martin (2010).

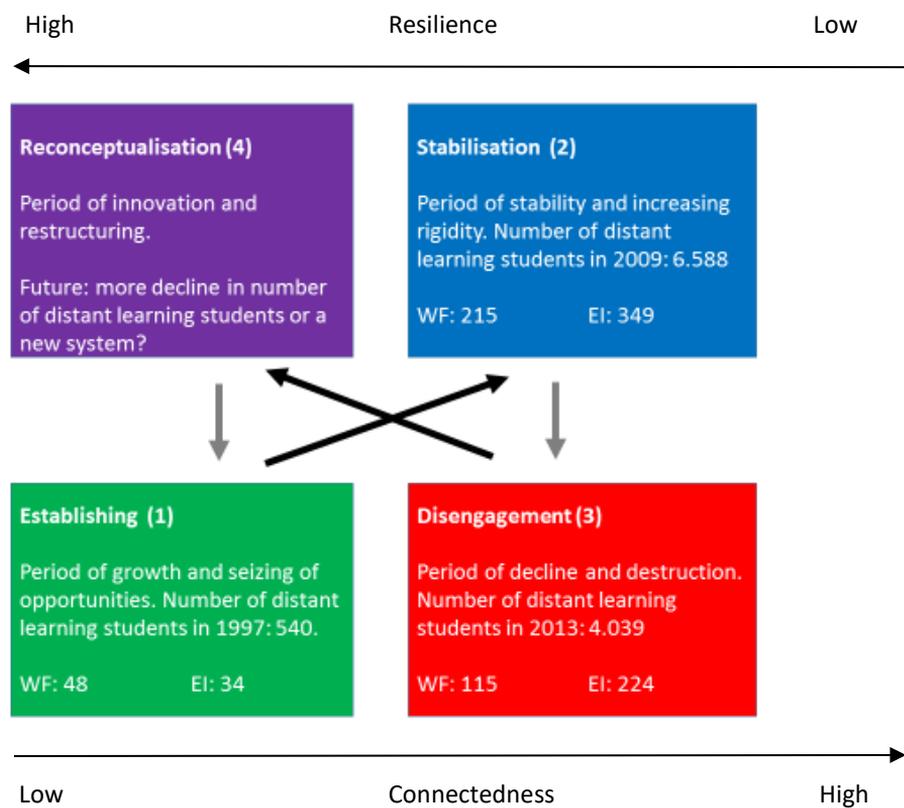


Figure 19. The development of distance learning in Iceland (Adapted from Simmie & Martin, 2010).

5.7.1.2 Research institutions and centres

In this thesis the development of the knowledge society starts with the establishment of secondary schools in the Westfjords region in 1970, and

in the East Iceland region in 1979 (misa,n.d.; me.n.d). Nothing much happened that can be related to this development until 1990s, when teacher education was offered on-line for people living in rural areas in 1993. What followed was the establishment of various research institutions and knowledge centres in the Westfjords and East Iceland regions (Ministry of Education, Science and Culture, 2010). This development is shown in a graphical way (Figure 19) and put into context with the population developments.

6.

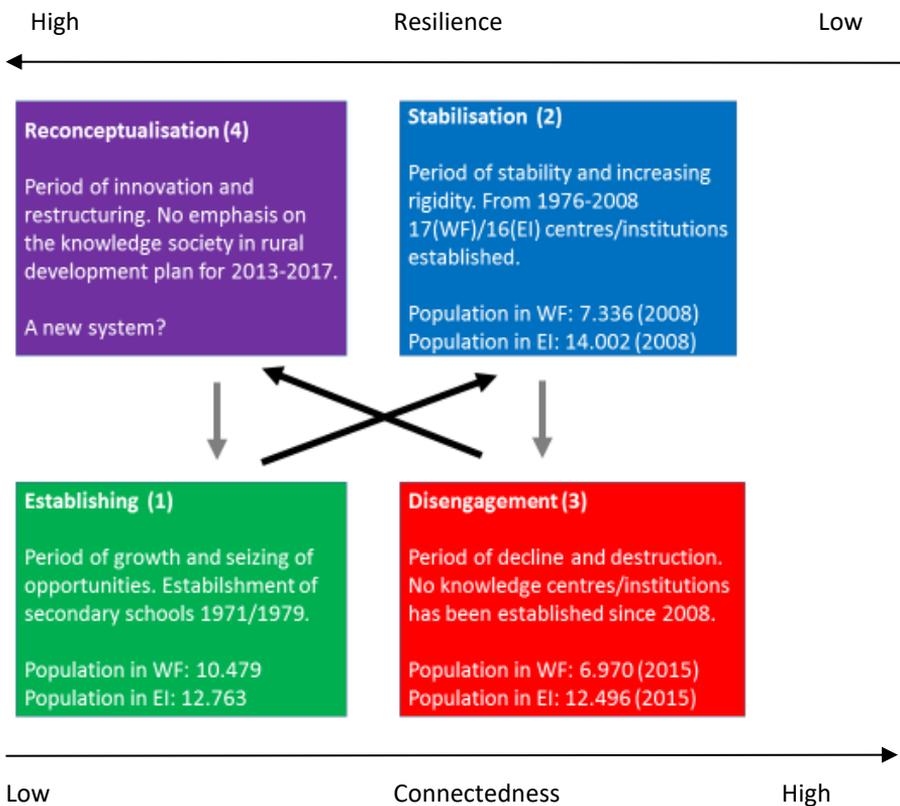


Figure 20. The development of knowledge centres and research institutions in the Westfjords and East Iceland (Adapted from Simmie et al., 2010).

The establishment of research institutions and knowledge centres was driven by the local authorities' demands for higher education and research

activities to be reinforced in rural areas, and the state response to that demand. The reason for that was the belief that such activities would attract higher educated people to rural areas and give people living in rural areas who were pursuing a higher education degrees through distance learning, and increased job opportunities. This belief was backed up by policy documents from the Iceland Regional Development Institute and the Ministry of Education, Science and Culture about the importance of these institutions and centres (Icelandic Regional Development Institute, 2001; 2004a; 2004b; 2005; Ministry of Education, Science and Culture, 2010).

By using the resilient lens and the adaptive cycle framework it can be seen that despite this effort of establishing various research institutions and knowledge centres, populations in the Westfjords and East Iceland continued to decline. Even though East Iceland showed some increase in its population, it was not related to the development of the knowledge society. The temporary increase was due to the fact that the power plant project and the aluminium plant project were begun, but once finished the population has declined again.

Increasing research and higher education activities in those two areas has not had the effect that it was supposed to have, increasing population and job opportunities. Higher education and research activities are looked at from the economic perspective and directed at the labour market. But as noted in Figure 16 and 17 this is not working. The reason for this is that the communities are vulnerable and resistant to change. Adaptability is not in place and no transformation takes place, because changing traditional fishing communities seems to be very difficult, even though the fishing industry itself changed dramatically with the main effort put on the economic sector. Because of that, people moved away from the areas, despite increasing job opportunities for higher educated people. Such a conclusion gives an opportunity for a shift in perspective and to start looking at things in a more holistic way and from a community perspective, taking the economic, environmental, social, and cultural aspects of the sustainability concept into the picture when starting projects in rural areas. The goal must be to create resilient and sustainable communities which are capable of dealing with change and using resourcefulness, in order for communities to adapt to change and transform into a system that keeps the balance between the four components of sustainability. For that, the knowledge society can be used as a tool.

5.7.2 The stern trawler project and the quota system

The stern trawler project in Iceland started in 1971 and it can be said that the nature of it changed in 1984 when the quota system on fish stocks was implemented into fishery management, and later in 1991 when the transferable quota system was agreed upon. The project had a great impact on the development of rural areas around the country, because a lot of activities in the communities followed, e.g. building new harbours and new official buildings. In many communities houses needed to be built, because more people moved to the rural communities than to the capital area (Andrésdóttir, 2013; Hall, et al., 2002; Herbertsson et al., 2003; Ómarsson, 2009). This development is shown below in a graphic way (Figure 20) using the resilience theory and the adaptive cycle.

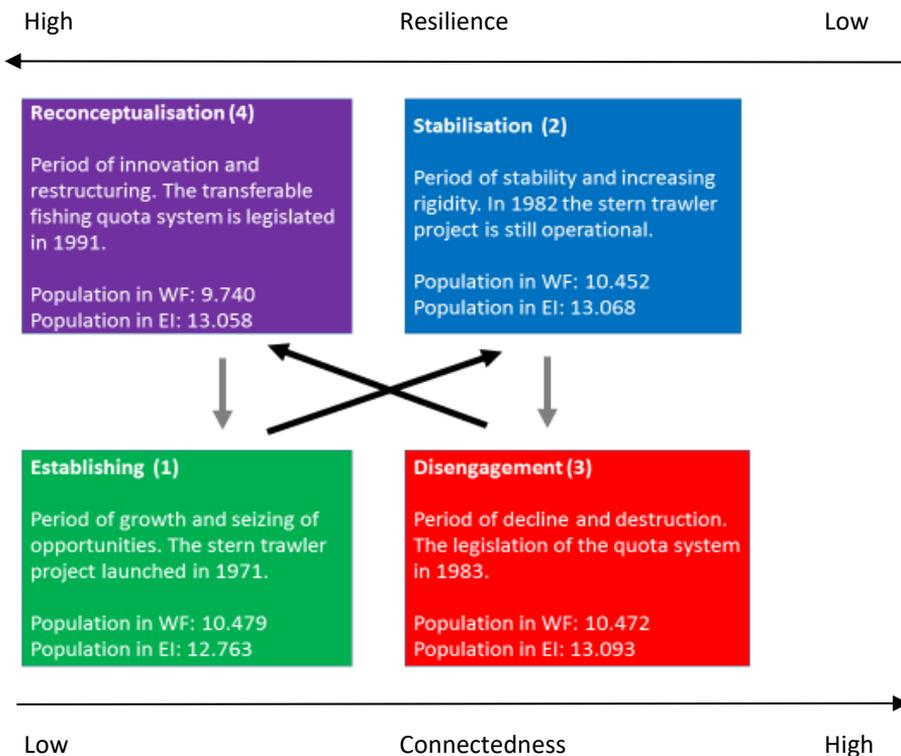


Figure 21. The development of the stern trawler project in Iceland (Adapted from Simmie et al. 2010).

Looking at this development from the perspective of the resilience theory, it becomes clear that while the stern trawler project was operational and the trawlers could fish as much as they wanted, it was a big economic boost for rural communities in the Westfjords and East Iceland. It was a period of growth, with the development of infrastructure and an increase population. After the establishment of the quota system, the communities decline period started. The quota system's goal was to protect the fish stocks, mainly the cod, from extinction, and was supposed only to last until the stocks became strong again. But it was never abolished and agreeing upon the transferable quota system, which allowed those who had a quota to buy and sell as pleased, reinforced its existence. This agreement changed the main focus from the environmental perspective to the economic perspective, because the transferable quota system is more related to neo-liberal thinking, which emphasises privatisation, marketization, efficiency, and profitability.

During this period rural populations declined, mainly in the Westfjords region. The reason is that the communities of the Westfjords rely on demersal fishing, mostly the cod, but East Iceland relies on both demersal fish and pelagic. It became clear that the communities of the Westfjords were not resilient at that time; meaning that they were not able to deal with the shock that came with the quota system. They were vulnerable towards that shock, because they had during many years relied only on one resource. Their adaptability was low, because they struggled for too long to keep on going in the same direction they had always done. So, no transformation occurred and nothing changed, unless people moved away.

East Iceland did not lose as much of its population as the Westfjords did and the reason is that they had more resources to rely upon. East Iceland's communities were more resilient, and not as vulnerable, as the Westfjords region, and dealt with the quota system by fishing from other stocks. They adapted better to this new situation but, as with the Westfjords region, no transformation occurred and nothing changed other than that they managed to keep their population stable.

The government policy for rural development has always revolved around increasing the population in rural areas and stopping the out-migration. Projects and various activities that had been agreed upon have had that goal. The stern trawler project had a positive influence on rural areas population at first but it also had other consequences that policymakers did not foresee. The quota system was addressed towards preserving fish stocks, but then a new problem arose, the decline of

population in rural areas. The transferable quota system continued to create even more problems, influencing the population decline, so it seems that this government policy for rural development failed from the perspective of preserving rural population.

5.7.3 Relationship of phases in adaptive cycle to population development in the Westfjord and East Iceland regions

By using milestones that are both linked to rural development and the knowledge society development, it will be shown how some events, whether created by humans or by nature, have affected the Westfjords and East Iceland regions and populations. When using the resilience theory and the adaptive cycle this development is as follows (Table 11).

Table 11. Changes in population with the respect to resilience and the adaptive cycle in the Westfjords and East Iceland (Adapted by Simmie et al., 2010).

Year	Westfjords	Population	East Iceland	Population
1970	<u>Establishing</u>		<u>Establishing</u>	
1971-	Secondary college	10.050		11.315
1981	13 stern trawlers		12 stern trawlers	
		10.479		12.377
	<u>Stabilisation</u>		<u>Stabilisation</u>	
1974				
1979	Snow avalanches	9.940	Snow avalanches	11.919
1982		10.363	Secondary college	12.763
1984		10.452		13.068
1987-	The quota system	10.427	The quota system	13.093
1993	Bankruptcy in the fisheries	10.217		13.096
1991	<u>Disengagement</u>			13.058
	Transferable quota system	9.740	Transferable quota system	
1995			<u>Disengagement</u>	
	Snow avalanches	9.018	Natural History Institute	
1997	Natural History Institute	8.634		12.623
				12.397
			<u>Reconceptualisation</u>	
2001				11.780
			A large scale industry project	
2005		8.152		13.585
		7.547		
2006	University centre established		EI Knowledge Network established	
	Development of knowledge society	7.470		15.350
2007			A large scale industry operational	
				13.901
2012		7.309	Development of knowledge society	
		6.955		12.359
	<u>Reconceptualisation</u>			
2016	Aquaculture	6.970	Aquaculture	12.496

The development of the Westfjords region and East Iceland is quite similar. The stern trawler project had positive impacts on the regions' population, but after 1984 there was a decline in the Westfjords population. Since then, various projects linked to the knowledge society have been launched, but they have not been able to stem the out-migration. There are other and stronger factors that are at work, e.g. natural disasters in the Westfjords area in 1995 and harsh winters seem to be push factors and have had more impact on the regions' population than the knowledge society's development as a pull factor. Thus a holistic sustainable approach is more likely to create sustainable and resilient communities than launching projects that only address the economic components of sustainability. For some years now the Westfjords region has focused on building up an industry in aquaculture and factories that work in the field of calcareous algae mining. It seems that the population is growing, but if the system approach is not changed, meaning that if environmental, social, and cultural factors of sustainability are not put into the picture of this development, resilient and sustainable communities will not be achieved. The system will always try to reorganise itself as it was, unless people are aware and try to influence and steer the system to a desirable state (Figure 19).

The same pattern can be found in the development of East Iceland, but the population decline has not been as drastic as in the Westfjords area. There are also periods when population increases, but this is related to the large scale industry that took place from 2000–2007. Now the aluminium factory has been operational for several years, but the population decline continues. East Iceland has had the same knowledge society projects as the Westfjords and they are not the pull factor they were hoped to be. Other push factors seem to be stronger. It seems that the system is reorganising itself into the same state as it was before the large scale industry projects. If the resilience in the system is low, no transformation is possible unless people realise that in order to help the system to change, it must be managed. Creating resilient and sustainable communities does not happen unless those inside the system work together to reach that desirable state (Figure 19).

No evaluation plans come with rural development projects in Iceland. Therefore, there is no way of telling whether the projects are fulfilling the goals that are set. In this thesis, rural development is seen as a system, so the evaluation part must also be addressed from a system perspective. One of the tools to be used for a systematic evaluation is the Causal-Loop

Diagrams, because it is 'an easy tool for visualising complex relations...' (Hummelbrunner, 2007). The diagrams are linked by two types of feedback mechanisms, which are negative feedback, focusing on interaction between stakeholders that work as a limiting factor, and positive feedback, focusing on interaction that 'leads to an increase of the previous state in the same direction...' (Hummelbrunner, 2007). These diagrams have been used in evaluating various projects in rural development and are good when evaluating complex realities to be able to better understand differences, or 'to overcome differences in innovative and often surprising manners' (Hummelbrunner, 2007). Feedback loop evaluation tools are well suited for group work and are therefore good to use for projects that involve various and often heterogeneous stakeholders. The loops can also give information about behaviour that is generated by the system (Arnarson, Kristjánsson, Bjarnason, Sverdrup & Ragnarsdóttir, 2011; Hummelbrunner, 2007).

5.7.4 Population development in the Western Isles

By linking population development in the Western Isles with some historical events that address rural development and adopt it into the adaptive cycle, it can be summarised as follows: the United Kingdom joined the European Union in 1973 (Róbertsson, 2009; Sverdrup, 2010). This is a period of growth and high hopes, because the belief was that a strong Europe would strengthen the status of each member state. But joining the EU led to a shift in how policy was dealt with, e.g. the Common Fisheries Policy guaranteed equal access for the member states and meant that the Western Isles and other fishing areas had to share their resources with all EU member states (Philipson & Symes, 2015; Thomson, 2001). In this phase the resilience is low and the system is vulnerable to external forces. In 1981 around 30.000 people were living on the Western Isles. In 1991 the population were almost the same as in 1981. A transferable quota system had been established and quotas and licences became valuable commodities and could be bought and sold if the state and the EU agreed. The result was that by mid 1990s the Western Isles quotas and licences had moved from small fishing companies to larger and richer companies (Symes, Philipson & Salmi, 2015; Thomson, 2001). In 1991 the LEADER programme was established and the discussion about establishing a university in the Highlands and Islands continued (European Commission, n.d.; Hills & Lingard, 2003). This is a period of stability where resilience is low and communities are becoming vulnerable to external forces. People,

especially women and young people, start to move away because of changes in the economy, especially in traditional primary production industries.

In 2001 the population had decreased to 26.500. At that time the EU fisheries policy had led to a collapse in the fishing stock in the Western Isles inshore fishing area. Fishing communities were struggling both financially and economically. To deal with that, programmes were launched by the EU to tackle the problems fishing communities were facing, such as retraining programmes for fishermen who could no longer work in the industry (Phylipson & Symes, 2015; Thomson, 2001). In 2001 the UHI Millennium Institution was established as a higher education institution and Lews Castle College became a partner in this network. In 2003 the Land Reform Act was agreed and the same year the Scottish government agreed on laws that a Community Planning Partnership had to be established in every region to work on rural development. This corresponds with a period of decline and destruction, resilience is high, but not flexible, which does not allow changes to occur. The system is vulnerable and not able to adapt to the new reality of change in traditional industry. However, the system is showing some resourcefulness, because things are being done that might help the system to adapt and transform.

In 2014 the population on the isles had increased to 27.250. UHI had been working hard to reach its vision on getting a university status and in 2008 it secured Taught Degree Awarding Powers and in 2011 the UHI was formally awarded university status and now it operates both at the national and regional scale with its emphasis on enabling students in rural areas to study from their home areas (Simco & Campbell, 2011). The Western Isles local communities have now bought more than half of the land area on the isles and communities are forming strategic plans on how to exploit this natural resource in a sustainable way for the benefit of the communities (Bryden & Gesler, 2007; Rennie & Billing, 2015). Since 2003 the Community Planning Partnership has agreed on several rural development plans. They are place-based plans which emphasise sustainability and resilience, which is in harmony with EU and the Scottish government goals in rural development. This corresponds to the reorganisation phase, which is characterised by innovation and reconstruction. The resilience is high and flexible and the system has adapted to changes. It has used local resources and is not as vulnerable to external forces as previously. The system seems to be on a cycle of transformation of creating sustainable and resilient system.

Everything is however looked at from the perspective of the whole region, so it might be that activities that are agreed on do not fit individual communities. To reach the goal of creating sustainable and resilient communities, the policy needs to start to look at communities as the core units in rural development.

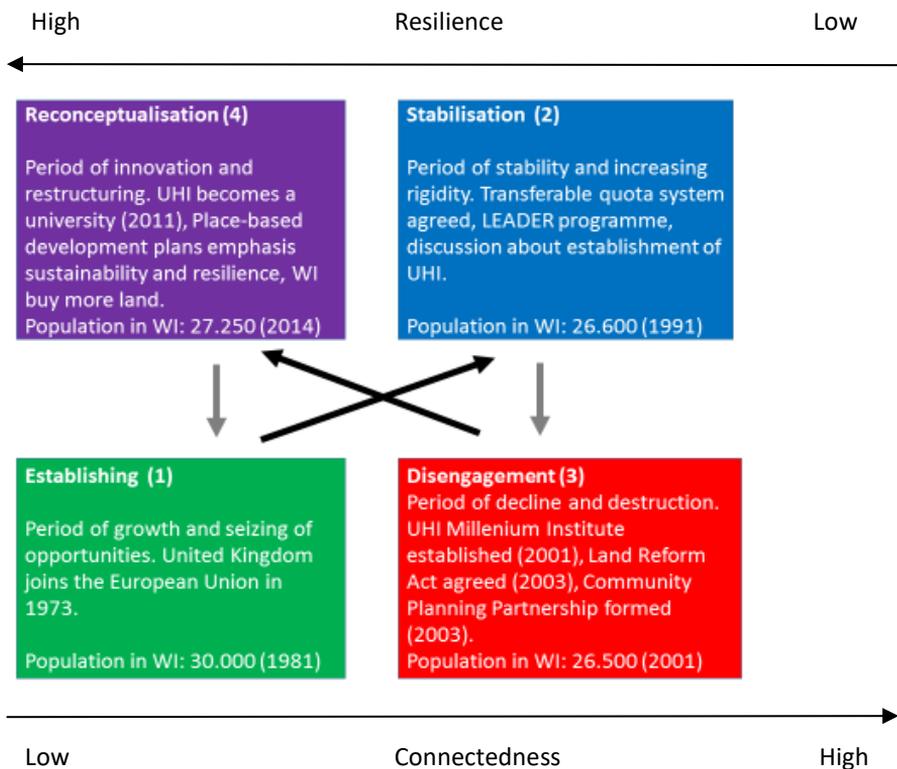


Figure 22. Population development in the Western Isles linked to events (Adapted from Simmie et al. 2010).

5.8 Summary and discussion

This chapter contained three main parts. The first part, section 5.1-5.5 discussed in a descriptive and critical way the development of the knowledge society and universities globally, nationally and regionally. It also involved a gender perspective according to higher education. The second part, section 5.6 and its sub-sections contained a descriptive analysis of historical events in Iceland and Scotland that affected development of rural areas. The third part, section 5.7 and its sub-sections

applied a system analysis of the events to understand how forces in the system drive the development of the events.

The cornerstone for the development of the knowledge society and universities is globalisation, with its flow of people, money, technology, and knowledge across borders. The Bologna declaration is a good example of that, where a homogenous global higher education system has been created, driven by the flow of students between countries. In Iceland, academic drift, where colleges have gotten a university status, and in Iceland and Scotland, with an increased number of university students, has characterised the development of the knowledge system. Technology has been used to reach students in rural areas by offering on-line courses, where UHI has made distant learning one of the cornerstones of its operation, but in Iceland's universities, distant learning is not of high priority.

The development of the knowledge society in the three areas has been different. East Iceland and rural Scotland seem to have been able to facilitate a knowledge society, East Iceland by establishing a One Stop Shop, and rural Scotland by establishing the University of the Highlands and Islands. The Westfjords approach has been a more traditional model, where each institution has worked on its own and no formal partnerships have been created.

In the higher education sector women outnumber men and they also use the distant learning method more than men. Research show that rural areas are more male dominated than urban ones and that women seem not to have access in decision making of the area's exploitation of natural resources or have real power at local authorities level (Evarsdóttir, 2013; Karlsdóttir and Ingólfssdóttir, 2011; Sheridan et.al., 2011). The question is whether a university degree expands women's activity space and later in this thesis this question will be address in connection with people as place-makers.

Three key events that happened in Iceland and Scotland were chosen for a further discussion and then applied to the adaptive cycle as systems. The stern trawler project and the quota system, the development of higher education and research activities in Westfjords and East Iceland and population development in the Western Isles were chosen because they happened because of human involvement. They happened because those in charged decided that they should happen. The decisions were both reactive and proactive in the sense that they were responses to certain

situations and proactive in the sense that they created other situations that still affect the current situation.

Politician at national level seem not to have realised the consequences these decisions had on the society, communities, or people, perhaps because they thought they were solving rural problems once and for all. It would have been better if policy makers would have looked at the problems they were facing as *wicked problems*, because policy problems and policy interventions are complex and unforeseen. Such problems deal with social, environmental, economic and cultural factors that could not be understood and addressed in isolation (Head & Alford, 2013; Koilimainen et al., 2015; Rittel & Webber, 1973), and cannot be solved once and for all.

In Iceland, the stern trawler project was launched with the focus on strengthening both economic and social factors in rural areas. The quota system is based on environmental grounds; that is preserving the fish stocks. The transferable quota system was set to support the fishing industry and make it more competitive and is based on economic grounds. By addressing those two factors of the sustainability concept it was believed that community issues would also be addressed. But the decline in population showed that it did not happen 'automatically'. The development of the knowledge society happened because of demand from inhabitants who realised that the new technology with internet connections could be of benefit for rural people, being able to get a higher education degree through distant learning instead of leaving the areas. Governments jumped to the knowledge wagon and made the development of the knowledge society in rural areas one of their goals in rural development, believing that increased research activities and an increased number of higher education students would create more jobs for higher educated people, stop out-migration and increase the rural population. This goal can be found in regional development plans from 1999-2011 (Althingi, 1999, 2002, 2006a, 2011). Although research activities in rural areas have increased and some jobs for higher educated people have been created, fewer students attend higher education studies through distant learning, the out-migration has not stopped, and population growth has not happened.

The Western Isles have also been facing a population decrease and difficulties in their primary product industry. EU fishery and agricultural policies had negatively affected the Western Isles's primary product industry and its population, because they were aiming at strengthening the economy of all EU member states. However, projects supported by the

Scottish Government and/or the EU, that have been launched since 1991 seem to have focused on the economy, environment, and community, such as the establishment of the UHI, which strengthened the Lews Castle College as an institution of higher education and research activities on the isles, and the Land Reform Act, which aims at strengthening communities. The goal in rural development is to create sustainable and resilient communities and the population seem to be increasing slowly.

All these decisions about projects launched in the name of rural development at the regional level reflect the global and national policy in the period of the time they were taken. The stern trawler project reflect the policy of direct state intervention as the driver for rural development. The quota system, and the EU policy on fisheries and agriculture reflect the policy that emphasised state withdrawal from direct intervention in rural development. The development of the knowledge society reflect the policy of knowledge as a driver for growth and well-being of people.

For that, the knowledge society along with universities, knowledge centres, and research institutions at global, national and regional levels have based their activity on the *Triple Helix model*, which represents the mode 1 and mode 2 of knowledge production. It links the knowledge society, industry and government. But in a complex world where the demand has been arising about the knowledge society's role in community development the discussion about the *Quadruple Helix* (community) and the *Quintuple Helix model* (environment) which represent mode 3 in knowledge production, is becoming stronger. In a way, adding the two helices with the *Triple Helix* model makes a holistic framework of sustainability that can be reached.

Sustainability has been a global, national and regional topic for decades. According to Du Pisani, it was in the 1970s that people began to question the assumptions of unlimited economic growth. In the book *The Limits of Growth* the topic of economic and population growth with a finite resource supply was discussed (Meadows et al., 1972). One reason for this continuing discourse was the first oil crisis in 1973, which showed the 'potential consequences of resource shortages' (Du Pisani, 2006, p. 90). At the same time environmental concerns became a critical issue, because of the fear that economic growth might endanger the survival of the human race and the planet. The 1970s was the period when various Green Movements and organisations became established and green political parties started to have an impact (Du Pisani, 2006). The downswing because of the oil crises continued into the 1980s and the economic

recovery did not start until the late 1980s (Du Pisani, 2006), when neo-liberal theories became influential in global politics. They continued to have an influence in the 1990s and today, even though more attention is given to environmental consequences, neo-liberal economic globalisation is the leading approach in global economic theory (Partridge, 2005; Sneddon, Howarth & Norgaard, 2006).

It has been, however, a debate whether weak, strong, or moderate sustainability should guide the global, national and regional policy and when it comes to creating sustainable communities it is important that policy makers and the inhabitants decide which of the three their policy should address. Rural development plans in Iceland emphasise creating sustainable communities, and the Western Isles's rural development goal is to create sustainable and resilient communities. It is challenging for policy makers at the governmental level to implement into the project in rural areas whether they operate under weak, strong, or moderate sustainability. For that, the knowledge society that fosters all five helices of knowledge production and takes scientific and local knowledge into the picture, is a key player.

In chapters six and seven the findings from the official documents analysed using historical discourse analysis and the thematic approach will be discussed. Chapter six revolves around presenting and discussing the discursive themes identified in the documents. The goal is to identify the dominant discourse and reveal how that discourse, created at the global and national level, becomes legitimated and becomes the historical conjunction, which agreed actions and activities in rural development are based on. In chapter seven the findings from the interviews with participants will be presented and discussed. The goal is twofold. First, the findings will be used to investigate if the discourse found among the participants is similar to the discourse found in the documents and/or how it differs, and second, to examine people's experience and the possibility they feel they have to become active players in their communities, and whether the knowledge society changes people's status in their communities. In this context the focus will be on women who have gotten a higher education degree, but men will also be included in order to see if there are any gender differences.

6 Policy-making for rural areas

Setting a policy requires meetings, working groups, endless revisions of text and content, and negotiations. The government bodies that are responsible for overseeing the development and implementation of those policies, appoint committees or working groups for the work that is to be done. Normally, they appoint one or two members themselves, one which is usually the chair and another who often is the secretary of the committee. As such they may be able to control the flow of information as is well known from the television series *Yes, Minister*. They ask various institutions or organisations, both from the private and public sector depending on the issue to be explored, to also nominate committee members. Those who sit in the committees represent their institutions or organisations and it can be argued that they tend to see to that their institutions or organisations interests are protected (Ministry of Education, Science and Culture, 2010).

This chapter contains an analysis of the discourse and the discursive themes identified in the eight documents that were chosen. Section 6.1 revolves around the Icelandic official documents and chapter 6.2 discusses the Western Isles official documents. The documents selected were policy statements for rural development and/or knowledge society development from 2010, related to the Westfjords and East Iceland, or the Western Isles. The reason for focusing on documents since 2010 was that in that year the Ministry of Education, Science and Culture in Iceland published a report about the knowledge society in Iceland which had been in operation since late 1990s (Ministry of Education, Science and Culture, 2010). As discussed in the introduction sector, the information in the report triggered this research and provoked several research questions, which were introduced in section 1.3.

6.1 Analysis of Icelandic policies

The official documents that were analysed deal with rural development and the knowledge society in Iceland, the Westfjords and East Iceland. They are all written in Icelandic. The quotations that are used in this thesis were translated by the author. The original Icelandic quotes are found in Appendix 5.

The documents are listed in Table 12. The first document is a progress report about the knowledge society in rural areas. The report was conducted by the Ministry of Education, Science and Culture in 2010. The report mapped the status of the knowledge society in rural areas and its goal was to show how important the knowledge society is for strengthening rural areas by emphasising the *Triple Helix model*, which is addressed in the report. The report is divided into two parts, the first maps the status of the knowledge society and the second part rationalizes why the knowledge society is so important and what the rural areas benefit from it. This rationalization is not backed up with any references so the researcher has to conclude that they are the members' own opinions. There are no suggestions about further development of the knowledge society (Ministry for Education, Science and Culture, 2010). The impact of this report on policy on development of the knowledge society is indirect, meaning that as such it has no power to set a policy but can be an asset for the minister or policy-makers in setting a policy.

The second document is a report about the revision of support to the economy in rural areas. It was prepared by the Ministry of Innovation and Industry about how to strengthen the cooperation between the knowledge society, industry, and government. The report discusses the *Triple Helix model* as the best model to use for that purpose. It puts forward suggestions about how the *Triple Helix model* could be realised and at least one of the suggestions about the formation of a *One Stop Shop* in rural areas found its way into the Iceland 20/20 report and the regional development plan 2014- 2017 (Ministry of Industry and Innovation, 2010). Only East Iceland has since then chosen the *One Stop Shop* approach. The status of this report is the same as the report about the knowledge society; it is an asset for policy-makers or ministers in policy-making.

The third document is a strategy for whole of Iceland till 2020, where strategies in development of the economy and society are formed. This strategy is at parallel with Europe 20/20, where smart, sustainable growth is in foreground. This is a governmental policy which other policies are based on, e.g. rural development plans. However, no plan on how goals are to be evaluated is found in the document and there is no discussion about the importance of formulating such an evaluation programme (Prime Minister's Office, 2011). The impact of this document is direct; this is a policy document set by politicians who have the power to realise it.

The fourth and fifth documents are place-based development plans for Westfjords and East Iceland. They are under the influence of the Iceland

20/20 plan. The emphasis is on choosing projects that work with the area's strength and speciality. Linking the knowledge society, industry, and government is seen the best way to accomplish this, and the concept of the *Triple Helix model* is addressed. The choice of projects between the two areas is similar, because the areas seem to have identified similar strengths and specialities. They are policy documents that priorities the fields the local authorities decide to emphasis. The local authorities are given an amount of capital to work with by signing a contract with the government, but have in their hands how to use it and there lies the power. An evaluation plan on the progress of the projects is not to be found in the documents (Association of the Municipalities of the Westfjords, 2013; The Association of the Municipalities of East Iceland, 2013).

The sixth document is a rural development plan for 2014-2017. It emphasis sustainability in economy and communities, without getting into any depth of what that means. There is no mention about the knowledge society so one must believe that the development of the knowledge society is no longer important in strengthening rural areas and/or the government sector believe that enough has been done in that field. It is a government policy document, but has in a way no value, because it is a parliamentary resolution with no given capital, unless decided by the government after it has been agreed up on. There is no plan on how to evaluate goals or projects in this development plan (Althingi, 2014).

Table 12. The Icelandic policy documents

Nr.	Year	Name of the reports	Responsibility
1	2010	A progress report about knowledge centres in Iceland (in Icelandic)	Ministry of Education, Science and Culture
2	2010	Revision of the economy support system (in Icelandic)	Ministry of Industry and Innovation
3	2011	Iceland 20/20 – A strategy for the economy and community (in Icelandic)	Prime Minister’s Office
4	2013	Iceland 20/20 – The Westfjords region (in Icelandic)	The Association of the Municipalities of the Westfjords
5	2013	Iceland 20/20 – East Iceland region (in Icelandic)	The Association of the Municipalities of East Iceland
6	2014	Rural development plan for 2014 – 2017 (in Icelandic)	Althingi 2014

Before presenting the discourse analysis findings from the six official documents it is important to look at official documents in general, to understand the power structure of those who sit in the committees and/or working groups and how the structure of the documents influences the policy.

6.1.1 Overview of official documents

In the process of choosing documents for further analysis, the author of this thesis read many and diverse documents from ministries, associations of the municipalities, economic development agencies in rural areas and the Iceland Regional Development Institute. It was interesting to find out how many of the various stakeholders had opinions and made suggestions about the knowledge society and the role of higher education and research activities in that sector in Iceland. It is the role of the Ministry of Education, Science and Culture to deal with the knowledge society, but other ministries and organisations also seem to be involved in this area (Ministry of Education, Science and Culture 2010; Ministry of Industry and

Innovation, 2010; Prime Minister's Office, 2007; 2011; Icelandic Regional Development Institute, 2009). Below are examples from two of the documents that were not selected.

Governments should reinforce current organisations in the areas. Emphasis should be on increased research activities, in order to promote cooperation between private businesses and organisations about research... (Prime Minister's Office, 2007, p. 15).

Universities can create special opportunities for rural development outside the capital area, especially in availability of jobs for higher educated people. Thereby universities can also reinforce rural innovation (Icelandic Regional Development Institute, 2009, p. 22).

In some of the analysed documents, no references can be found to statements that are given in the texts, so there is no way to find out whether they are based on research findings or if they are just the members' own opinions (Ministry for Education, Science and Culture, 2010; Ministry for Industry and Innovation, 2010; The Association of the Municipalities of East Iceland, 2013).

In one of the reports analysed, which is about the reinforcement of knowledge centres in rural areas in Iceland, two out of eight committee members were women. One member came from the Reykjavík Academy, which is a non-profit foundation of independent scholars in Reykjavík the capital, and one member came from the Icelandic Regional Development Institute. The low number of women as committee members is noticeable, but also the fact that a member from the Reykjavík Academy is appointed to sit in a committee, which has its main task to develop knowledge centres in rural areas. The Icelandic Regional Development Institute member is on the committee, because of the rural area perspective. Other members came from the university and research sectors and the ministry (Ministry for Education, Science and Culture, 2010).

The Ministry for Industry and Innovation engaged a consultant firm to work on a report about the revision of the support system in rural areas of Iceland, where economic issues are in the foreground. Nowhere in the report is information included about who worked on the project or who the firm talked to. Meetings were held and transcripts from them introduced, but no mention about who attended the meetings. It is only

stated that representatives from rural areas businesses or from the area's economic development agencies attended the meetings. This lack of transparency weakens the report (Ministry of Industry and Innovation, 2010).

Analysing the discourse about universities and research institutions with regard to their roles and the expectations in rural development and the knowledge society revealed five discursive themes in the Icelandic documents which are discussed below.

6.1.2 The knowledge society and its interaction with rural development

The first discursive theme was an emphasis on the knowledge society as a tool for strengthening rural areas, by emphasising the *Triple Helix model*. Linking, industry, government, universities and research institutions in engaging innovative activities in rural areas is not only connected with growth and prosperity, but also with the belief that the knowledge society is the key factor in stopping the out-migration from the rural areas and getting people to move there, especially young and well-educated people.

... the knowledge centres' dissemination can be a foundation for certain areas for innovation, promote initiative in the economy, attracting educated workforce as residents (Ministry for Education, Science and Culture, 2010, p. 68).

The goal is to stop the ongoing out-migration from small communities and the countryside (Althingi, 2014, p. 2).

The goal is to increase in number well-educated residents in vulnerable rural areas (Althingi, 2014, p. 2).

It is important to increase in number jobs in all sectors of the economy, especially those jobs that require an educated workforce (The Association of the Municipalities of East Iceland, 2013, p. 9).

Innovation should not be just in one economic sector. Its goal is to increase the number of residents living in the areas, besides attracting new residents to the area in order to turn around the reduced population in the Westfjords region (The Association of the Municipalities of the Westfjords, 2013, p. 7).

These quotations, whether they are found in policy documents or in the status reports, are good examples on how the governmental sector and policy-makers see the knowledge society's interaction with rural development. The ruling discourse flows from the national to the regional level, which are realised in the place-based documents. The discourse seems to revolve around a strong belief that increased demand for goods and well-paid jobs for higher educated people will be the solution for stopping the out-migration and getting people to move to the area. A strong and powerful knowledge society, which emphasises entrepreneurship and innovation as a key player in promoting residency in rural areas, is dominant in the discourse.

6.1.3 Reinforcement of rural areas

The second discursive theme identified was how the discourse about the reinforcement of rural areas revolves around the interaction of economy, innovation, and entrepreneurship with the knowledge society, especially the university sector as the key factor on areas growth and prosperity.

Presumption for an effective system of innovation in modern knowledge society is a knowledge flow between businesses, universities and research institutions (Ministry for Education, Science and Culture 2010, p. 3).

Relationship between the support system, economy and the universities must be promoted (Ministry for Industry and Innovation, 2010, p. 5).

These two quotations were chosen, because they are good examples of how the two reports map the status of the knowledge society and the support system in rural areas. Such status reports give policy-makers or ministers a rationale for setting a policy.

The relationship between universities and the economy in research and teaching must be reinforced. Research activities that come from the needs of the economy and take place in universities, by individuals or businesses, but under supervision of specialists, must be strengthened (The Prime Minister's Office, 2011, p. 21)

Strengthening the economic support system.it is done by emphasising local knowledge centres which will integrate

inter-disciplinary research studies and place emphasis on local speciality and areas strength´ that are likely to result in innovation and economic development (Althingi, 2014, p. 6).

An active cooperation between those who work in the field of culture, education and innovation to support the creative disciplines and entrepreneurship needs to be promoted (The Association of the Municipalities of East Iceland, 2013, p. 11).

The prerequisite for progress and growth consist in the economy's ability to engage in research and invest in innovation and development (The Association of the Municipalities of the Westfjords, 2013, p. 5).

As seen above there is a direct discourse flow from the status reports discourse to the policy documents discourse from the national to the regional level. Therefore the discourse about how the reinforcement of rural areas is best met is strengthened. The quotations were chosen, because they are good representatives of the discourse, which emphasise the knowledge society and innovation as key players in creating economic growth. The discourse seems to revolve around those two factors as the main tools to be used in strengthening rural areas.

6.1.4 Triple Helix model

The third discursive theme identified was the emphasis on the *Triple Helix model* as a way of linking the knowledge society, industry and government and forming clusters is the way to address that ideology. Clusters should be established in the fishing industry, tourism and so on. Inside each cluster various activities should take place, with the emphasis on research activities that focus on economic innovation and development, all for the benefit of the areas' economic growth and prosperity. Knowledge centres are also looked at as one form of cluster, where both public organisations and private businesses are operating under the same roof, working together on research projects.

A great emphasis is on increased cooperation between universities, organisations and businesses in research and innovation (Ministry of Education, Science and Culture, 2010, p. 59).

Forming clusters have been integral in interconnect diverse interests (Ministry of Education, Science and Culture, 2010, p. 61).

The discussion about the universities' involvement in the support system and economic development was that it was necessary to promote the relationship between those two sectors with cluster cooperation (Ministry of Industry and Innovation, 2010, p. 21).

Even though the two status reports do not speak of the *Triple Helix model* directly, they emphasise the relationship between the knowledge society, industry and government. They do however address the cluster concept and put an emphasis on the importance of the knowledge society to be involved in cluster activities.

Cluster forming will be supported, wherever there are chances for responsible growth and the emphasis is on investment in education, science and innovation (Prime Minister's Office, 2011, p. 16).

A continuing emphasis will be on clusters, especially the Triple Helix cooperation among businesses, knowledge institutions and the public sector (Althingi, 2014, p. 3).

The Triple Helix model ideology will be in focus, where the economy, the public sector and higher education and research institutions work together in organising education studies and create stronger grounds for economic development and residency (The Association of the Municipalities of the Westfjords, 2013, p. 8).

The above quotations show the strength of the historical discourse analysis as a method, because it reveals the direct flow of the policy discourse from national to regional level. This discourse becomes stronger and entrenches itself in the policy and in the end becomes the policy, which guides the actions that are agreed up on. The discourse emphasises cluster formation in relationship with the knowledge society so entrepreneurship and innovation can be promoted. By doing that, it was hoped that economic growth and prosperity would increase.

6.1.5 Strength and specialities of rural areas

The fourth discursive theme identified was the discourse about the need for identifying strengths and specialities in rural areas and to use these to the benefit of the economy. Universities and research institutions are big players in this, as university studies and research activities are targeted towards this approach. In the documents, the rural areas strengths and specialities are thought to be nature, culture and history.

With further cooperation between knowledge centres, universities, research activities and companies, human capital and facilities can be better exploited and increase both students and scientists' accessibility to cultural and natural resources (Ministry of Education, Science and Culture, 2010, p. 3).

The knowledge centres should identify priority projects and take the strength of rural areas into account (Ministry of Industry and Innovation, 2010, p. 12).

In order to improve competitiveness in rural areas, it is important to map each rural area, evaluate its strength and weaknesses and acknowledge their competitiveness (Ministry of Industry and Innovation, 2010, p. 27).

Here, the status reports suggests that strength and specialities of rural areas should be identified and that the knowledge society should emphasise its operation on them. The progress report identifies rural areas strengths and specialities to be natural and cultural activities, but the revised report emphasises improving rural areas competitiveness. The reports suggestions can be found in the policy documents so it seems that they have had an influence on the policy.

The economic core is improved competitiveness, innovation and sustainable development of the economy, which is based on the strength of each area and speciality or each industry, education, research activities and various cultural and sociological aspects (Althingi, 2014, p. 6).

Tourism, the creative industry and knowledge industry will be the main industries in the area along with complete processing of local ingredients transformed into a profitable product (The Association of the Municipalities of East Iceland, 2013, p. 8).

Reinforcement of higher education in the Westfjords region must be in the field of the area's core industry..... (The Association of the Municipalities of the Westfjords, 2013, p. 8).

....increased knowledge is vital, especially in the field of exploiting possibilities in using the resources from the sea..... (The Association of the Municipalities of the Westfjords, 2013, p. 7).

...promote innovation in cultural activities and support activities that can create job opportunities in the area (The Association of the Municipalities of the Westfjords, 2013, p. 12).

The policy documents take the discourse about rural areas' strengths and specialities a bit further, because they identify one strength and speciality to be the nature, linking it to the areas' industry, history and culture, and linking those to tourism and cultural activities. This discourse can be said to be under the influence of the homogenous perspective that rural areas tend to be looked at with. It appears in the discourse about what kind of higher education studies should be offered and what kind of research activities should get funded in order to serve the areas best. Those activities are in the field of nature, culture, and history and are thought to be the strengths and specialities in areas. It seems that areas are considered to be the cornerstones of national and cultural heritage and are seen as homogenous communities rather than multicultural like the capital area.

6.1.6 Sustainable development

The fifth discursive theme that was identified is the discussion about sustainability or sustainable development. In the documents these concepts are used in connection with the exploitation of natural resources, green economic development, and sustainable communities, but their meaning and how to implement sustainability is never fully explained or discussed, so it is difficult to see exactly what the policy refers to.

Sustainable development needs to be implemented in three main fields; at economic, social and environmental level (The Prime Minister's Office, 2011, p. 9).

Here, the three components of sustainability are in the picture, but in the same documents the emphasis is targeted towards how the environment and economy are being linked to quality of life.

A responsible and sustainable exploitation of the natural resources and a competitive economy must be ensured (The Prime Minister's Office, 2011, p. 9).

...promote sustainable development and economic creation and ensure a sensible prioritisation of capital and natural resources in the beneficiary for quality of life for whole Iceland (The Prime Minister's Office, 2011, p. 17).

The emphasis should be on environmental issues and sustainability (Ministry for Industry and Innovation, 2010, p. 22).

The foundation of the economy shall be diversity, equality, healthy business practices and a green economy according to the ideology of sustainable development (Ministry of Education, Science and Culture, 2010, p. 60).

The Associations of the Municipalities of the Westfjords and East Island never refer to the concept of sustainability. However, they put forward in their policy documents actions that could refer to aspects of sustainability. East Iceland talks about 'eco-friendly products in aquaculture' (p. 9), and the Westfjords region suggests that the region should 'get an environmental certification' (p. 4).

In the national regional development plan for 2014, the main goal is to create sustainable communities, but no definition can be found of a sustainable community. Statements on actions to reach the goal of sustainable communities are made.

The rural development plan goals are to equal people's opportunity for work, service and other quality of life and promote sustainable development of communities in the whole country (Althingi, 2014, p. 6).

To reach those goals actions that refer to infrastructure, special operations, economic matters and public services will be realized (Althingi, 2014, p. 6).

The above quotations were chosen, because they show that the term sustainability or sustainable development has found its way into policy documents. They show that there is a shallow understanding of the concept or the ideology of sustainability or sustainable development. It seems that the concept was adopted into the policy, without a full explanation of its meaning or how to go about realising sustainability into real life of communities.

6.2 Analysis of policy related to the Western Isles

The Western Isles official documents that were analysed were two rural development plans, shown in Table 13.

Table 13. The Western Isles policy documents

Nr.	Year	Names of documents	Responsibility
7	2011	Forward together – Single Outcome Agreement 2011 - 2013	The Outer Hebrides Community Planning Partnership
8	2013	Forward together – Single Outcome Agreement 2013 – 2023	The Outer Hebrides Community Planning Partnership

Both of the above regional plans are written with a holistic approach in mind, meaning that they deal with all aspects of rural matters. First, a vision and a purpose is introduced, along with a chapter on the area's profile in order to understand the place. This includes discussions about population, economy, health and well-being, poverty and deprivation, education, training and skills, housing, communities, natural resources, natural and cultural heritage, infrastructure, and connectivity. Statements and statistics which are quoted are backed up by references. Local outcomes and priorities are put forward, and a chapter on how the regional plan is to be monitored and how progress is measured, using both a quantitative and qualitative methods, is presented along with chapters about governance, community engagement and equality (The Outer Hebrides Planning Partnership, 2011, 2013).

The Western Isles regional plans are partnership documents between the Western Isles and the Scottish Government. Those who form the Western Isles partnership come from the governmental sector and

represent the local authority, the community landowners, the housing partnership, Highlands and Island Enterprise, Lews Castle College, the police, the fire and rescue services, Scottish Natural Heritage, Skills Development Scotland, and the Youth sector. The Scottish Government decides who forms the partnership. The rural development vision for the Western Isles was stated as:

a prosperous, well-educated and healthy community enjoying a good quality of life and fully realising the benefits of our natural environment and cultural tradition (The Outer Hebrides Planning Partnership, 2011, p. 5; 2013, p. 7).

When looking into the discourse about the roles of the universities and research institutions and their expectation about the development of the Isles and the knowledge society's development, four discursive themes were identified.

6.2.1 The knowledge society and its interaction with rural development

The first discursive theme identified was about the role of Lews Castle College in the development of the isles, which revolves around providing further and higher education, research activities and lifelong learning for the benefits of the community. The college is one of the partners in the planning partnership and is seen as such to have important roles, both educational and economic, in rural development. In that context the college has

already developed a number of degree programmes online and has post graduate research activity in a number of areas critical to the communities of the Outer Hebrides (The Outer Hebrides Planning Partnership, 2011, p. 20).

The Partnership is keen to promote the positive economic impact a thriving university will have on the Islands (The Outer Hebrides Planning Partnership, 2011, p. 20).

The educational and research sector is used frequently as a tool for economic development, to strengthen residence in the area as a means to reduce out-migration and to encourage people to move to the islands.

...the OHCPP is committed to delivering an education and skills programme which fit for the identified emerging sectors, looking at new ways of supporting school pupils to make informed training and career choices, which include the option of remaining on the islands (The Outer Hebrides Planning Partnership, 2013, p. 20).

The challenge that the partnership faces is to ensure there is a secure and sustainable economic climate that attracts people to remain or return to the islands to work, live and raise families (The Outer Hebrides Planning Partnership, 2013, p. 20).

This discourse about the strengths and specialities can be said to be under the influence of rural identity, especially the discourse about the cultural heritage and the importance of creating a sense of place.

The Local Authority works with partners in the promotion of Gaelic Medium Education in order to increase the number of pupils who are educated through the medium of Gaelic (The Outer Hebrides Planning Partnership, 2011, p. 20).

Renewable Energy is one of the leading drivers for economic growth in the Outer Hebrides (The Hebrides Planning Partnership, 2013, p. 19).

As noted above, a Western Isles strength and speciality is thought to be the culture that lies in the Gaelic language and its heritage, which helps to create a sense of place among inhabitants of the Western Isles. The renewable energy sector is also an attraction. Projects linked to these issues get a sympathetic response to funding requests, because it is believed that they have a positive impact on the area's economy and will increase quality of life.

Our natural and cultural heritage are amongst our greatest assets. They support a wide range of economic activities, and help to define the Outer Hebrides as an attractive place to live and work (The Outer Hebrides Planning Partnership, 2013, p. 30).

Increasingly the cultural sector has been identified as a major economic driver for the economic sector (The Outer Hebrides Planning Partnership, 2013, p. 32).

These quotations were chosen, because they show a consistency about the role of the knowledge society in these two policy documents created at different time. In 2011 the discourse about the Lewis Castle College as a key player in rural development is strengthened in the 2013 policy document.

6.2.2 Sustainable communities

The second discursive theme that was identified is related to the plan's vision, which is to create sustainable communities where social, economic, environmental and cultural well-being of the people is in the foreground (The Outer Hebrides Planning Partnership, 2011). No definition of sustainability is to be found, but the goals and actions reflect the general definition of the concept.

The rural development plans mentions seven goals targeted at the four components of the sustainability concept. The goals that focus on social sustainability are:

The population of the Outer Hebrides are stable, with a better balance of age, gender and socio-economic groups

The people of the Outer Hebrides are well educated, well trained and well skilled

The physical and mental health and well-being of the people throughout the Outer Hebrides is improved

The services of the Outer Hebrides are of high quality, continuously improving and reflective of local needs (The Outer Hebrides Planning Partnership, 2011, p. 7; 2013, p. 34).

The goal that emphasises economic sustainability in the Western Isles is

The economy of the Outer Hebrides and the economies within the Outer Hebrides are thriving (The Outer Hebrides Planning Partnership, 2011, p.7; 2013, p. 34).

The goal that addresses environmental and cultural sustainability is

The people of the Outer Hebrides derive maximum benefit from the natural and cultural resources of the area, whilst at the same

time safeguarding those resources to benefit future generations (The Outer Hebrides Planning Partnership, 2011, p.7; 2013, p. 34).

The activities that the partnership agreed upon reflect these goals, with projects that are targeted at improving the quality of life of the people of the Isles, especially among the elderly and the young. They deal with health inequalities and physical activities, provide opportunities for sustainable economic growth by focusing, for instance, on renewable energy, such as wave energy and windmill farms, support activities that use natural resources in a sustainable way, and work with cultural contents of the Isles and products that can create a sense of place, with the emphasis on the Gaelic language and cultural heritage (The Outer Hebrides Planning Partnership, 2011; 2013). It can be said that an active connection between the economic, environmental, social, and the cultural components of sustainability is in place in the Western Isles rural development plans. It is however important to have in mind that these goals reflect what has been agreed upon at European Union level and national level, which flows to the regional level (European Union, 2013; European Commission, 2013; Scottish Government, n.d.4; n.d.5).

The realisation of this holistic vision is dependent upon how well the partnership of Single Outcome Agreements integrates its individual members.

6.2.3 Resilient communities

The third discursive theme that can be found in the documents is about resilient communities and the importance of improving community resilience, self-reliance and building capacity, which is one of the goals of the rural development plan. The partnership sees it as one of the key factors in community development, along with sustainability. Communities should be:

well-designed, sustainable places where we are able to access the amenities and services we need (The Outer Hebrides Planning Partnership, 2011, p. 7); (2013, p. 34)

...strong, resilient and supportive...where people take responsibility for their own actions and how they affect others (The Outer Hebrides Planning Partnership, 2011, p.7; 2013, p.34).

The plans emphasise the importance of strengthening community resilience so communities are better able to deal with a changing environment. This also reflects goals set by the European Union and the Scottish Government, so there is a direct flow from European Union policy that finds its way to the national level and the regional level (European Union, 2013; European Commission, 2013; Scottish Government, n.d.4; n.d.5).

6.2.4 Demographic changes

The way the rural development plans address the discourse about out-migration and migration to the isles was the fourth discursive theme identified. It seems that a shift occurred in the discourse between the regional development plan from 2011 and 2013. In the 2011 plan the discourse revolved around depopulation and its effect on the isles, while in the 2013 plan the discourse shifts and a discussion about a demographic balance dominates.

Population stability and growth is seen as an indicator of an area's well-being and, at the extremes, an indicator of the future viability of communities. Depopulation in fragile areas such as the Outer Hebrides can have an adverse effect on community confidence and service sustainability (The Outer Hebrides Planning Partnership, 2011, p. 12).

Over the next decade the key themes for the Outer Hebrides will revolve around demographic balance... A key measure of success is whether the population of the Outer Hebrides declines or grows in a sustainable way (The Outer Hebrides Planning Partnership, 2013, p. 16).

This shift from discourse about depopulation towards a demographic balance can be explained by the fact that even though the population in the Western Isles has increased between 2011–2013, the number of people over 65 years of age has increased and at the same time there was a decrease of young people and women (The Outer Hebrides Planning Partnership, 2013). The discourse now revolves around the importance of a balance in the matter of age groups and to achieve this, more young people and women must stay or move to the islands. In this matter Lews Castle College, higher education and research activities of the University of the Highlands and Islands are looked upon as key players. These quotations

show that using words that address a problem from a positive perspective can change the perspective the problem is looked at. The problem in itself will not go away, but it will be addressed differently.

6.3 Summary and discussion

The Icelandic analysed documents were written over a period of four years, 2010–2014. Yet the same discursive themes were identified in all of them, despite the fact that a change in the governmental landscape from a left wing government to a right wing government took place in Iceland during that period. The policy themes had not changed, which indicates that these discursive themes have become legitimated principles in the discourse about rural development and the knowledge society. They had become the rules about what could be said. Those legitimated principles were the dominant discourse of the governmental system about the impact that the knowledge society on rural development was believed to have.

Using the historical discourse analysis revealed that the ideologies of the *Triple Helix Model* and sustainability were dominant discourse and could be found, either directly or indirectly in other discursive themes. How strong the emphasis on the *Triple Helix model* ideology was came as a surprise. The researcher had not realised how much effort the policy had put on this ideology of linking the knowledge society, industry, and government. The interaction of the knowledge society with rural development seems to be through the *Triple Helix model*. The discourse revolves around rationalizing that the knowledge society must work with industry and government so sustainable, rural communities could be built, and where a powerful business sector and innovation with increased job opportunities could attract higher educated people and strengthen the rural communities. As a means to accomplish this, the areas' strength and speciality must be identified and they tend to be identified from the perspective of the dominant industry. This is the historical conjunction on how the knowledge society should interact with rural development in rural areas of Iceland. It is the dominant discourse that is accepted in all systems at national and local government levels. The rural development system had adapted itself to this discourse and invested effort and capital to get it realised.

Even though the sustainability concept is mentioned in the documents, it is, at first, linked to the areas' resources. In the regional development plan for 2014-2017 a statement about creating sustainable communities is

put forward. To create sustainable communities, environmental, economic, social, and cultural issues of communities must be addressed. Therefore, a shift in the discourse that addresses the communities and environment is needed. Adding two more helices to the *Triple Helix model* ideology, that is the *Quadruple Helix*, which addresses the communities and the *Quintuple Helix models*, which addresses the environment needs to become the dominant discourse in order to change. Now it seems that the system is stuck in the dominant discourse of the *Triple Helix model*, which has become the legitimated principle. Therefore, the historical conjunction does not change and the rural development system continues to work as always; the same actions and activities will be agreed up on. Bringing communities and the environment into the picture moves the emphasis from the region, to each community as core regions, and can change the dominant discourse.

It is noticeable that even though the goals that are to be met by various activities were put forward in the documents, no indication is found on how to evaluate the goals. Because no indicators or measurements were introduced it is hard to see how those involved are able to measure progress against the official timeline (Althingi, 2014; Ministry of Education, Science and Culture, 2010; Ministry of Industry and Innovation, 2010; Prime Minister's Office, 2011; The Association of the Municipalities of the Westfjords, 2013; The Association of the Municipalities of East Iceland, 2013). An evaluation plan is also necessary to find out why goals and activities are not successful and/or are not evolving as planned. That might help identify the dominant discourse, give an understanding on why it has become a legitimated principle, and assist in taking necessary actions for the rural development system to move along according to plans.

The Western Isles regional plans were written in the years 2011–2013 and no differences in the discourse about rural development policy were revealed in the plans, except the shift in the discourse about the importance of population decrease. The vision in the two documents was the same and some of the goals and activities also. This indicates that those discursive themes that were identified had become legitimated principles in rural development and knowledge society discourse. As in Iceland, this was the discourse that had been agreed upon and was accepted by those who put the policy into action. This dominant discourse permeated the governmental system, both at national and local levels. Both parties signed the rural development contracts and by doing so, they sustained the discourse.

The discourse of the Western Isles rural development plan revolved around creating sustainable and resilient communities, and evaluation of progress. However, the idea about the knowledge society's role in creating a powerful economy, with increased job opportunities, both for residents and those that might be attracted by it, was the historical conjunction that the policy response in rural development in the Western Isles was based upon. That dominant discourse was accepted, as in Iceland, in all systems by all the stakeholders, at national and local levels, that formed the Planning Partnership.

The discourse about the ideology of the *Triple Helix model* was also found in the documents, even though the term *Triple Helix model* was not used. The importance of the knowledge society working with the area' industry and government for the isles prosperity was apparent when discussing the isles' strength and speciality. Even though the isles show an indication that they are adopting the fourth helix, and even the fifth helix, with the emphasis on creating sustainable and resilient communities, the focus is still on the region as the core unit. However, it seems that a shift in the discourse is taken place, but in order for it to lead to a move in the rural development system, the focus need to move to each community as the core unit.

Now that the policy actions and perspectives have been introduced in the research areas, chapter seven will look at the issues from the perspective of individuals living in the effected areas. These perspectives offer insight on the opinions and needs of the individual communities effected by rural development plans and will lead to a discussion on quality of life, people as place-makers and gender perspective as introduced in chapter four.

7 Living in a rural community

Living in rural places is romanticised as an idyllic way of living, presenting the countryside as an innocent and pure place, where honest and hard-working people live. This can be seen in modern literature, e.g in poems, where poets describe loneliness and alienation as a part of the city life as a contrast to the countryside living (Einarsdóttir, 2013).

In this chapter, findings from interviews taken with people in the three research areas, the Westfjords, East Iceland, and the Western Isles of Scotland will be presented. The focus is on the views and experiences of women, both those who have finished a higher education degree while living in their hometown, and those who were working in the political, educational and rural development sectors. The goal of these interviews was to find out whether and how their place and space inside their communities had changed by getting a degree or being involved in the above sectors, and whether it had any effect on rural development and sustainability. To get a clearer understanding of the women's views and experiences, interviews with men were also taken for a comparison.

This section is divided into ten sub-sections. These refer to the themes identified from the interviews:

Table 14. Identified themes

Identified themes	
Urban and rural	The understanding of urban and rural places
Equal rights issues	The views towards equality
University studies	The experience of being on-line university students
Knowledge society and rural development	The knowledge society interaction with rural development
Communities and natural resources	The characteristics of rural communities and views towards natural resources
Realization of rural development plans	Executions of rural development plans
Rural development emphasis	Identify rural development emphasis
Strength and specialities	Identification of strength and specialities
Sustainable development	Understanding of and views towards sustainable development

Before presenting the themes and interview results, some background information about the participants will be introduced in section 7.1.

7.1 Background information

There were 32 participants, both women and men, who came from the three research areas. They ranged in age from 27 – 65 years of age. Most of them were married, but two were single and some had children and/or grandchildren. They had worked in private companies or in public institutions and/or had had their own businesses. Those who were chosen had to meet at least one or more of the following criteria:

- were working in the development and innovation sector
- were members of the local authorities in the areas
- were working in the higher education sector
- had a university degree from universities in Iceland and in Scotland
- had gotten the university degree through distance learning methods (Table 15).

Table 15. Participants, criteria by countries and gender.

Criteria	Iceland		Scotland	
	Men	Women	Men	Women
Working in the development or innovation sector	3	2	1	2
Were members of the local authorities in the areas	6	1	0	1
Were working in the higher education sector	1	8	4	2
Had a university degree from universities in Iceland/Scotland	6	6	4	2
Had gotten university degree through distant learning method	5	6	1	3

The author of the thesis had in mind when selecting participants, to find participants for all of the chosen criteria. Most people covered more than one, e.g. almost everybody had a university degree, worked in various

places, and some even were members of local authorities. People in rural areas tend to take on various roles at the same time in their communities and the participants were no exceptions. The following quotations show the participants working experience.

Sjöfn [WF]: 'I have also run a business... Founded it, ran it and then sold it. I learned a lot during that time, yes; where money and values comes from'.

Bragi [WF]: 'Yes, I have been working in three separate professions. I started as a marine engineer and in industry, then I moved to the social work sector and then into the environmental sector'.

Nanna [EI]: 'I worked on a project for the Ministry of Education...'

Fjalur [EI]: 'I worked for the University of Iceland for a long time...'

Rose [WI]: 'I had a high profile job in the capital, but it meant nothing to people here...'

Gus [WI]: 'After that, I worked in rural tourism as a project manager, focusing on cultural tourism'.

Some came to the area as young women or men to work in the fishing industry, to study, or were just looking for an adventure. There they had met their partners and stayed on because neither they nor their partners wanted to leave.

Unnur [WF]: 'I came here because my relatives lived here at that time, and I decided to study at the high school here, I met my husband in the school'.

Bragi [WF]: 'Then I saw this job advertised and thought that it would be nice to apply and I did'.

Nanna [EI]: '...and then I got a phone call and was offered a job here, which I accepted...'

Others had met their partners in Reykjavík or in the case of the Scottish participants, in Glasgow while studying or working and moved with him/her to his/her hometown.

Gerður [WF]: 'Yes, I was born and brought up in the capital and moved up here after finishing high school with my husband who was brought up here'.

Ægir [WF]: 'Moving here was related to my wife'.

Rose [WI]: 'And I came up here when I got married to my husband'.

Some couples were both from the areas and had decided to move back to the man's/woman's hometown.

Freyja [WF]: 'I think, because we are both from the area and our relationship had developed to the point that we talked about having children and wanted them to grow up in the countryside'.

Pór [WF]: 'I'm born and brought up in the area and so is my wife...'

Gus [WI]: 'I'm brought up on an island...my wife is from another island ...'

Both the women and men that were interviewed were living in the areas because they or their partners had families there. For the Icelandic women, an important factor for choosing to live in rural areas is child-raising and security. Those factors are valued by the women and is best seen when they compare the city life to the rural life.

Unnur [WF]: 'I haven't found myself in the capital, even though I was brought up there, it's just good to be here. I just feel that every individual matters here...because I know what it's like to live in the capital and see the closeness to other people here, which might bother some, but not me. I feel safe, I feel safe with my children and that other people know their parents and so on'.

Hera [EI]: 'When I lived in the capital, it was so difficult to go to work because we only had one car. And then we moved up here

and found out that everything you need is here and you don't have to go anywhere'.

For the women living in the Western Isles those factors did not come forward, only that they had brought up their families there and had later in life gone into studying.

Alice [WI]: 'But when I moved to Lewis, my children were growing up and I wanted to get back to the work-place'.

Rose [WI]: 'Had a family, brought up a family and wasn't working and it was only when the family were grown up, I decided to go back into education'.

To live in a child friendly environment is more valued by the Icelandic women than living near their blood family. But they all talked about having a job that they liked.

Gná: [WF] '...I decided to go into studying, so I wouldn't have to take a job that I found boring. Not having an education limits your choices'.

Rose [WI]: '...and then this job came up and I felt confident to apply for it after having achieved my degree'.

Nanna [EI]: 'I was getting bored in my previous job in the capital...but when I was offered this, it seemed an interesting one...'.

For the men, living in a child friendly environment did not seem to be an issue. What was important for them was that they liked the place they lived in, that they were accepted by the community, and that they, just like the women, had a job they liked.

Týr [WF]: 'Yes, I was born and brought up in the capital and moved here with my wife, like so many others. Here I have settled down and like it very much here'.

Bragi [WF]: 'Like so many kids at my age, I was sent to the countryside during summertime, from the end of April to the end of September. After being there you felt you didn't have as much

freedom living in the capital and I started to dislike it. So in a way already as a kid, I had decided that I didn't want to live there'.

Pór [WF]: 'You could say that the proximity between people is closer here; meaning that relationships between people are tighter...'.

Gus [WI]: 'Given the choice I'm far happier on an island in a rural environment than I would be in the inner city'.

The main reason both sexes gave for the possibility of moving from the area was related to the loss of a job. For women it was more related to their husbands losing their jobs, while men were more concerned about their own jobs, not their partners

Freyja [WF]: 'Yes, it would entirely be related to my husband's work...we would not move if I would lose my job'.

Ægir [WF]: 'There could be lot of reasons for moving. Maybe work...well let's just say that it would probably be because of changes related to the job I have...'.

Alice [WI]: 'I would probably not move, because my husband would not want to do that or my family...'.

The women gave different reasons for coming to the area, but the reason for the Icelandic women to stay-on were related to their traditional views towards life, which value family matters, especially child-raising. Small communities in rural areas in Iceland seem to express those values. Those factors seem not to be an issue for the women living in the Western Isles, where being able to go into education and get a suitable job afterwards was more of a factor for staying.

Both the men in Iceland and on the Western Isles gave different reasons for coming to the area, but their reasons for staying were more related to themselves and their negative feelings towards living in the capital area. They also have traditional views towards life in the sense of liking small, rural communities and their values.

7.2 Urban and rural

Icelandic men and women had similar understandings when asked to define the differences between rural and urban areas. They did not feel they were

living in a rural area, because in their mind any population centre that has some services is urban, so a town of 60 inhabitants is considered an urban area, if it is able to provide necessary services. A rural area is the individual farms in the countryside (Edvardsdóttir, 2013).

Gerður [WF]: 'No, I don't think my village is a rural area, for me it is an urban area, even though the population is about several hundred people. But it has to have some service institutions that we need, like in urban areas, but the rural areas do not have that'.

Ægir [WF]: 'A village of one hundred people is not rural if it has the basic services'.

Iðunn [WF]: 'Well, some kind of service is needed, so a small village that does not have that kind of thing is rural...'

Óðinn [EA]: 'Rural is something that is far away where basic service is not provided...'

The understanding of rural and urban by the participants from the Western Isles is more in line with the EU definition and classification, discussed in section 2.2.2. It was however this feeling for a sense of place that in their mind influenced their understandings of the difference in quality of life in a rural or urban area.

Alice [WI]: 'That's how I see the Outer Hebrides, anything outside of Stornoway is rural'.

Gus [WI]: 'I think there is certainly a sense of, you know, one's surroundings, the environment, the ambience of being in a rural area, a sense of detachment, a sense of pace of life...'

For the Icelandic participants, the villages around Iceland are urban areas and the countryside rural. To be able to call a community rural or urban depends on the status of the services that can be found there. If there are most of the necessary service institutions, e.g. a pre-school, a compulsory school, a health clinic with a doctor and/or a nurse, various shops that sell food and/or clothes, a town hall and a bank, both sexes felt they live in an urban community. With these services one can live daily life the same as in the capital area, which is the benchmark for urban development (Edvardsdóttir, 2013), at least for the Icelandic participants.

The participants from the Western Isles indicated that when you live in a rural rather than an urban area, then you may have a stronger sense of place.

7.3 Equal rights issues

Asking about participants' views towards equal right issues is helpful when identifying if their views reflect the equal rights issues in their communities. It can also explain how they see and experience the communities they live in. When asked about the meaning of masculinity and femininity, men and women in Iceland expressed very traditional ideas about them.

Rán [WF]: 'Well, you know, femininity is naturally the mother figure, the home and children. ...masculinity is related to the car, the house and maintenance'.

Ægir [WF]: 'Well, fishing is a male occupation. ...and delicate matters are femininity'.

The same traditional ideas about these concepts were found among the Western Isles participants, who sometimes related them to the regional influences of the church.

Rose [WI]: 'Femininity...yea, I suppose the home, the family, caring, looking after the elderly...masculinity, I suppose the decision making, more fiscal, I would say the key things they are still the bread winners'.

Gus [WI]: '...I base my views on that on biblical values...'

Despite the traditional ideas about masculinity and femininity, the Icelandic participants said they believe in equal-rights, and the Icelandic women said they were not feminists, because in their minds that concept had a negative meaning.

Unnur [WF]: 'I believe in equal rights, but I'm not a feminist. Why? Because I feel that it is a negative concept and extreme, like women are superior. Like, if a man and a woman apply for the same job and are equal, the law says you have to hire the woman; I don't see the point'.

Týr [WF]: 'Yes, I would say that I believe in equal rights. I believe that everybody should have equal right to do what they want to and also in employment'.

The same discourse was also identified among the Western Isles participants.

Alice [WI]: 'I don't consider myself as a strong feminist. I've certainly got very strong views, but I still don't think women can ever act like men...and feminism has a slightly negative meaning if you think of it in terms of the extremes'.

Gus [WI]: 'Well, I do believe in equality...'

The men did not address the issue about feminism in relation to equality, and it seemed that they did not see that as a part of equality in a patriarchal discourse. It was the same with the women, although admitting to believe in equal-rights, they seemed not to realise, that the discourse about those matters is a patriarchal discourse, which favours male values and beliefs. So, neither men nor women were able to discriminate between the structure of individual rights and the structure of the patriarchal structure of their communities. Therefore, they did not see that their negative views towards feminism strengthens male dominance (Edvardsdóttir, 2013; Proppé, 2004)

7.4 Undertaking university studies

The Icelandic women indicated that they had always nurtured a dream that one day they would be able to study. However, the women living in the Western Isles had obtained a degree before they moved to the area, which did not fit the needs of the area, and then they took another degree in something else where job opportunities were more likely.

Unnur [WF]: 'No, I just always wanted to go into that field and when the opportunity came, I grabbed it'.

Nanna [EI]: 'And now I'm taking some courses to find out if I can do some more...'

Alice [EI]: 'I went through secondary school, and went from there into art colleges. I was looking to get into the workplace and

there weren't really any opportunities to complete my art courses...'.

Some of the men had received their education either before they moved to the area, others after they had moved. They all seem to have used the educational opportunities that were in the area at the time they moved.

Týr [WF]: 'After I moved up here I started to work in the construction sector as an unskilled worker, but found out rather quickly that I could just as well have studied to be a carpenter, which I did'.

Óðinn [EI]: '...finished secondary school, started learning business studies, but gave it up and started teaching at compulsory level in the area and later I finished the pedagogy studies through distance learning'.

Gus [WI]: 'I studied here and that was a requirement... a pre-defined degree was mandatory so I decided to do the rural development degree'.

The Icelandic women did not feel they could have moved into higher education earlier, because it would have meant moving away from the area and that was too complicated for them with family and children.

Gná [WF]: 'If studying would have meant that I had to move away from the area, I would not have gone into studying, that was never an option'.

Hera [EI]: 'And those courses that are offered through distant learning are those that seem to appeal more to women; teaching and nursing'.

For the women in the Western Isles, moving away to study was not something they thought about, because they had access to a variety of study options both through distance methods and face-to-face learning. Their biggest concern was to get jobs afterwards.

Alice [WI]: 'I myself was a wee concerned about my age and my ability to get a job afterwards, after wasting all this time studying...'.

The men, like the women, did not want to move away from the area to study and that was more related to their dislike of the city. That did not stop the men from enrolling in a programme that was not taught in the area and meant that they had to stay in Reykjavík, Glasgow, or Edinburgh for a period of time.

Týr [WF]: ‘...the last semester I only had two subjects left and because they were taught twice a week in the evenings, so I flew to the capital in the morning and back again in the morning of the third day....And the week after I skipped class’.

Gus [WI]: ‘So, it was very different leaving the area and going to the capital city for three years, but we enjoyed it’.

During their studies, some women and men stayed in Reykjavík for a period to complete their studies or because they wanted to experience being in school with other students.

Gná [WF]: ‘If I could choose, I would choose class-based learning, but first when I entered the class-based learning, I found, because I had been in distance learning the previous year, that it was a waste of time, sitting in a classroom for a whole day...but then I realised that it was the fellow students, the teachers and the whole environment that mattered’.

Bragi [WF]: ‘The class-based learning periods were necessary, just to get to know the teachers and your fellow students and to get into the discourse. That just changed everything and created this academic environment’.

Nanna [EI]: ‘There are number of teachers in the area who want to go into a master’s program in teaching and we want to try to get short periods to be here in the area, not in the capital’.

The people of the Western Isles have access to higher education courses both face-to-face learning at Lews Castle College or through distance learning through the UHI or Open University, so leaving for a short period of time was something that was not uppermost on their mind, because there was no need to worry about it.

Rose [WI]: ‘Open University, interestingly enough, didn’t attract me, because of the type of person I am. I need to be stimulated

and I could work on my own, but I knew I needed something to pull me in’.

Gus [WI]: ‘I did my first year of my degree course at a distance so to speak, because I didn’t actually attend any classes, but I was studying at home and then the next year I did a full academic year on a campus’.

The Icelandic women chose the line of their study because it is something that was offered through distance learning.

Freyja [WF]: ‘See, my study was chosen because it could be studied through distance learning. Then the choice was limited’.

Hera [EI]: ‘It seems that the young people here chose their study lines based on job opportunities in the area...’.

The men chose their line of their study because it interested them, even though it was not taught through distance learning methods.

Bragi [WF]: ‘The driver for going into this study was my interest in these issues, even though that wasn’t at first offered in distance learning’.

Pórr [WF]: ‘...my background is in political studies...’.

The participants from the Western Isles chose their study line out of interest, whether it was offered as a distance learning courses or face-to-face, probably because both these methods were practiced by the higher educational sector in the area.

Alice [WI]: ‘I had to look to see what was available through the local colleges and that one really jumped out at me as an area of interests...’.

Gus [WI]: ‘So, I think at that level it was most helpful to be able to study on my own turf, on my own island, within cycling distance of my home...’.

Both the women and men in Iceland chose their line of study because they had been working as unskilled workers in that sector and wanted to

receive qualifications, but the driver in the men's case was their aspiration for higher salary.

Rán [WF]: '...and then I started to work here (in the school) and got good references from the principals and all that. I applied but was afraid that I would be rejected again, but I wanted to be a teacher'.

Pór [WF]: 'I went into the studying to change my current situation in order to get higher salary'.

Óðinn [EI]: 'I had been teaching in a compulsory school in the area for several years and went into a study to get teacher qualifications in order to get a higher salary'.

That was not the case for either the Western Isles' women or men; they often went into completely different sectors than their previous study had been.

Alice [WI]: '...so I was a mature student when I went back to study rural development, which is very different from art...'

Some of the Icelandic women ended up studying what was not always their first choice, but rather something that could be studied through distance learning, and was practical in their community. That was not the case with the Icelandic men. Their aspirations and the certainty of a higher salary after graduation was the key factor in their choice.

Freyja [WF]: 'I chose this study line, because we had decided to move back home and we thought my previous study line was not practical enough there and I knew that this was something that would be useful'.

Hera [EI]: 'Those who stay want to study something practical, something where there are job opportunities in the area'.

Ægir [EI]: 'I felt it was the logical thing to do, regarding my previous study and if you think of it in terms of getting higher salary, then taking this study line was a must'.

As said above, these factors were not found among the Western Isles' participants.

When asked about their studies, both the Icelandic women and men stressed that they had gained a lot by studying, e.g. they were more confident, open minded, organised, aware of their own abilities, had obtained a higher salary in their line of work, more job satisfaction, and had a better life standard.

Rán [WF]: 'Well, I feel safer with my knowledge and stronger...I'm more organised and have learned other work methods; e.g. teamwork and better communication methods'.

Freyja [WF]: 'Yes the difference in salary from being an unskilled worker to a skilled worker was great'.

Ægir [WF]: 'Well, I don't know, maybe the fact that now I feel more comfortable to stand up and defend my views about the work'.

Bragi [WF]: 'I have gained a better and deeper understanding of the subject and now it is easier for me to talk about it. Before, I used to talk about these things based on my feelings towards them, but as my understanding has deepened, I have become more confident in my work'.

The Western Isles participants had the same story to tell as the Icelanders when discussing what they had gained by their studies.

Alice [WI]: '...economically it has made a difference..., me now being the main earner..., and for me personally it has increased the confidence and you feel you're putting something into your community as well'.

Gus [WI]: 'Well, for myself, there was such a tremendous sense of achievement'.

All the Icelandic women said that they received some support while studying. They found family and friends supportive, but not always the community they lived in. The reason might lie in the fact that educational standards in rural areas are often low, so understanding for the need for an education beyond the traditional industries is lacking.

Gerður [WF]: 'My family supported me 100%, but it seems that the community didn't understand what I was going to study, why and what I was going to do with it'.

Nanna [EI]: 'When women finish their degree and they become more prominent, take too much space in the community, then a fear comes up...'

Family, friends or community support was not an issue for the men in Iceland and the Western Isles', and said it did not bother them if they did not find support from these parties.

Týr [WF]: 'What I felt was a general understanding...'

Bragi [WF]: 'Support? Well, yes and no. I felt certain passivity towards the fact that I was studying, but many said that they envied you for being so efficient'.

Alice [WI]: 'Well, my husband was not at first happy with it. I think he just wished that I would go out and get some sort of job that was going to earn a small income'.

The Icelandic women who entered into higher education were the ones who always had planned to study something someday, but for family matters and location they had not been able to do that. When the opportunity came, with distant learning options, they took it, even though study options were limited, so in some cases the study line that they followed was not what they wanted most. What to study is a consideration for the women, and sometimes their decisions seemed to be based on what was practical for them, their family, and the community.

Women living in the Western Isles went into higher education after raising a family. They were mature students, who used the benefits of studying either through distance learning or face-to-face. Their choice was based on their interests and the main thing that concerned them was whether they were able to get suitable jobs in the area after graduation.

For both the Icelandic men and those who lived in the Western Isles, entering into higher education seemed to be based on their aspirations or interest in the study line they choose. They were motivated by the idea that after graduation they would get a higher salary, not simply the fact that the course could be studied through distance learning methods. If it could be studied through distance learning it was fine, but if they had to leave for

their studies, they found a way to work things out. Their main concerns about their studies seemed not to be about what was practical for them, their family, and the community, but rather their interest in the study area, job satisfaction, and the expectation of a higher salary.

7.5 The knowledge society and rural development

When discussing the knowledge society in rural development, two themes were found among the responses from both the Icelandic and the Western Isles participants. The first theme was related to migration to and from the areas and the second theme was related to the role of universities and research activities in community development.

7.5.1 Migration pattern

Both the men and women in Iceland talked about the importance of reducing the out-migration from their areas and getting more people to move to the area. Their discourse revolved around how the development of the knowledge society could be a crucial factor in rural development, mainly by creating jobs for higher educated people, especially young people and women. However, it was acknowledged that young people moving from the area to gain experience was seen a good thing. Getting them back was, however, not so easy. The out-migration of women did worry the participants more along with a lack of good jobs for educated women, which was seen as the main reason for them leaving rural areas. The research sector was seen to be the foundation for innovation and entrepreneurship and it was hoped that it would create jobs for higher educated people, especially women, in that sector

Pór [WF]: 'And then there is innovation, which is based on what has been done. The social capital needs to be strengthened and education must be able to promote skills and research activities creates new knowledge and based on those factors, new jobs can be created.'

Finnur [WF]: 'The economy emphasis is male dominated. It revolves around finding jobs for men. What is lacking is thinking about good, well-paid jobs for higher educated women, otherwise they leave.'

Freyr [WF]: 'We have been successful in developing higher education studies in the areas, both face-to-face learning and

distance learning, but we have not been successful in creating research activities.'

Embla [WF]: 'I believe that young people who finish high school should go to university somewhere else. Of course I would want them to come back, but to leave and broaden their horizon is good for them. It is not good for anybody to always stay at home.'

A lack of higher educated job opportunities was thought to be the major cause of the out-migration, and was used to rationalise why people did not want to move to the areas.

The discussion with Western Isles men and women about migration from or to the islands revolved around the demographic balance. They were worried about an ageing population, with an increasing number of retired people from the mainland moving to the islands and, because of that imbalance, getting young people to stay or move to the island is important.

Gus [WI]: '...there are few young people, depopulation is an ongoing factor...'

Alice [WI]: 'We still have the problem of people leaving...'

Sally [WI]: 'It's a real challenge, because you know, a large number of our young people leave and they choose to leave to pursue higher education...'

Betty [WI]: 'I mean, it is a dying community in the sense that people are leaving...and there are quite a lot of older people moving in here'

Don [WI]: 'So we now have an ageing population, we have more retired people who will put more and more pressure on municipal social services, we have less people in employment and the young people that are here are leaving to go to the mainland, because they don't see job opportunities here'

Both men and women's discussion about young people is divided between the importance for young people to leave in order to see something else and to broaden their horizon, and the discussion about the importance of creating opportunities to come back if they so wish. All of the

participants believed that education would be the key factor and believed that the role of the college was huge in that context.

Robert [WI]: 'A lot of the people leaving, getting good degrees and a whole range of disciplines have been able to come back...'

Don [WI]: '...you can still argue that there is a need for young people to go away to broaden their horizons, to see the world, get new experiences and then keep your fingers crossed and hope there will be a job for you back in the Western Isles'

Mark [WI]: 'And then the concept of UHI was about bringing all these colleges together as one institution, that would allow them to develop higher level work, research and also be able to stay within your home area and get good qualifications'

All the participants had worries about women leaving the islands and discussed various reasons, such as male oriented religion and a homogenous economy. With an increasing number of women entering higher education at Lews Castle College, participants saw education as one factor that could turn the out-migration around, if women were able to get suitable jobs after graduation.

Robert [WI]: 'I think more women are now keen to get to the highest level of qualification as they can as a future investment'

Chris [WI]: 'The local authorities' concerns are the out-migration pattern which is very much more women than men and that the opportunities for women on the islands are not particularly good, employment wise'

Don [WI]: '...but still the majority of the further education students are women and that pattern has carried on into higher education as well'

Nina [WI]: 'Women return into education in their thirties'

The participants were able to identify some of the key factors related to out-migration, especially by young people and women. They shared the same worries as the Icelandic participants about not getting the young people back, and losing women from the islands. The main reason for the out-migration was because of a homogenous economy and a backlash in

employment on the Isles. They seemed not to see that to fulfil the standards about quality of life these groups set, the interplay between economic, environmental, social and cultural factors must be in place.

Both the Icelandic and the Western Isles participants admitted that even though lots of things have been done in the higher educational sector, migration from rural areas has not stopped, and both women and men felt that education itself would not prevent people from moving. The labour market was more of a key player in that sense, meaning that if there are no suitable jobs in the area, people leave. Therefore, the labour market is a key player both in migration to the rural areas and out-migration in all the three research areas.

7.5.2 Universities and research activities

The Icelandic men and women did not think that universities were doing well when they were asked about the role of universities in the development of higher education and research activities in rural areas.

Freyja [WF]: 'In many ways, higher education study should be organized in a way, that you don't have to go to Reykjavík. ...here people have taken higher education degrees, and then left, it's cheap to live here and study through distance learning, but opportunities are maybe elsewhere'.

Ægir [WF]: 'Rural areas need to be in connection with the universities...and it is important that they offer distance learning studies'.

Hera [EI]: 'Universities seem not to be interested in participating in research projects with other research institutions in rural areas'

They felt that universities were not thinking sufficiently about the people in rural areas or about rural development, but that they ought to do that. They stressed that the chance to have distance higher education in every university subject is important for people in the rural areas, and the development of the area.

Sjöfn [WF]: 'The universities' role is, naturally, to educate people to get better jobs for themselves and the community. ...to be able to study through distance learning has a positive effect for

this area; it could be an attraction, but will not prevent out-migration’.

Bragi [WF]: ‘I believe that the universities must answer the question of what their role is; is it their role to educate people or is it their role to take part in community development, or maybe both. These are the fundamental questions, which they have partly answered because they don’t take part in community development in rural areas’.

Hera [EI]: ‘I feel that the university sector is so difficult to deal with...’

The Western Isles participants stated that the Lews Castle College and the University of the Highlands and the Islands were fulfilling their role as active partners in rural development and in developing higher education studies and research activities.

Rose [WI]: ‘So when you look at the Outer Hebrides as a whole, you would say the satellites from Stornoway are working brilliantly’.

Gus [WI]: ‘I think Lews Castle College is an excellent example of what can be done and what is being done...Lewis Castle is a part of rural development’.

The Icelandic men and women believed that forming clusters in the main industry in the area, the fishing industry, and tourism, was the best methodology for innovation. The discourse revolved around the Triple-helix model, which was addressed either directly or indirectly by the participants, where universities and research institutions work with the public and private companies in the areas on innovative projects. Establishing knowledge centres, where research institutions, and public and private institutions were based along, with higher education studies, either face-to-face learning or distance learning, was seen by the participants to be the best way to form partnerships. They felt that by forming clusters it was more likely that something innovative would come out of the partnership that would be beneficial for the areas’ economy.

Hera [EI]: ‘Obviously it is more likely that innovation will take place in a community, where knowledge clusters are operating and where you can study something, do some research or do

other things than just this traditional profession that everybody is working in'

Fjalar [EI]: 'The Growth Agreements are very much in to this 'triple-helix' model, and now they think it is vital to have research institutions and companies working together on innovative projects.'

Dagur [WF]: 'There are various research projects that we could do here in the area that are linked to the economy, rural development and industrial development...'

Freyr [WF]: 'But we managed to get companies and research institutions under one roof...the idea was just to be an umbrella organisation, where people at the same level being in the same building, would start creating something.'

However, some participants found that not much had happened since these knowledge centres were established. After a powerful beginning, no development or changes had occurred in the field of research activities.

Finnur [WF]: 'About 10 – 15 years ago when the knowledge centres were established, very much was going on. But I don't find that there has been much development or changes for a few years.'

Dagur [EI]: 'What is often discussed here is how we can develop the knowledge centre further. Now it is just some courses in distance learning, but how can we increase the number of courses? And I think that is the next step the knowledge centres should take.'

It is clear that all the Icelandic participants saw the knowledge centres as the key to economic development in the area. They had had high hopes about the centres when they were established, but were unhappy about their functions at the moment, and saw the necessity for them to develop further.

All of the Western Isles participants stated that education was highly valued among the island inhabitants and that there was a positive attitude towards Lews Castle College and the UHI. The participants claimed that the college's educational role to promote the island economy was important

Robert [WI]: '...that they see the college as major economic driver in the region and have had a key role in rural development...'

Chris [WI]: 'I would say in this community a very high value is placed in education, both higher and further education'.

Don [WI]: 'I think people are broadly positive towards UHI, yea and I don't think there is anybody who wishes that UHI would never have happened'.

The participants stated that Lews Castle College was addressing the areas strengths and specialities by offering higher education and research opportunities in the fields of Gaelic language, tourism, culture, and renewable energy. Their belief was that education and research activities offered by the college should benefit the islands, especially its economy

Rose [WI]: The businesses say that the college is too academic and is not vocational enough; just producing academics, which do not fit into the business sectors'.

Don [WI]: '...it's this relationship to the land that makes the huge difference...this sense of being rooted in a community.'

Chris [WI]: 'And because the windmills would have affected the view, no one wanted them, because it was regarded as polluting the landscape..., they don't see the land as an economic product, you know'.

Robert [WI]: 'I think we can relate the college, the college of rural and local development, cause that's what we do. And I think we always have to be alert to that important function and we have not always been good at it and I think particularly in supporting local, small-scale entrepreneur activity..... So we decided that our biggest research program would be related to energy, partly because of the opportunity of working with the industry, partly because of the need for the local economy to have cheap energy supplies and partly because we are trying to address the issues of fuel poverty...,

Both the Icelandic and the Western Isles men and women saw the development of the knowledge society's main goal as stopping the out-migration and getting people to move to the islands. This could be

accomplished by providing higher education opportunities in the rural areas and increasing research activities.

7.6 The communities and natural resources

Both the women and men in Iceland said that the main industries in their communities were fishing and agriculture, and in which there was a lot of capital and investments. Both sexes agreed that the fishing industry is male dominated, meaning that it is the men that own the boats, the quota, the companies, and it is men who manage the businesses and sit on the companies' boards.

Sjöfn [WF]: 'Who runs the fishing industry? For me, it seems that it is the biggest male dominated industry in the country; women are not there'.

Bragi [EF]: 'No, women are not running the fishing companies. They are allowed to manage in the health sector and in compulsory education...they are allowed to deal with the 'women issues'.

Iðunn [WF]: 'I think that it is the men that own the quota and the companies'.

Pór [WF]: '...the women are working in healthcare, while the fishing industry is mainly occupied by men...'.

Women work in the fish plants. The men manage the sector where the financial resources are, and have all the real power.

Iðunn [WF]: 'Women don't pursue fishing, men don't pursue work in the fish plants at the processing line. A woman has to have physical strength to be a fisherman, to sail and to fish, I think'.

Sjöfn [WF]: 'Yes, the male values and beliefs are naturally always dominant, even though we fight for female values and beliefs to be seen; it is somehow that male network is much stronger, and while men have all the financial powers, the women get no power, because money and power go hand in hand'.

Bragi [WF]: 'The rural area problem is how much male dominated it is and the men have been in power and been preoccupied in

building up this male dominated world; emphasising golf courses, skiing areas, football fields etc.’.

Nanna [EI]: ‘The boys in the boys’ clubs own the quota and the companies, they pay the highest taxes and they rule everything’.

Þór [WF]: ‘...you can say however that the community is gender divided with the schools and health sector more women and the fishing industry more men’

The Western Isles participants stated that there was diversity in the island industries where fishing, the public sector, small businesses and renewable energy were the main factors in the island economy.

Nina [WI]: ‘Fishing and maritime service in the Navy was the main source of income. The council employ a lot of people here and then there are small businesses’.

Chris [WI]: ‘The renewable energy has got potential...I think what the main industry is fishing, which is quite badly hit, obviously’.

It was, however, noticeable that even though Western Isles’ participants did not talk about crofting as an industry, they all said that the communities on the islands were crofting communities. Furthermore, many of these crofting communities were in the process of buying their land back from absentee landowners in order to run their land in a more sustainable manner, for instance by building windmill farms on the land. It is as if crofting is a cultural thing, rooted in their heritage and identity, which creates a sense of place.

Sally [WI]: ‘...and certainly as far as the croft communities are concerned, we all pay a rent to the land owner. And what has happened through the land reform, is that the community has come together and become the landlord’.

Rose [WI]: ‘There are much deeper senses of community here...yes, deeply, deeply rooted in history...’.

Gus [WI]: ‘It is traditional (community) there is a sense of culture, a sense of identity, a sense of autonomy...’.

The Icelandic participants indicated that they felt their communities to be male dominated, with male values and beliefs; the smaller the community the more male dominated participants felt it was.

Gerður [WF]: 'Male chauvinist community...just straight out'.

Bragi [WF] 'If men don't realize that and don't want to change things, then settlements in rural areas will die; if women don't want to live in the rural areas, then there will be no settlement there'.

Nanna [EI]: 'What is done here reflects the male values that dominate the communities....'

The participants living in the Western Isles stated that their communities were also male dominated, but this was more related to how religious the communities are.

Rose [WI]: 'Mostly men probably. Yea, there are exceptions, but when I think of those organisations who have directorship, it is mainly men'.

Chris [WI]: 'Because women have a lot of power within the family relationship, but you don't get women in many top jobs and you don't get many women.., well I don't think women can be leaders, sort of lead preachers, they can only be men'

All the Icelandic participants felt that the economy in their communities was monotonous and that the labour market was gender biased. Women worked in the fish factories or in unskilled, low-paid service jobs in the public sector, while men were fishermen, farmers, journeymen and contractors.

Sif [EI]: 'Well, yes, sort of. Women tend to go into the service sector and caretaking work and then the men are more in the fishing sector and some kind of industry and running a company; if a woman is running a business, it is inside the women's sector'.

Týr [WF]: 'The area is male dominated, maybe because there are more men living in the area than women. But also because it is connected to rooted traditions here, jobs tend to be divided either into a male or female sector'.

Hera [EI]: ...we need more jobs in the public sector for women, besides teaching and nursing'

The same discourse was also found in the interviews with the Western Isles participants. They too felt that their labour market to be gender biased.

Alice [WI]: 'It tends to be women are the main.., that's where they end up... mainly in the public sector'.

Chris [WI]: '...but I know it's a significant increase of women that work in the public sector than in the private sector'.

When asked about the political sector, none of the Icelandic women participants had gone into local politics, because they stated that they had no interest in politics, no plans of taking part in political activities, and all had the opinion that it also was a male dominated sector.

Gerður [WF]: 'Well, I think that the political sector is male dominated. I say it, because once I was asked to sit in a political board, because they wanted a woman. They were looking for my gender, not my expertise; so I said no'.

Nanna [EI]: 'I was a bit involved in politics, but now I have no interest in taking part in it, because I'm not happy about how it is practiced'

Only one woman of the Western Isles participants had participated in local politics, and she experienced how male dominated this sector was.

Sally [WI]: 'I think it has been heavily male dominated....I think it's very, very hard for women to get involved in some of these things'.

At least half of the Icelandic men were involved in political activities, but the others had no interests in entering the political sector. They did however agree that the political sector was male dominated, but felt that it was changing, because more women were entering the local authorities sector and then women's power would increase.

Bragi [WF]: 'We see it in the local authorities' preparations that women's status inside the political parties is stronger than ever'.

Pór [WF]: 'This community tries to have gender balance in its local committees'.

The same discourse about men and women in local politics was found among the Western Isles men. They also thought that the political landscape was changing with more women entering into local politics

Gus [WI]: 'But it is interesting that you have a mix of individuals, men and women, who are very active in these areas. I can think of some instances where it is fairly well balanced'.

Both the men and women in Iceland identify the fishing industry as the largest industry, and at the same time the most male dominated industry in the areas, where both money and power go hand in hand.

The Western Isles participants saw more diversity in the island economy, but said that women tend to go into the public service, leaving fishing and small businesses to the men.

Women tend to be excluded from the primary money and power industries, fishing and agriculture, and therefore feel their community to be male dominated. That factor appears to be one of the reasons women move to more urbanized areas, where they seem to feel better, more valued, and have a feeling of belonging. The men acknowledge that and realise that if it is not changed, some rural areas might not survive. The women also feel that political activities are male dominated and do not want to go into that sphere of activity. The men however feel that this is changing with more women going into the politics.

7.7 The realization of rural development plans

In Iceland, both men and women indicated that they did not have much faith in the realization of the rural development plans. Discourse about lack of policy and funding was apparent. Governance inabilities to see the plans through and a lack of understanding of rural areas conditions was prominent. Finally, a lack of real will as a consequence of a lack of political commitment, was found among participants.

Freyr [WF]: 'There is not enough commitment in the rural development plans from the national authorities.'

Narfi [EI]: Many rural development documents have been written, but the actions have not been followed up. Those

documents are just put into drawers or on shelves. And the actions are so general that nothing happens.'

Nanna [EI]: 'I'm afraid that the 20/20 plan will be messed up by the governmental system in Reykjavík.'

Askur [EI]: 'The 20/20 plan is just one of many rural documents that we here in the local authorities have seen over the years with promises, but it is just another piece of paper, which will become nothing, because there is no plan of implementation.'

Despite the disbelief in the rural development plans' implementation, participants stated that to be able to get something out of the plans, it was important to play along with the government, and to not criticise the plans or the authorities, at least not too openly.

Finnur [WF]: 'Well, I didn't have much faith in it, but because the government seemed to have great faith in it, then it was possible to get some result inside the project's framework. I mean, the government wanted so much to believe that this was the big solution, some magical solution and because of that you were able to work in that framework and could possibly get some result, because the government was so preoccupied that this was the solution.'

The interview findings about the realisation of the rural development plans in the Western Isles show that both men and women knew about the 'The Single Outcome Agreement (SOA)' for the Western Isles, but only those who were in the top positions in their institutions were directly involved in the process of the plans and thought they were working well.

Robert [WI]: 'So, yeah, I think it's quite effective'.

Those who were not involved did not think they worked well. Although the plans were often related to projects that were ongoing, participants had no idea they were involved, because they stated that they had not been formally informed.

Nina [WI]: 'I don't know anything about it'.

Don [WI]: ‘...but how the Agreement has come together, how it works, what the impact is, I don’t know, because the information about the SOA is not been disseminated...’

Rose [WI]: ‘I think the difficulties are that people don’t believe in it any more, they don’t admit it in public, obviously, but I think there is a lack of credibility in the Single Outcome Agreement’

Experience towards the development plans reflects how the Scottish people see and analyse the environment in which they work. Those who do not feel they are active partners in the SOA partnership tend to be negative towards it, while others look at it in a different way, believing it has some importance. That may be a reason why those who were directly involved in, or were familiar with, the SOA development plans could at least partially relate to the vision of the plan. For example, although partners were working together, each member of the committee emphasised the sector he/she represents and tried to justify its access to funding.

Sally [WI]: ‘It’s up for an interpretation for the context of what we can do here, clearly. And then it is up for all the public organisations to come together to deliver and that’s what’s different is that formalisation of coming together of the public bodies....’

Chris [WI]: ‘And yes, we are involved, but quite honestly the Single Outcome Agreement is not something that we would drop everything we are doing and just do that’.

Robert [WI]: ‘So all of the targets in the Single Outcome Agreement that have to do with further and higher education are there because we put them in there and we got agreement from our partners that these are the priorities...’

Being gatekeepers for their own sectors, looking out for their interests, and seeing that their share of the fund is in place, can contribute to preventing both men and women from seeing the holistic aspect of the development plans, where economic, environmental, social, and cultural factors are to be balanced in creating sustainable communities.

Sally [WI] ‘Some parts of the plan are probably working better than a lot is...’

This lack of a dialogue about how rural development plans should be executed, and the distrust between the area's inhabitants and the political system, is one of the factors that characterizes the discourse about rural development both in Iceland and in the Western Isles.

7.8 Rural development emphasis

Both men and women in Iceland found the discourse in rural development revolve around the importance of reinforcement of the fishing industry and a large-scale industry, which could strengthen the area's economy. Innovation and entrepreneurship, especially in above sectors, were also seen as important factors in rural development.

Dagur [EI]: 'Before the aluminium plant, the employment situation was not good, no opportunities. So, I believe that these projects, the power plant and the aluminium plant did a good thing for the communities. And people started to be innovative; thinking what kind of a by-product could be made out of aluminium.'

Freyr [WF]: 'The fishing industry is getting stronger in the area after a downturn. And technology companies that work for the fishing industry have become stronger also.'

Narfi [EI]: 'Let's not forget about the derivative jobs that the aluminium plant created along with a stronger service industry.'

However, some participants found that by putting an emphasis on the large-scale industry and the fishing industry, which are mostly occupied by men, other sectors, where women are in the majority, did not get the same attention or understanding of their importance in regional development.

Nanna [EI]: 'The discourse here was that the aluminium plant would save everything and I was not happy with that. What had been going on here before the aluminium plant, i.e in art and culture didn't get attention.'

Finnur [WF]: This emphasis in the economy is male dominated and revolving around finding jobs for men and fixing the regional fishing catch quota for the fishing industry. Innovation in tourism does not get the same amount of support, because in that sector the jobs are mostly for women.'

Even though participants admitted that much effort was put into economic factors and emphasising the areas' industry, this was seen as being the best way of strengthening the areas' economy and status among other regions.

When talking about community development the men and women of the Western Isles tended to talk about how the sectors they are working in are contributing to development of communities.

Sally [WI]: 'Now in the meantime since we bought the land, we have put forward our own plans for a much smaller development, which will actually almost give us the same kind of financial return'.

Robert [WI]: 'Yea, I think the college is about rural development'.

Alice [WI]: 'It was a government initiative for areas that were recognised to be particularly fragile and I was working with that area as a development officer'.

The participants seem to be preoccupied with working in their own sectors on community development and could describe their activities and projects in detail. At the same time they seemed not to be able to connect their work with what other sectors were doing, or put them into the perspective of the holistic vision of the development plan, which address the four components of sustainability.

Their purpose for doing these activities and projects was however to strengthen the island's economy, which is seen to be the main goal by all the participants

Robert [WI]: 'I mean a lot of our research activities are focused on supporting local economy...'

Don [WI]: 'If you have a better educated workforce, you should be attracting more and more better paid jobs into the islands'.

For the participants, the economy is the key factor in community development and their activities aim at reinforcing this factor. In short, it can be said that the vision that was presented in the rural development plans about resilient and sustainable communities, with the focus on goals that address the four components of sustainability and the practices that were executed do not match.

Both the Icelandic and the Western Isles participants focused on economic factors when talking about emphasis in rural development. While the Icelandic participants focused on fisheries and a large-scale industry as the key player in rural development, the Western Isles participants' perspective seemed to be more oriented towards their own sector, and trying to find ways to strengthen their area. It seems that a discussion between sectors is lacking in order to reach the holistic vision the rural development plans emphasise.

7.9 Strength and specialities

When discussing the higher education offered in the area and what kind of research activities should be undertaken, the discourse of the Icelandic and the Western Isles participants revolved around the three research areas' strengths and specialities. There was no gender difference found in the discourse. The Icelandic participants stated that the knowledge society's development should be targeted at promoting higher education studies and research activities that would be practical and supportive for the area's economy, and would be job-creating. The participants agreed that the strengths of the areas were nature, culture, and history and there the opportunities lie.

Dagur [EI]: 'Research that is linked to the strength in the area needs to be carried out in the fishing industry, the aluminium industry, agriculture, forestry etc.'

Nanna [EI]: 'What is lacking is the whole research community working with the economy and the communities.'

Pór [WF]: 'We were looking at the area's tourism and identified that our speciality would lie in winter tourism with an emphasis on mountain's accessibility and nature'.

Embla [WF]: 'Doing research activities in rural areas should not just be done because we need to do some research there. It should be done because it is important to do research in rural areas based on the area's strength, i.e. research on fishing gear.'

Finnur [WF]: 'Yes, it is kind of strange, that no research activities can be done in rural areas, unless it is something special. You can only get funds for something that is peculiar or special and then

people try to define something that is based on the speciality, because that works and money is put into that kind of projects.'

Fjalar [EI]: 'Our research projects have been in the field of the fishing industry, the environment and land use.'

Hera [EI]: 'Most of our research projects are practical projects linked to all kinds of economic activities, i.e. in aquaculture, for the power plant and the aluminium plant.'

It is noticeable that participants mostly agreed upon governmental policy about identifying strength and speciality in an area and were willing to work on projects that were targeted at the same strength and speciality. By doing that, they accepted what had been identified, but did not necessarily agree on that policy definition. However, in order to get capital for projects, they played along.

The participants of the Western Isles identified the islands strengths to be Gaelic language, renewable energy, and indigenous culture focusing on arts, crafts, music, and culture. They were of the opinion that these were the areas which should be promoted.

Alice [WI]: '...there is renewable industry you know of, we want to become a centre of renewables...'

Robert [WI]: '...and the other research are in rural development and in health and to some extent in Gaelic'

Some of the Icelandic participants mentioned that a sense of nationalism could be found in the regions when discussing the areas' strength and speciality, but also a sense of place, which appears in the pride they have for the place they live in.

Hera [EI]: 'Well I don't know, I sometimes find that in this community you can find some kind of nationalism here...'

Nanna [EI]: 'It's just that people here are proud of their home towns...'

It was noticeable to see how much emphasis the participants of the Western Isles put on the islanders strong sense of place. How they discussed the issue shows that a strong sense of place is one of the elements that maintains sustainable and resilient communities.

Don [WI]: '...is this identification with the land, and being in touch with almost a historical concept of the land'.

Gus [WI]: 'So, the island has a sense of community that I think is unique to it'.

Rose [WI]: 'There is much deeper sense of community here... and I would say that there is even a difference between the value of land between Skye and the Outer Hebrides. There is more depth here'.

This sense of place appeared to be stronger among the participants of the Western Isles than in Iceland, and was more often identified as the areas strength. However, it can also be said that the other side of the coin is the nationalism which the Icelandic participants identified to be significant in their areas, rather than sense of place.

7.10 Sustainable development

When discussing sustainability and sustainable communities, men and women in Iceland tended to revolve the discourse around the economic factor. In order for a community to be able to grow and prosper the main industry must be firmly grounded in community needs and must create jobs for its inhabitants. Then the other components of sustainability will automatically follow and do not have to be addressed specifically or thought about.

Freyr [WF]: 'And I think the communities in the area are gaining their strength; I mean, the fishing industry is stronger and new industries have also emerged, and the positive attitude that follows, has had a positive impact.'

Narfi [EI]: 'What needs to be done is to make sure that people live with all the advantages you can find in a modern society, i.e that income is acceptable.'

Nanna [EI]: 'There is an enormous emphasis on better transportations in the area along with emphasis on big operations like the aluminium factory which aims to save everything'

This discourse was also found among the Western Isles participants.

Rose [WI]: 'But our main purpose is to stimulate economic development and that's what we do'.

Robert [WI]: 'I mean a lot of our research activity is focused on supporting local economy; the stuff that is based on hydrogen is there, because we have a commitment to sustainable fuel for the future of these islands and lot of the European research projects, we are involved in, are about sustainability of energy resources into the future.'

The Icelandic participants use the word 'sustainability', but when they do, it is in a relation to industry. The knowledge society's role is to help the industry to be sustainable, meaning making sustainable tourism or sustainable fisheries by linking academic knowledge to local knowledge.

Fjalur [EI]: 'When you talk about sustainable tourism, then it is very delicate, because the research institutions can't run the tourists companies and tell people what to do.'

Nanna [EI]: 'The knowledge society needs to be sustainable and by doing that you need to use the local knowledge, experience and the opportunities that are here locally in connection with the academic knowledge, but that is not done.'

Speculation about social sustainability in the communities was found among the Icelandic participants. They discussed how a lack of various kinds of infrastructure had an impact on people's quality of life, and that living in a remote rural area often affected the social factors of life.

Finnur [WF]: 'And then people move up here and after a short time they start to talk about that they didn't realise that they were moving from good internet connections. That they couldn't watch English soccer anymore. And suddenly you realise that you need this critical mass of people, because you always are in association with the same people wherever you go.'

Freyr [WF]: Well, you don't feel happy in a community that is always in a defence, where the discourse revolve around that someday the community is going to die and who is going to be the last inhabitant to turn out the lights. I often wonder why people talk like this.'

Nanna [EI]: 'What we need here are projects that aim at increasing quality of life rather than money, which is the norm here.'

The discourse found among the men and women of the Western Isles was related to how good the connections rural areas on the island had and how influential the church was on people's life.

'Chris [WI]: What I would describe is a small minority of male fundamentalists; that is people involved in the church who are very, very controlling.'

Despite this discourse about the social factor of the sustainability concept, few suggestions, other than the governmental role in strengthening infrastructure in the areas, came from the Icelandic participants. It seemed that they did not see that the inhabitants and the local authorities had some responsibility in reinforcing the social factors in the areas. The Western Isles participants however were more preoccupied about what the inhabitants and the local authorities could do to increase the quality of life in the island.

7.11 Summary and discussion

The interviews revealed that men and women have a traditional view towards life. Getting a higher education degree does not seem to influence women's place or action space in the communities. Their study choices were inside their domestic space and are influenced by the job-market, with both sexes claiming it to be gender segregated. However, the men seemed to make study choices based on interests, and the local environment has little effect on these. In that sense, men seemed to act differently as place-makers than women.

There seems to be little difference between sexes as regards the topics discussed. The difference seems rather to be between countries. The reason might lie in the fact that the perspective towards rural development issues is different. The participants from Iceland seem to be preoccupied with a region's economic prosperity and depopulation. The participants from the Western Isles however, seem to have perspectives that are more revolving around how to enhance quality of life. They both seem to be worried about the status of women in rural areas and claimed that rural areas are dominated by male values. The Icelanders relate such values to

the dominant fishing industry, and the participants of the Western Isles to the strong practice of religion on the islands.

The participants from the Western Isles also seem to be satisfied with how the knowledge society has developed, and were happy about Lews Castle College activities in creating on-line courses and taking part in research activities. The Icelandic participants felt that the development of the knowledge society had plateaued and wanted to see more dynamic activities, especially in increasing the number of courses to be on offer as on-line courses. They did not think the Icelandic universities were active players in rural development, or that they even looked at it as their role. They also showed a scepticism about higher education as the right tool to use to reverse out-migration, or get people to move to the areas. The labour market played a more significant role regarding that matter.

The findings from the interviews reveal a discourse among the participants that seems in many ways to be similar to that found in the official documents. The participants agree with the document goals and do not question the actions chosen in the documents. The reason might be that participants are preoccupied with their field of work in the context of development. However, the participants' responses reflect frustration on how the implementation is executed in their areas. They reflect scepticism on the successful future of the rural development plans.

What is interesting is that the Icelandic participants discussed their worries about the status of women in their communities, but the analysed documents do not discuss gender issues. The participants discuss male dominated industries, a gender segregated job market, and the governmental policy to emphasise creating jobs that are more suitable for men. In that context it is necessary to look towards an increased emphasis on aquaculture in the fjords of the Westfjords and East Iceland. This industry is now taking place and participants wonder in what direction this industry is developing. As it is today, it seems that it is going into the direction of a large-scale industry which is male oriented, with jobs mostly for men. So, will the development in the aquaculture industry be any different from the stern trawler projects or the aluminium smelter in East Iceland? This question will be discussed further in the context of the rural development of today in chapter nine.

The thesis was set up to answer one main research question and three sub-questions. In the next chapters the research questions will be answered. These questions were addressed in chapter one, and are put forward here for the reader's review.

The main research question in this study is:

How do aspects of the knowledge society interact with rural development in Iceland and Scotland?

The sub-questions being asked are:

- What characterises the knowledge society and rural development systems in rural communities in Iceland and Scotland?
- What are the key features of the educational, social and political discourse in rural communities in Iceland and in Scotland?
- Does the rural discourse in Iceland differ from that of Scotland with regards of higher educational activities and rural development and if so, how?

In the next chapter these questions will be answered, but first a discussion about the knowledge society as a social and cultural force is under scrutiny in the beginning of chapter eight.

8 Knowledge society as a social and cultural force

8.1 Introduction

Using the historical discourse analysis lens revealed a perspective in the analysed policy documents that I found to be different from what I had expected. Discussions and opinions about the role of universities and research activities in rural development were substantial, even though those who were appointed to sit on national level government committees did not always come from the university or research sector. It seems that the Icelandic rural development policy defines the reinforcement of higher education and research activities as an economic or employment matter. The epistemological perspective, related to the knowledge which education and research create, was not considered when policy about the role of universities in rural development was agreed upon. It seems that the role of universities was first and foremost to create jobs and promote economic innovation. To reach the goal of reinforcement of rural areas, the *Triple Helix model* ideology, which is the interaction across the knowledge society, industry, and government, was emphasised.

Knowledge centres are platforms for cooperation between the economy, local authorities, state organisations, universities, research institutions, life-long learning centres, centres for entrepreneurship and others in every region and base their work on the region's circumstances. Their main role is knowledge dissemination and collaboration about research, development and innovation (Ministry of Industry and Innovation, 2010, p. 12).

Those who are appointed to sit on committees control what goes into the documents, what is left out, and how they are structured. The governmental sector has power, because it is the task of that sector to present the policy. However, each committee member also has power through his/her organisation and uses it to benefit his/her organisation. Usually, the members agree upon the content, structure and wording, but if there is not full agreement, individuals might submit a separate paper. The writing takes place inside the governance structure and the texts reflect the political discourse and emphasise the dominant issue(s) at any given time.

The same phrases are used frequently in or across documents, and it is often difficult to understand the real meaning of what is said (Ministry of Education, Science and Culture, 2010; Ministry of Industry and Innovation, 2010; Prime Minister's Office, 2011; Althingi, 2014).

The interviews give information about the way that the participants think about their life. The participants' discourse and the discursive themes in official policy documents were similar. Thus, the legitimated principles are strengthened in the rural area discourse, which becomes the historical conjunction, and the combination of views and events that rules the actions that take place in rural development in Iceland. Those actions focus on the *Triple Helix model*, with the emphasis on public-private partnership among research institutions and rural areas main industries. As the interview findings show, participants showed some frustration about the realization of the rural development plans, but by accepting and not questioning how things are done, they strengthen the dominant discourse both at governmental and local levels.

The findings from the interviews brings the documentary discourse to life. In some key issues, such as the role of the knowledge society in rural development, the discourse found among the participants matches the documentary discourse. The participants understand and appear to accept the viewpoints put forward in the documents, but have different opinions and beliefs about the practices and activities that are chosen and prioritised.

8.1.1 Westfjords and East Iceland – resilient enough?

The first sub-question in this study is about what characterises the knowledge society and rural development systems in rural communities in Iceland and Scotland.

In section 5.7 resilience theory was applied to the development of the stern trawler project (5.7.2), the establishment of knowledge centres and higher education (5.7.1) and population development in Westfjords and East Iceland (5.7.3). Even though the stern trawler project and the establishment of the knowledge centres took place in different time periods and were different in nature, they were both targeted at economic growth and population increase. The population changes, looked at from the perspective of resilience theory, show that these two governmental goals have not been entirely met when looking at them from the perspective of long-term effects. At the time when the stern trawler project was operational the economy did grow, but the growth was not sustainable. The

population has been declining in the Westfjords and East Iceland, with small exceptions, mainly in connection to large-scale businesses (Statistics Iceland, 2015).

Some activities within the knowledge society and rural development appear to work as disconnected systems. These activities or systems seem not to have significant effects on each other. Each system runs according to its own cycle and various projects that are established, like the development of knowledge centres, follow the adaptive system cycle. In this system, there is a growth period, a stagnation period and a decline period. The projects run their course and after a period of time they seem not to be operational any more. There is no formal evaluation about how successful they have been or not, or if they have reached the goals that were set. In the regional development plan for 2014–2017 the knowledge society is not mentioned, nor is there an evaluation of the projects' result, what aspects were successful or not, and why it is no longer on the governments' agenda. One wonders if it is because it has not been successful or whether the government thinks that enough has been done in this sector.

The resilience of the systems is sometimes inflexible and that might explain why there seems to be no change in how various projects in different time periods move along the cycle. When a project reaches the particular stage of reorganisation, the tendency is for the project to move along the cycle in similar manner as other projects had done before, irrelevant to the success of the project. As indicated in section 5.7 that happens because the system's resilience is inflexible and strong, it will not allow the project to reorganise itself into a different and more successful state, rather resilience steers the development into a historically similar behaviour.

Similar projects and similar solutions are offered to rural areas without regard to the complexity of the context. An example is the moving of public institutions from the capital area to other areas, which was done in the 1990s and is on the government agenda today. Another example is building large-scale industry in rural areas, which has been on the government agenda for a long time. Various projects have been established over the years and certain places strengthened as growth poles or clusters, which was a development idea in 1970s and again in 1990s (Icelandic Regional Development Institute, 1999). What these projects have in common is that they were state-led and used top-down strategies in the implementation. The question is whether the projects support governmental goals of

population growth. The statistics show a decline in the population, irrespective of the purpose of the projects mentioned above (Statistic Iceland, 2015). As seen above some of the projects have been tried before, but because of a lack of a built in evaluation plan, it is difficult to find out what parts of each projects have been unsuccessful, so shortcomings can be resolved. Systems can be highly resistant to change and have the tendency to restructure into similar state, and it is necessary to assist systems to adapt to new reality and transform the system into a new state.

In recent years, rural development plans in Iceland have started to mention sustainability, e.g. Iceland 20/20 and the Westfjords and East place-based regional development plans (Prime Minister's Office, 2011; The Association of the Municipalities of the Westfjords, 2015; The Association of the Municipalities of East Iceland, 2015). In the plans analysed and among participants, the understanding of sustainability appears to lie in how to exploit the natural resources in a sustainable manner to benefit the areas' economy. Rural development is the same as economic growth (Althingi, 2002; 2006a; 2011; 2014). To understand what is needed for further development of the sustainability concept from a holistic point of view, the environment, social and cultural components of sustainability must also be given value. Broadening the sustainability concept could be the tool that is needed to change systems. A system change is more likely to occur if cultural activities, the environment, the well-being of people, and economic growth are all valued, and it is acknowledged that the quality of life and maintaining and developing culture matters. This cannot be done unless there is a shift in perspective on rural development issues.

To change the perspective on rural development, the concept of *wicked problems* could be introduced at all levels of decision making, both at national and local levels. Wicked problems are those problems that cannot be solved by straightforward measures and/or by just one authority (Head & Alford, 2013; Kolehmainen et al., 2016; Rittel & Webber, 1973). Today, the tendency is to start projects aimed at solving a problem, which has been identified as bad, such as economic status and depopulation. Instead of acting as if a rural problem can be solved for good, it must be acknowledged that rural issues and problems are an on-going processes that must be addressed in a holistic way, constantly changing methods and perspectives in order for systems to survive and flourish. Also it must be acknowledged that many actors must be part of the problem solving process in order for the change to be successful (Kolehmainen et al., 2016).

Resilience theory and the concept of the adaptive cycle are useful tools to understand the development of a system over time. The dominant characteristic of both the rural development system and the knowledge society system in the Westfjords and East Iceland are the firm and inflexible resilience that can be found inside most systems. This does not facilitate long-term changes in the systems. Instead, these systems become stuck in the phase of economic solutions characterized by state intervention. Projects that have been tried before are used again and again by governments, even though their outcome has not been evaluated. Both local authorities and the government see them as a tool for boosting regional prosperity. In order to really see whether and how goals have been met, evaluation must be a part of every project.

8.1.2 Western Isles – resilience in action?

The Western Isles have also been dealing with a population decline for many years. However, in 2000, the local authority adopted a more holistic approach to development issues. Its main goal in rural development since 2009 has been to create resilient and sustainable communities. This holistic approach reflects the policy agreed by the European Union and the Scottish Government (Scottish Government⁵, n.d.). The goals they put forward address the four factors of sustainability, giving the social aspects more space than before (Outer Hebrides Planning Partnership, 2009; 2011; 2013).

The land reform law, which the Scottish government agreed upon in 2003 gave local communities in Scotland the authority, under certain condition, to buy land from current landlords gives the four factors of sustainability equal value. It is a community-based approach, where community trust funds are established to be able to buy the land and manage the usage in a sustainable manner (Bryden & Geisler, 2007; Rennie & Billing, 2015).

The land and the sea are key natural resources of the Western Isles and giving the power to the local people to manage their use is a different commitment to rural development than that found in Iceland. In the Western Isles management is more of a bottom-up approach. To a large extent, it is about management being in the hands of the people living in a community. Projects that focus on renewable energy sources, such as wind turbines and the possibility of harnessing the waves for electricity have been chosen. Research shows that this approach has positive effects on rural communities, with people becoming strong place-makers in their own communities and with community awareness and participation in

community activities growing (Rennie & Billing, 2015). It is currently under discussion to put inshore fishing in the Western Isles into a community trust fund, giving the local people greater power to decide its level of exploitation.

A major turning point in the knowledge society's development in the Western Isles was the establishment of the University of the Highlands and Islands in 1996, thereby formalising the connections between educational institutions. Lews Castle College on the Western Isles became one of its thirteen partners, which are distributed around the Highlands and Islands. UHI's goal is to provide higher education, using distance learning methods with the people in the area, so they do not have to leave in order to pursue an education (Simco & Campbell, 2011).

When looking at this development through the resilience theory lens and the idea of the adaptive system cycle, as shown in section 3.7.4, these two events, the Land Reform Act of 2003 and the establishment of the University of the Highlands and Islands seem to have had the impact of changing the cycle of stagnation and population decline that were characteristic of the Western Isles before 2000. That was done by a combination of using bottom-up strategies and empowering the communities and the people in making decisions about their micro-environment and natural resources. The Western Isles system shows resilience, it has shown adaptability towards the transformation that is taking place. The results are that the population on the isles is slowly growing and the well-being of the people seem to be improving.

The drivers that keep things going in systems lie in the political, social, and educational discourse found in policy documents and among the inhabitants in the three research areas. In the next section the policy discourse is discussed and the second sub-question on the key features of educational, social, and political discourse in the policy documents from Iceland and Scotland will be discussed and answered.

8.2 The life of discourse

In this section, the discourse found in the Icelandic policy documents and among the Icelandic participants will be discussed along with the discourse found in the Western Isles policy documents and among the Western Isles' participants. When the interviews were analysed similar key features were found in the discourse of the inhabitants (Table 15).

8.2.1 Westfjords and East Iceland

These themes found in the Icelandic policy documents reflect the discourse found inside the political and governmental sectors about rural development and the knowledge society. Rural development plans are 'one-size-fits-all' and apply to all rural areas in the country. Even though it sometimes might look like a place-based approach in more recent rural development plans, these tend to focus on similar activities across rural areas (Althingi, 2014; The Association of the Municipalities of the Westfjords, 2015; The Association of the Municipalities of East Iceland, 2015). That happens because the core unit in rural development is the regions. In order for the plans to be place-based the core unit must be the community. The five themes dominate the discourse and have an effect on the kinds of activities selected and funded.

The first discursive theme in the documents reflected the role of the knowledge society in rural development. The second theme revolved around the interaction of the economy, innovation and entrepreneurship with the knowledge society and the third theme, the emphasis on the Triple Helix model ideology as a way of linking the knowledge society, industry, and government by forming clusters in local industry, e.g. in the fishing industry and the tourist industry. Fourthly, an emphasis on the need for rural areas to identify their strength and specialities and use these for the benefit of the economy and fifthly, a theme of sustainable development was identified (Table 16).

8.2.2 The Western Isles

The Western Isles have their own place-based rural development plans, formed through agreement by several stakeholders on the Isles, with funding support from the Scottish Government. The plans are for the Western Isles as a region and are as such plans that are 'one-size-fits-all'. In order for the plans to be place-based each community must have their own development plan. Four discursive themes are identified in the rural policy documents of the Western Isles and in the discourse of the participants. First is a vision about creating sustainable communities, where the environmental, economic, social and cultural well-being of people are important. The second discursive theme is the importance of creating resilient communities. Discourse about the demographic balance in the island population is the third theme, and the fourth is about the role of the knowledge society in rural development.

These discursive themes (Table 16) form the educational, social, and political discourse of the knowledge society system and the rural development system.

Table 16. Discursive themes in analysed documents and interviews

Westfjords and East Iceland	Western Isles
Implementing the ideology of THM	-
Formation of clusters in local industry	-
Role of the knowledge society	Role of the knowledge society
Sustainable communities	Sustainable communities
Place-based: strength and specialities	Creating resilient communities
-	Demographic balance
-	Communities of practice

8.2.3 The educational discourse

The role of the knowledge society, the implementation of the ideology of the *Triple Helix model* by forming clusters (growth poles) and the discourse about rural area's strength and speciality reflects as an educational discourse.

8.2.3.1 Westfjords and East Iceland – resource or history

Policy documents introduce the knowledge society as the key to stopping out-migration from rural areas and increasing in-migration, because more jobs for higher educated people related to innovation and entrepreneurship could be established.

This research has shown that the knowledge society has an economic focus in the way it is to be implemented. The knowledge society is introduced by the governmental policy as a tool to increase rural area populations, but the population in the Westfjords and East Iceland have not grown (section 1.5). As section 1.5 shows, the decline continues, despite growth in higher education opportunities through distance learning and face-to-face learning, as well as the establishment of various research institutions and knowledge centres in those two regions. The government strategy is on increased employment, but this might come as a bonus and is not the main outcome. In my opinion education and research activities should revolve around increasing knowledge and education for an individual, thus contributing to personal development. Education should be

looked at as a tool to increase the well-being of people and to promote quality of life for individuals irrespective of where they live.

Despite the decreasing population, the participants believe that the knowledge society plays a key role in migration to rural areas, but are dissatisfied with the provision of higher education to rural areas and their lack of ability to see themselves as partners in regional development. It seems that seeing the knowledge society as a tool for population growth is more directed to research activities which emphasise innovation and entrepreneurship linked to natural resources in the areas, mainly the fishing industry. Thus, the dissatisfaction about the university service could be linked to the fact that not all university studies are offered to rural people in distance programmes and also to how the courses are organized. Study courses that are offered through blended learning are often organized with those who live near the university in mind. I feel that that some of the Icelandic universities do not look at themselves as participating in rural development by increasing their research activities and organizing study courses from the perspectives and knowledge of rural people.

The feature of rural policy-making has been forming clusters to operate in the industries that characterise the rural areas, e.g. in the fishing and tourism industries, is strongly linked to the educational discourse. The emphasis is on getting various public institutions and private companies to form public-private partnerships, where universities and research institutions both take part. Such partnerships are well known around the world and are believed to encourage innovation and entrepreneurship based on the ideology of the *Triple Helix model*. The role of the knowledge sector in this partnership is to facilitate research, which helps to produce new products from natural resources. This in turn is linked to the economy, because the goal is to exploit the products better, e.g., in the fishing industry new products are being developed from cod to add value. Some small and medium size companies have established themselves as partners in these areas. Most of them have been able to finance research and development from local funds such as the Development Fund. These activities, however, have been too small to have much effect on the population. Experience has shown that funding start-ups is difficult and the path from an idea to a new product can be long and time consuming. The discourse of the participants echoes the knowledge society discourse in emphasising the importance of forming clusters and conducting research in the field of fisheries and tourism for the benefit of the economy. Working in the field of innovation and entrepreneurship is considered important for further development and population growth in rural areas.

The emphasis on the need for rural areas to identify their strengths and specialities, and use these for the benefit of the economy, is a key factor in the educational discourse. Both the policy documents and the interview participants identified nature, culture, and history as specialities in rural areas. Policy suggests that the knowledge sector should focus on these forming partnerships to create initiatives. Research activities that get funded generally include one or more of these three categories and aim both at strengthening the area's economy, as well as increasing knowledge in these fields. The knowledge gained is supposed to add value to the resource or more efficient utilisation increasing profits. In the Westfjords and East Iceland's development plans this natural, cultural, and historical identification of rural areas is put forward as the two areas strengths and specialities, and the activities that are agreed in these fields tend to be similar, making the two areas homogenous (The Association of the Municipalities of the Westfjords, 2013; The Association of the Municipalities of East Iceland, 2013). However, rural areas of today are multicultural areas with diverse of people living there, and therefore I believe that higher education and research activities should recognise that and broaden research to include social and cultural factors.

The participants in this research also identified the potential of nature, culture and history as growth areas, and agreed that research should aim to strengthen the economy and provide employment for well educated people. They were, however, not as convinced about the value of the projects that got funded, even though the projects addressed these fields. Participants did not complain about the selection, they simply adapted to the criteria to get funding. I believe that by doing that, the discourse is becoming entrenched as a legitimated principle and is generally not publicly questioned.

8.2.3.2 The Western Isles

In the Western Isles the role of the knowledge society is to use the islands' strength and specialities and be a provider of further and higher education, research activities, and lifelong learning to support the economy and labour market. Lews Castle College is seen, both by policy-makers and the participants as an active partner in rural development by providing education through both distance and face-to-face learning. It also facilitates learning centres in remote areas and has campuses on several other locations in the islands. The college is a leading partner in research on renewable energy, such as wind and tidal energy. This has been identified as a Western Isles strength, along with the Gaelic language, culture, and

heritage. Rural areas are seen as homogenous, and not as the multicultural areas they are in reality. In the Isles, the religious tradition, and the culture linked to that, seem to strengthen this homogeneity.

The discourse of the participants matched the discourse in the policy documents about the role of the knowledge society in rural development, and the Islands' strengths and specialities. Participants seem to be satisfied with college policy and see the college as an active partner in rural development, both in research activities and distance or blended courses. College activities in research are linked to the area's economy, meaning there was general agreement that the college research activities should aim at the areas' strengths and specialities, especially in the field of renewable energy, which was seen to be important and a way to increase the quality of life and well-being of people.

8.2.4 The social discourse

Sustainability is seen as a key factor to the social discourse.

8.2.4.1 Westfjords and East Iceland

The use of the sustainability concept in the policy documents is linked to the utilisation of local natural resources to create sustainable communities. This version of sustainability is a human-centric view and is linked to the concept of weak sustainability, where the need and interests of humans come first, and resources are used to benefit humans (Hopwood et al, 2005, Roper 2012; Williams & Millington, 2004). In order for natural resources to last for future generations, good management is needed. Instead, the policy documents focus on economic considerations that pervade everything. Getting as much as possible out of the natural resources to create a profitable good is often the main goal.

The discourse of the participants with regard to sustainable communities revolved around economics. Sustainable communities could be attained wherever the fishing industry was firmly rooted. A strong economy is the reason regions might prosper, leading to the social and cultural well-being of rural people. This perspective is linked to important industries, such as fisheries and tourism, and based on the environment, history, and culture, but it is not holistic. The participants found it difficult to accept that social and cultural sustainability is needed for communities to be sustainable. Fulfilment is not an issue and it is assumed that if you have a job, you are happy and should not complain. This research has shown that factors such as natural disasters or a harsh climate are more of

a push factor in population decline than the development of a knowledge society is a pull factor (see Table 9). Nevertheless, participants rarely talk about these factors and do not connect them with quality of life, happiness or well-being of people.

8.2.4.2 The Western Isles

The demographic situation in the island population underlies the social discourse. A shift from a discourse about depopulation towards the need for creating a 'demographic balance' was found in the documents. By shifting the focus, the negative aspects of the discourse are minimised. The focus is now on the importance of a balance in the demography, not the out-migration from the island. The discourse revolves around the problems that arise because of an ageing population and how to address them. Young people and women are moving from the islands, and it is vital for the islands to get those groups to move back.

The participants' discourse about demographic balance on the islands matches the policy discourse. The ageing population concerns the participants, because they realise that what follows is that a different set of needs comes with an ageing population, and demand for services will increase. These concerns are linked with worries of young people and women leaving the islands, especially the women. It is seen as good for young people to leave to study or work in other places, but the hope of the community is to get them back; meaning that fulfilling young peoples' standards for quality of life and well-being are what communities need to have in mind. Creating sustainable and resilient communities that offer jobs that suit young people is the desirable state. The out-migration of women is linked more to better job opportunities and better services in more urban areas. The labour market is more male-dominated and even though participants realise that this affects the status of women on the island, many seem to acknowledge that 'this is how it is'.

8.2.5 The political discourse

Policy founded on a belief in economic growth is the key factor in the political discourse in Icelandic documents and among participants. Across the ocean the creation of resilient and sustainable communities is emphasized in documents, but the discourse of the participants in the Western Isles is similar to the discourse found among the Icelandic participants.

8.2.5.1 Westfjords and East Iceland

The policy documents address rural issues from economic and population growth perspectives by choosing projects, such as large-scale industry projects that aimed at increasing economic growth and population. It is believed that emphasising the economic factor will automatically impact other factors, such as demography, quality of life and well-being of people. Despite various projects, discussed in chapter 5, the population of rural areas is declining. Nothing changes, but this discourse is very much alive in policy documents.

The policy discourse is backed up by the discourse of the inhabitants who also believe that strengthening the economy is the best way to reinforce the rural communities, emphasising fisheries, large-scale industries, and in-migration. The match between the discourse in the policy documents and among participants is very strong. The discourse is strengthened as a legitimated principle and even though participants question the activities that are chosen in the name of rural development, their scepticism does not reach those who make this policy, the government. I think that the reason might be that government funds for rural development are limited. Some participants indicated that it was better not to criticise the management of the funds or projects might not get anything.

8.2.5.2 The Western Isles

Two of the discursive themes are political, because they reflect the vision that the Western Isles partnership and the Scottish Government have agreed on the main goals of rural development.

The first theme contains a vision of creating sustainable communities, where environmental, economic, social and cultural well-being of the people is in the foreground. Seven goals are identified, one aimed at the environment, one at the economy, one at the cultural factor and four address specific social issues (Outer Hebrides Community Planning Partnership, 2013). This is a holistic approach, which shows consistency and an understanding that rural development goals and activities must address the four aspects of the sustainability concept to create sustainable communities.

Even though the participants in the Western Isles showed some understanding of the concept of sustainability, their discourse revolved mostly around the economic issues, promoting research projects that support economic development, such as windmill farming, linking the

economy to the quality of life and well-being of people. Their main concern revolved around speculations about what can be done on the Isles to improve the quality of life and well-being of its people. In that sense the discourse of participants does not match the policy documents, and even though projects that are chosen include the four aspects of sustainability, creating sustainable communities will not be successful if the inhabitants do not share the vision that has been agreed by the policy sector.

The second theme is the importance of creating resilient communities. As discussed in chapter 4, resilient communities are those that can deal with change, adapt to a new reality and be resourceful in transforming into a desirable state. Resilient communities show that they understand the importance of managing effects and are able to move in a desirable direction. The Western Isles buy-out of their land can be looked at as a way of making communities resilient. Communities manage these buy-outs, by forming community trust funds around the land to keep it in community control, involving inhabitants in decisions about how to use it. By doing that, people become place-makers in their home areas, developing their self-awareness along with community awareness (Rennie & Billing, 2015). A transformation takes place and the vision of resilient communities is likely to become a reality.

The participants show an understanding of the characteristics of resilience in the discourse about the land buy-out project. When following a policy of sustainability or resilience many aspects will be similar in practice. The participants refer to the buy-out program when talking about using their resources in a sustainable way for the well-being of the island's inhabitants. The social aspect of the sustainability is visible and a discourse about, for example, self-awareness, community awareness and self-confidence is to be found when describing the effect of the land buy-out on communities and the inhabitants.

In my view the Western Isles documents and the participants discourse operate under the influence of *moderate sustainability*, meaning that the discourse reflects a belief that resources must be expanded, but at the same time to reduce the demands on them (Williams and Millington, 2004). However, I feel that the discourse about the land-buy out and its effect on people living in a rural communities indicates that a change in the discourse is taking place and the system is moving towards the *strong sustainability* ideology, because the land buy-out programme aims at striking a balance between economics, the natural environment and community. This move

could lead to a transformation in the system towards a creation of sustainable and resilient communities.

Looking at people as place-makers helps to find key features of the place and to understand how the discourse affects and shapes people's environment. In this thesis the emphasis is on women that have university education, but to see if there are any gender differences in the discourse, men were also included in the research. That will be the main issue of the next section.

8.3 The patterns of place-making

The communities of the Westfjords, East Iceland, and the Western Isles are traditional fishing, farming and crofting communities. The participants indicate that these communities are male dominated, favouring male values over female ones. In an earlier study the researcher identified power, competition, rationality, efficiency, and results to be typical male values, where as typical female values are thought to be communication, relationships, co-operation, and understanding (Edwardsdóttir, 2004).

Eco-feminists argue that the world's economy is male-dominated with neo-liberal, neo-classical, and capitalistic perspectives, where market forces are seen as natural and the privatisation of natural resources as the best way to create and sustain prosperity and quality of life (Edwardsdóttir, 2013; Mellor, 2006; Langley & Mellor, 2002; Buckingham, 2004; Leach, 2007; Proppé, 2004; Karlsdóttir & Ingólfssdóttir, 2011; Dowling, 2011; Byrne et al., 2013; Pini et al., 2014). Both men and women find themselves living in communities structured by male values, with women disadvantaged with regard to ownership and control over the land and sea. Such places seem to appeal to conservative women and 'tend to hold up as their strongest woman-friendly card as good conditions for raising children and family-friendly jobs in the children/youth and care sector' (Edwardsdóttir, 2013, p. 83). For the men, job opportunities and the dislike of urban areas are more influential in their choice of a settlement. Even though both men and women see fishing as a male-oriented industry, and that money and real power is in the industry, they keep to the traditional perspective that it is a natural order of life that cannot be changed because women have no interest in that industry and they are not fit to fish. Having such a perspective towards the fishing industry strengthens male dominance over the natural resources, and capital and power helps to keep things as they are.

The women interviewed frequently have a conservative perspective bound up with family and home. They value family life and child upbringing and tend to pattern their lives around those values. Their choice of residence or study line is not always based on their desire to live in their location, nor do they always choose what they want the most, rather the choice is based on what they believe is the best for their families, especially for their children, and how that education could fit into the communities in which they wanted to continue living. So it can be said that the women educate themselves primarily for the benefit of their families and communities (Edvardsdóttir, 2013).

The men have an equality-oriented perspective and value both work and family life. Their choice of residence is based on their dislike of living in an urban area and their study choice is based on what they wanted to study and whether they would get a suitable future job. Men tend to choose their study line out of interest.

Other research shows that the main reason for choosing to live in rural areas was family ties (Bjarnason & Thorlindsson, 2006; Edvardsdóttir, 2013; Ní Laoire, 2007; Rye, 2006; Pretty et al., 2006). It is generally believed that it is better to bring up children in rural areas. Those areas are considered to be safe, healthy, and relaxed, and living in rural areas is more natural than in urban areas (Bjarnason & Thorlindsson, 2006; Edvardsdóttir, 2013; Ní Laoire, 2007; Rye, 2006; Pretty et al., 2006). Families stay in rural areas as long as the male partner has a job, even if the economy in rural areas is monotonous. When one loses one's job, it might be difficult to get another one, but it is more important that men have jobs, and this may affect the stability of the population in the region. Research shows that the lack of diversity in the economic sector plays a big role in out-migration from rural areas (Bjarnason & Thorlindsson, 2006; Edvardsdóttir, 2013; Ní Laoire, 2007; Rye, 2006; Pretty et al., 2006).

Both men and women who had pursued an education said that they gained a lot by getting educated. Not only does their economic status improve, but also more personal matters. Other studies show that men may start to see things differently. They could change perspectives, values, and beliefs by increasing their education (Mendle, 2013; Moore 2005; Pahl-Wostl, 2009). They accepted the knowledge they got in their studies and considered it to be important. They seemed not to question the contents of their studies, and seemed not to think about their studies in a sustainable way. Their perspective is an individual one, e.g. themselves. It can be said that their approach towards what living a 'good life' means is well-being as

a state of mind and as human capability (Dodds, 1997). Their goal is to get a university degree and to get a qualification for a job that is needed in their community. The driver for their studies is the desire for a degree and higher salary, not the knowledge that it provides. The knowledge could be more related to the place they live in and would then be more relevant to them and the place (Edwardsdóttir, 2013).

Research activities and higher education are looked at in a similar way. Both men and women believe that research activities should aim at the areas' strengths and specialities that is nature, culture, and history. I felt that they were proud of their communities and believe that they had a lot to offer in the sense of being a research field for those disciplines. In this way they show a sense of place, deeply rooted in nature, culture, and history, but some participants choose to describe it as nationalism. The men and women of the Western Isles show more of an understanding of the sense of place concept than the Icelanders, who more often relate to nationalism by not seeing the increasing multicultural aspects of their communities.

Rural communities, where primary production has been the main focus in the economy, tend to value education and work related to the local economy. Higher education that is not related to resources in rural areas is less acceptable in a community dominated by such values, which are mainly male values (Edwardsdóttir, 2013; Karlsdóttir & Ingólfssdóttir, 2011; Skålnes, 2004; Verstadt, 2001). In urban areas, the labour market is more diverse and jobs requiring higher education tend to be located in urban areas (Andrésdóttir, 2013; Arnardóttir, 2001; Bjarnason & Thorlindsson, 2006; Edwardsdóttir, 2013; Karlsdóttir & Ingólfssdóttir, 2011; Peace, 2003; Pretty et al.; Verstadt, 2001; Wiborg, 2001).

Young people and women in Iceland and elsewhere are more likely than men to move away from rural areas to get higher education (Bjarnason & Thorlindsson, 2006; Edwardsdóttir, 2013; Karlsdóttir & Ingólfssdóttir, 2011; Ní Laoire, 2007; Outer Hebrides Planning Partnership, 2009, 2011; Pretty et al., 2006; Rye, 2006). In order to prevent them leaving the area, both state and local governments emphasise distance learning in higher education, but out-migration continues (Bjarnason & Thorlindsson, 2006; Edwardsdóttir, 2013; Ní Laoire, 2007; Pretty et al., 2006; Rye, 2006). As the men and women say, the labour market is more important, if one does not get a job, a person will move. They all stressed in the interviews that they had no intention of moving from the area unless they could not get a job or lost the one they had.

All around the world parts of the fishing industry are male dominated. Women generally do not fish, they do not run the fishing companies and they do not sit on the company boards (Dowling, 2011; Edvardsdóttir, 2013.) They do not see themselves as fishers although they may take part in the fishing process, e.g. baiting the line, working in the fish plant, or doing the book-keeping. Even though they are doing things that can be called managing the business, they do not see themselves as managers or that they are in a position of having power. The men acknowledge that the fishing industry is managed by males, but say it is because women do not want to work in that sector. The Icelandic men emphasise how the male dominance of the community infrastructure and development has been over the years, with an emphasis on the reinforcement of facilities that are linked to men, e.g. building football fields, golf courses, or sports facilities. The men from the Western Isles emphasised in the interviews the strong religious male values that influence the communities. In accepting the *status quo* people rationalise the absence of gender in an occupation, and when doing that it is common to use arguments that are linked to intrinsic abilities of masculinity and femininity (Dowling, 2011; Edvardsdóttir, 2013; Karlsdóttir & Ingólfssdóttir, 2011; Proppé, 2004).

Gender equality is written into both Icelandic and Scottish laws and prohibits any discrimination between sexes. Despite that, women are generally paid less than men and take more responsibility in the household and child upbringing (Edvardsdóttir, 2013; Proppé, 2004). In reality, women are in charge in the domestic sphere and men in the public sphere. Still, women think that gender equality is a fact, and that feminism is something that is no longer needed and will just destroy that equality. This is a neo-liberal discourse, where the individual's ability is of prime consideration and people should be valued as individuals. This discourse does not take into account the fact that people live in a patriarchal society which favours male values, norms, and beliefs. When measuring women and men from that perspective, there is always a danger of favouring men (Edvardsdóttir, 2013; Proppé, 2004).

In the next section the third sub-question about the discourse differences across the three regions will be answered.

8.4 Discursive differences across regions

In this thesis the research areas are three: the Westfjords, East Iceland, and the Western Isles of Scotland. So far, they have been discussed separately. It was my belief at the outset that differences would be found between the

Westfjords and East Iceland policy discourse, and in the discourse among the participants. After the analysis of the official documents and the interviews, it became clear however that there is hardly any difference in the discourse. Therefore, the two Icelandic regions are discussed as one.

The discourse in the Westfjords and East Iceland is different from that in the Western Isles with regard to the topics of higher educational activities and rural development. The Western Isles rural development plans are more holistic in that a vision of creating resilient and sustainable communities has seven goals that address the four aspects of the sustainability concept. In the Westfjords and East Iceland rural development plans, the discourse revolves around economic aspects to create sustainable communities where the other three sustainability aspects will follow.

The Western Isles have frequently used and managed their natural resources through a community-based foundation. Their land buy-out projects are put into community trust funds, where the responsibility for management is with the people of the community, not on a governmental basis. I believe that by doing this, the vision of resilient and sustainable communities is more likely to become a reality, because people become place-makers in their micro-environment, and have something to say about how their resources are used.

In the Westfjords and East Iceland, decisions about how to use and manage the areas' natural resources are taken by the government, e.g. dividing the fishing quota among those who have ships and boats. These are top-down strategies and the people living in those areas have very little influence on the management and use of their natural resources. It is my believe that because of the emphasis on economic prosperity and growth, the governmental goal of sustainable communities will not be achieved, unless the other three aspects of the sustainability concept are put into the mix. The people of the Westfjords and East Iceland are place-makers in their communities, but their absence in the decision-making process on the utilisation of the natural resources in the area limits their influence on community development.

The goal of the Western Isles is to improve the quality of life and the well-being of people on the islands. Higher education and research activities which focus on renewable energy are one tool to be used. The regional goal in the Westfjords and East Iceland is to strengthen the economy, mainly in the fishing industry and tourism. It seems to me that higher education and research activities in the area are seen as a tool for an

increase in the population and job creation for people with higher education.

Rural development plans do not revolve around the discourse about the depopulation of the Western Isles, rather it seeks balance within the island demography, with an increasing number of older people living on the islands. For me the discourse becomes more positive because focusing on the depopulation of a place shows a negative picture of that place, meaning that something must be wrong with that particular place, because everybody is moving away. The problem does not go away, only the perspective is changed, and it is addressed from a different angle. The Westfjords and East Iceland's discourse revolved around the depopulation concept and all projects agreed upon must fulfil the demand of having population growth as a primary goal.

In the Western Isles rural development plans, an evaluation plan for projects and general indicators are to be found. That is done so the projects that are chosen can be evaluated to see if they fulfil the goals that have been set. In the Westfjords and East Iceland regional development plans, there are no evaluations or indicators. It is therefore difficult to see which projects are operating at any given time and whether they are working towards the goals that have been set. Therefore, in my view the plans are not reliable enough, and there is a danger that they will have no effect on development.

The Western Isles discourse from policy documents is related to resilience and sustainable development. That discourse is holistic, the vision is clear, and an evaluation plan on chosen projects is in place. It seems to me that everything is aiming in the same direction of creation of resilient and sustainable communities. It is however noticeable that the discourse among participants does not fully reflect this discourse, because of the participants emphasis on economic growth. When discussing the land buy-out project, the participants identified that social and cultural aspects need to be in place as a means to create sustainable and resilient communities. The Icelandic discourse of planning is more nebulous, with a strong emphasis on the economy. A vision about sustainable communities is in place, but there is no mention about how such communities are to be created.

The reason for the Westfjords and East Iceland to be so similar in discourse and actions might lie in the fact that even though there are differences in the implementation of various projects across the two regions, e.g. the knowledge society in East Iceland is a part of an umbrella

institution called Austurbrú, while the knowledge society in the Westfjords is spread across a range of various institutions, the discourse remains similar. Both the Westfjords and East Iceland have their own place-based regional plans, but they tend to focus on similar projects that have been approved at governmental level. The Icelandic system seems to limit rather than open up differences between regions in Iceland, e.g. if one region gets some public jobs to the area, other must have the same and regional development discourse across regions in Iceland is homogenous. Even though that is not what I had expected, it is a reality that must be addressed and acknowledged. It also shows how the rural development system in Iceland works.

Place-based plans in the three research areas focus on the region as the core unit for rural development. By doing that communities are looked at from a homogenous perspective and activities agreed upon are applied to all of them in a similar way. A strong emphasis is on the creation of sustainable and resilient communities, where the community is the core unit. Therefore, in my opinion, place-based development plans must reflect that and change the perspective from the region to each community.

In section 8.5 the main research question about the knowledge society's interaction with rural development in the three research areas will be answered.

8.5 The knowledge society's interaction with rural development

This research was designed to identify how the knowledge society interacts with rural development in the research areas in Iceland and Scotland. First, there is a discussion identifying how the knowledge society interacts with rural development in the Westfjords and East Iceland, and then this is followed by a similar discussion for the Western Isles. What is to be seen in my different sorts of data? What can be done about the roles of sustainability in promoting or requiring links between rural development and the activities of the knowledge system?

8.5.1 Westfjords and East Iceland

Rural development policy in the Icelandic context revolves around economic growth and the increase of the rural population. Projects that were launched have been aimed at those two goals. The knowledge society was supposed to stop out-migration, increase the population, and create jobs for people with higher education. This research has shown that this has

not (yet) happened. Various projects, such as the stern trawler project, the establishment of research institutions and knowledge centres, and launching large-scale industrial projects, have not been able to stop the out-migration from rural areas or increase the rural population. Even though various jobs for higher educated people have been created both in the Westfjords and East Iceland, as seen in Figures 15 and 16, the number of them has been too small to have any significant effect on the rural population. It is also notable that the majority of jobs and projects have been addressed to nature, culture, and history, which have been identified by the policy and inhabitants to be the rural area's strengths and specialities (Ministry of Education, Science and Culture, 2010). Especially projects linked to nature, mainly the sea, have secured more funds than other themes. In my opinion the reason is that those themes are linked to the economic aspect of the sustainability concept, which is believed to be vital for the survival of rural areas.

It would not be fair though to say that the knowledge society has not had any positive interaction with rural development in the Westfjords and East Iceland communities. It has been easier for the inhabitants to get higher education through distance learning methods, and the general level of education in the area has increased. It has also given higher educated people opportunities to work in research and innovation projects and because variety within the labour market has increased. This research shows that the knowledge society has had an interaction with social and cultural sustainability, specifically on the quality of life and the well-being of the rural people.

Rural development plans addressed the importance of creating sustainable communities (Althingi, 2002; 2006a; 2013), but the execution of the policy did not match with what has been said. It is my opinion that creating sustainable communities requires a holistic framework where economic, environmental, social, and cultural aspects of sustainability are all addressed, and to acknowledge that the core unit for development plans is the community, not the whole region. Now projects are launched to strengthen the economy as a means to increase the rural population. As shown in the research, this focus on the economy is the primary reason why rural development plans and projects have not been very successful from the perspective of population criteria. It is mainly for this reason that rural communities of the Westfjords and East Iceland have not become resilient and sustainable and are vulnerable towards changes in their environment.

It seems that the two Icelandic regions are stuck in the phase of the adaptive system cycle somewhere along the way to a reorganisation phase. In order for the communities to move forward and reach the reorganisation phase, it would be necessary to change both the policy discourse and the discourse of the inhabitants, as these two discourses support each other and perpetuate the current system that has not been successful. The communities must be encouraged to use their resourcefulness to help them adapt and transform into a more desirable state. Resilient and sustainable communities should be able to adapt to change and show initiative in regard to transforming communities into places where the quality of life and the well-being of the people who live in these communities are in the foreground. Politicians and the governmental system must support and then facilitate a place-based approach in rural development policy, based on individual communities as the core unit and where bottom-up strategies are used, especially in the field of the utilisation of natural resources. People in the rural areas must be trusted to use both local knowledge and scientific knowledge so that the knowledge society can support rational decisions about the usage of natural resources both at land and sea, with the well-being of people and the creation of sustainable and resilient communities in mind.

With increasing higher educational standards in rural areas, more and more people have gained knowledge, and this is important. They also have developed local knowledge which can be just as important as scientific knowledge in a community place-based approach, and both could be used to benefit the rural communities. The knowledge society, along with universities, must work together in the spirit of valuing epistemological pluralism by admitting that both local and scientific knowledge is equally valid and to organise projects and courses that combine scientific and local knowledge. Planners should also bear in mind the importance of triple-loop learning, meaning that in the projects and courses there must be a forum not only to reflect critically on a given topic, but also to create an opportunity for reflections on transforming the actions of people and communities. This means adding the fourth and the fifth helices, and the community and the environment to the *Triple Helix model*, which is the ideology that most projects in rural areas operate in. This is vital for this transformation. Doing this may assist in the creation of resilient and sustainable communities, which in turn also increases awareness of place, meaning that people become more active place-makers in their own communities.

8.5.2 The Western Isles

Rural development policy in the Western Isles in recent times has revolved around the vision of resilient and sustainable communities. The vision is holistic, giving the economic, environmental, social, and cultural aspects of the sustainability equal attention. Plans and projects address the vision of sustainability, with the goal of improving the quality of life and the well-being of the inhabitants. It is not simply an issue of increasing the islands' population, rather it is bettering the well-being of the people who live there. However, it is also notable that projects that have been launched address the area's strengths and specialities, which have been identified to include nature, culture, and history. An effort has been put into projects that are linked to people's quality of life and well-being including harvesting renewable energy, focusing on wind farming, and the harnessing of sea wave energy. The reason for this focus is the very expensive cost of house heating on the islands, with oil as the main energy source currently being used.

The knowledge society has been crucial in these projects with scientists conducting research in the field of renewable energy along with local partners in the rural development planning partnership. The knowledge society, mainly through the Lews Castle College, is used as one of the tools in forming resilient and sustainable communities, because these approaches address the four aspects of sustainability. Cheaper energy sources would have an impact on the economy, because firm's competitiveness would increase. It is better for the environment, because of less pollution, and socially and culturally the people will benefit because of lower house heating costs.

Lews Castle College has always looked at itself as a part of rural development, providing further and higher education for its community, wherever people live, either using distant learning methods or face-to-face learning in campuses and learning centres around the islands. It is also a partner in various research projects and provides a variety of research jobs that increase diversity in the labour market.

The grounds for increased interest in renewable energy can be related to the land buy-out projects that have been operational for several years. To me it is a project that makes the community the core unit, not the whole region. The Western Isles communities have been able to buy a lot of land back from private landlords. The communities have then established community trust funds to handle the management of these natural resources. The communities have chosen to focus on wind farming and tidal

energy. The guiding light has been to improve the quality of life of local people. Giving power to people to take decisions about the usage of the natural resources in their micro-environment has empowered them and made them more effective as place-makers. People can be trusted to make rational decisions for the benefit of the whole community and its people, with sustainability as a guiding light with a view to create resilient communities (Rennie & Billing, 2015).

Subsequently, the region's population is slowly increasing after a period of depopulation. However, a demographic imbalance, with more old people living on the islands and young people and women moving away, continues to be a worry.

The Western Isle's adaptive system cycle seems currently in the reorganisation phase, moving perhaps to a growth period. The system is resilient in the way that it is adapting to changes and uses its resourcefulness to transform the communities into a more desirable state. The communities appear to be becoming more resilient and sustainable. The inhabitants' discourse seems mostly in harmony with the policy discourse and that also impacted the flow inside the system cycle.

Lews Castle College has been a partner in the University of the Highlands and Islands (UHI) since the establishment of UHI and as such has been able to increase higher education standards and research potential on the islands. Local knowledge and scientific knowledge has been combined in the study courses offered, such as sustainable rural development courses, which favour knowledge in a trans-disciplinary manner, and also gives the students an opportunity to reflect on their studies, and if necessary, to transform their behaviour. The college seems to have been able to adapt to the *Triple Helix model* but also shows a sign of adopting the concepts of *Quadruple and Quintuple Helical models* (Carayannis & Campbell, 2011) to capture the social, cultural, and environmental aspects of sustainability, so demands of inhabitants and society are better met.

8.6 Summary

One of the goals in rural development plans in both Iceland and the Western Isles is the creation of sustainable communities. The difference between the two Icelandic research areas and the Western Isles lies in the different usage of the concepts of sustainability. The Western Isles' goals aim at creating resilient and sustainable communities and their development plans address these goals. Icelandic goals are more addressed to issues concerning economic factors and population to create sustainable

communities. This research indicates that all four aspects of the sustainability concept should be addressed if sustainable communities are to be created.

The Icelandic rural development system has become firmer and less flexible, and seems to be unable to adapt to a new reality and transform rural areas by starting projects that might create more resilient and sustainable communities. The system seems to be stuck in a phase of top-down strategies and state-led projects. The Western Isles rural system cycle seems to be moving towards the reorganising phase, using its resourcefulness to adapt and transform to reach the goals that have been set.

The key factors or themes discussed above were found in all the Icelandic analysed policy documents. In chapters six and seven the same key factors or themes have been found in the discussion about regional development and the knowledge society since 1970. This means that these themes have become the legitimated principles of rural area discourse and are believed by many to be true. All state-supported activities that are agreed upon in the name of rural development in Iceland are about strengthening the local economy as a means to stop out-migration from rural areas and increase population. It has become the historical conjunction that has guided the path of rural development policy and activities in the Icelandic areas, irrelevant of whether they work or not. Rural development policies and activities are seldom questioned or evaluated, because no evaluation process or indicators are built into the rural development plans. The policy and the activities are not evaluated in any systematic way to find out if the goals that are set actually have been reached, and if not, why they are not working.

The Western Isles rural policy documents that were analysed were from 2009–2013. The discourse in the documents is more in terms of how inhabitants and communities can create their own future, based on sustainability and resilience. Before 2000 the emphasis was on how to get support from EU or the Scottish government in order to address issues and problems in rural areas. It seems that a shift in the discourse to a more place-based and self-reliance approach has occurred, which I believe can be related to the two milestones mentioned before: the establishment of the University of the Highlands and Islands, and the Land Reform Act from 2003. What had once been legitimate principles of top-down approaches in rural development has changed, and principles about sustainable and resilient communities with bottom-up and distributed strategies seem to

have taken their place. That is the new historical conjunction, which all activities are based on in regional development in the Western Isles. The discourse of the participants strengthens this approach and keeps it alive.

The Western Isles seems to have taken several steps towards creating resilient and sustainable communities which take into account all aspects of the sustainability concept. Lews Castle College is an active partner in improving community resilience, with its emphasis on being a key partner in regional development. Those interviewed for this study believe that education and research activities are key features in enabling people to become place-makers in their own communities. The enthusiasm of the people of the Western Isles in their land buy-out shows that bottom-up strategies, where people are empowered to make key decisions about their micro-environment, can both be efficient and successful.

The Westfjords and East Iceland regions seem not to have reached the same developmental stage as the Western Isles. In my opinion they are still focusing on economic growth and population decline, even though the central rural development goal is to create sustainable communities. State-led, top-down strategies are used, especially when it comes to the utilisation of natural resources. In this model the people have no real influence on whether and how their resources are utilised. Focusing on the community as the core unit and using bottom-up strategies, such as giving people decision-making powers on issues affecting their micro-environment generates more effective place-makers could lead to the creation of more sustainable communities.

The thesis conclusion will be put forward in the last chapter along with how recommendations on how rural development strategies could be implemented to create resilient and sustainable communities in Iceland.

Chapter nine is divided into two sections. In section 9.1 a conclusion regarding creating resilience and sustainable communities is presented, and in section 9.2 a criteria on ways to reach the goals of resilience and sustainable communities are put forward in order to make an input into the discourse of rural development at local and national levels.

9 Conclusions and implications

Efforts have been made by national and local authorities to stem the decline in population in the Westfjords and East Iceland, and the Western Isles of Scotland. Over the years several projects aimed at increasing the population in rural communities have been launched, yet the two Icelandic regions face continued migration out of the area, especially young people and women. Most Icelandic projects in the two regions have emphasised strengthening the economy and have given little or no attention to environmental, social, or cultural aspects which influence sustainability. This research study has considered the interaction of the knowledge society and rural development from a range of viewpoints, using discourse analysis, historical records, interviews in Iceland and Scotland. Conceptual arguments about the knowledge society and place-based approaches to development were discussed.

I would like at this point to ask questions about what might have happened to the rural areas if the decision about the stern trawlers had not been taken, or alternative tools had been chosen instead of the quota system. If the stern trawler project had not been realised, the rural population would probably have decreased, because there were few types of job opportunities other than those that were connected with the fishing sector (Herbertsson & Eypórsson, 2003). Gylfi Arnbjörnsson (1989), quoted in Herbertsson & Eypórsson (2003) found out that

the growth in the fishing industry from 1972-1980, which was related to governmental actions in the name of rural development, had in that period reduced the out-migration from rural areas (p. 37).

However, over time overfishing of fish stocks was the next problem to emerge. And the solution seemed to be to establish a quota system for fish catches (Matthíasson, 2003). At the same time there was a decrease in rural population (Herbertsson & Eypórsson, 2003).

I can safely conclude that there is a need for a new approach in thinking about rural development and how it is executed in Iceland. National and local sectors and inhabitants must search proactively for new, holistic

approaches to rural development, where the core unit could be individual communities instead of the whole region.

How other countries have responded to similar problems as those found in Iceland could be useful. The Western Isles of Scotland were chosen as a research area because the islands have faced a similar population decline over the years. In recent years however, their population has increased a little, even though out-migration of young people and women continues to worry the Islands local authorities. The Western Isles have put forward a rural development plan that is under the influence of the European Union's agreed development policy for rural areas, which has been adopted by the Scottish government, and its main goal is the creation of sustainable and resilient communities. This holistic approach in which the economy, environment, social, and cultural aspects of sustainability are considered important, seems to be attracting people to the islands. The quality of life and the well-being of people have been put forward as the number one goal. The new emphasis on social and cultural aspects reflects a change in the discourse and approach used to reverse this decline in population. Even though the main goal is applied to communities, the core unit of the rural development plans is the region. In order for the rural development plans to become place-based they need to create a space for communities to develop.

To understand and to influence the discourse and approach to rural development in Iceland, scenarios will be put forward for regions in Iceland which involve the creation of sustainable and resilient communities. It is my belief that by focusing on the communities and their people and supporting them in a journey to resilience, rural societies will be able to deal with change. This means that a sustainable perspective must be adopted that systematically values environmental, economic, social, and cultural aspects of sustainability when preparing policy and planning projects.

9.1 Resilient and sustainable communities

Rural development in Iceland has for a long time revolved around economic and population growth. However there has been a decline in the Westfjords and East Iceland's population over the last 40-50 years. All attempts towards increasing the population have been unsuccessful, e.g. the power plant project and aluminium project in East Iceland and the development of the knowledge society in the Westfjords and East Iceland as a means to increase public jobs.

This decline has mostly been among young people and women, and it is important for national and local authorities, along with communities themselves, to acknowledge that and try to find a way to create communities that meet the demand of a good life for women and young people. They have to find ways to encourage women with modern and alternative perspectives, and men that hold careerist and adventure-seeking views, to move to the rural areas or return to their communities so that diverse communities can be created. Communities are often willing to do this when their demographic situation shows a decline over a long period (Skålnes, 2004).

9.1.1 Rural development of today

How the communities of the Westfjords, East Iceland, and the Western Isles will manage in the future depends on communities being able to develop resilience. It is possible that the Western Isles will increase its population because of their holistic approach in creating sustainable communities. They are currently in the reorganisation phase of the adaptive system cycle and will hopefully move towards the growth phase. The islands have changed their developmental discourse and approach from top-down to bottom-up and distributed, which is also reflected in the management of some of their natural resources, which are now community based.

The Westfjords and East Iceland seem to be stuck in the path towards the reorganisation phase of the adaptive system cycle and there seems to be a lack of a holistic vision. In the projects and activities that have been launched there is a great emphasis on large-scale industry which base their existence on low energy prices from the state, and a policy of moving public institutions from the capital area to rural areas. Projects like that have been based on top-down decisions taken at the political and governmental levels and have been operational for decades. This has coincided with depopulation from rural areas, but even so the discourse both from the policy sector and the inhabitants maintains the status quo. This discourse is dominated by 'male' values, because these projects tend to focus on jobs for males. Even though jobs in aluminium factories are said to suit women, the reality is that more than 70% of those who work there are male, so apparently jobs like that do not appeal to women.

The growing industry of salmon fish farming in the Westfjords and East Iceland seems to be heading to the direction of a large-scale industry. The discourse about job creation and increases in rural population follows the patterns of rural development discourse that has been dominant for

decades. It seems that every time a new project starts, it is forced by the system into a similar cycle as always. All this is done at the governmental level and it seems that the same top-down strategies as earlier are still being used, not letting community people sit at the decision-making table, deciding whether they want such an industry in their community and at what scale it should be.

Several groups oppose the culture of Norwegian salmon in Icelandic fjords. One group which has come forward with an opinion and is strongly against this development are salmon fishermen, who believe that culturing Norwegian salmon in floating marine pens could have an effect on the wild salmon in Icelandic rivers (Lúðvíksson, 2014). In the Western Isles, aquaculture is already a big industry in rural areas and similar discussions about fish farming in general can be found.

It will be interesting to see how this discourse and the aquaculture in the Icelandic fjords will develop in the future, but as it is today it is likely that it will be a large-scale industry. That indicates that the system is reorganizing itself into the same state as before, where weak sustainability is in the foreground. In that context the 'what next?' question is: Can the knowledge society be a leading key player in assisting the system to transform into a sustainable and resilient system?

Creating resilient and sustainable communities where a balance across the environment, economy, social, and cultural aspects is found, and which favours male and female values and work equally, is something to which rural development should aspire. There are some scattered examples of development in this direction, which are mostly related to the knowledge society with research jobs linked to increased number of research institutions and knowledge centres in rural areas.

9.1.2 Place in rural communities

For both women and men 'places make us' (Gruenewald, 2003, p. 621). Participants in this research realise and accept that they live in patriarchal communities that favour male values and perspectives. In such communities women's space for action in the public sphere is limited. Women tend to dominate in the private sphere such as the home, and men tend to dominate the public sphere, through the communities' main industry, the fishing sector. Both sexes seem to realise and accept this dominance, and support it by using biological arguments and women's lack of interest for their absence in the industry. Men, despite accepting that

dominance, are more willing to challenge that discourse, realising that if women are not satisfied living in the rural communities, they will move.

The educated women in Westfjords, East Iceland, and the Western Isles are the primary 'place makers' in the sense that by taking a higher education degree they strengthen their action space in traditional women's sectors (Skålnes, 2004). But their action space does not expand, because they do not go into the men's sector, the contractor's business, the fishing industry, or politics. Their space for power, decisions, and actions is limited, and by strengthening their status and space activities in traditional women sectors, they also strengthen the male discourse. Men are also 'place makers', but the difference between them and the women is that they move more freely between the sectors, belonging both to traditional women's sectors and men's sectors. The male dominated discourse in the communities accepts such a movement between sectors for men, but not for women. In that sense the discourse allows men to be more effective 'place makers' than women.

9.1.3 Change towards resilient and sustainable communities

A change in the discourse and approaches in rural development policy and plans, and among the inhabitants of the Western Isles, has coincided with a slight increase in population on the islands. The discourse about resilient and sustainable communities is becoming the dominant discourse, along with bottom-up and distributed approaches in the implementation of projects and activities on the isles. This can be seen in the approaches to decision-making about the utilisation of the Islands' natural resources. It is an effective community-based forum, where the inhabitants become place-makers in their own micro-environment. The people of the Western Isles seem to have been able to link together resilience, sustainability, and place-based approaches, identifying them as the main tools for the successful implementation of the improved quality of life and the well-being of the people.

As said earlier, the knowledge society has played a significant role in the Western Isles, with its diversity in study options and research activities in fields that address the well-being of people.

In this study I have learned that systems need to be managed, so they will not manage us. On reflection I realise how my different forms of knowledge, experience and emotions have brought me to understand better what is needed in order to manage the future of sustainable and resilient communities. Therefore, I propose three criteria regarding the

creation of resilient and sustainable communities in the Westfjords and East Iceland. They might help us to find our way forward.

9.2 Criteria: Creation of resilient and sustainable communities through partnerships, participation, and a sense of place

To create resilient and sustainable communities, I believe that a change in the discourse and approaches to rural development in Iceland is needed, where the core unit in place-based development plans is the community. In that context it would also be helpful to look into the theories about distributed management, because they emphasise involvement of the whole community in decision-making. These changes should meet three criteria: partnerships in place-based plans, participation in decisions made at community level, and working more closely with the knowledge society to develop a sense of place. Each is now briefly discussed.

9.2.1 Partnership in place-based plans at the community level

Today, each rural region in Iceland has its own designated rural development plan. However, it is still prepared at the national and local authority level, and it is the responsibility of the Associations of the Municipalities in each rural/regional area to develop the plans and allocate funds in accordance with a rural development strategy that has been agreed upon by Parliament, and by the state along with the municipalities.

A broader partnership is a priority in elevating the notion of 'place' and collaborating on these local rural plans. There is a need for the knowledge society, the health sector, local authorities, the fishing industry, the tourist industry, and others that operate at a local level to form this partnership and create the plans along with the inhabitants. A broader partnership could then develop a more holistic vision of sustainable and resilient communities, and form plans that have in mind the environmental, economic, social, and cultural aspects of sustainability. Every partner brings its perspective and knowledge, which must be respected equally and the goal should be to improve the quality of life and the well-being of the people who are already living in the area, instead of focusing on how to increase the population (Ferkany & Whyte, 2012). A space must also be given in the process to form a development plan for individual communities.

Therefore, it is important to pay more attention to the social aspect of sustainability. In today's development plans, the social factor is almost invisible. To incorporate the social factor, the partnership could look to the Local Agenda 21 plan, which has not really been given the attention it

deserves. The reason is that the Icelandic Government's efforts went into the environmental part of Agenda 21, emphasising waste and garbage, but failed to realise that it was in fact a welfare plan where economic, social, and cultural aspects were to be addressed also. It could help the partnership to address the social part of the sustainability as equally as the other factors.

Causal-loop diagrams are one of the tools that can be built into the place-based rural development plans, because they suit this approach of partnership with different and various stakeholders (Hummelbrummer, 2007). The feedback loops provide the means for monitoring projects where relations between stakeholders need to be understood.

The partnerships need to look at rural issues as wicked problems that must constantly be reviewed and evaluated in order to be sure that the appropriate approaches, methods, or resources are being developed. Therefore, an evaluation plan must be built into place-based regional development plans. The Icelandic development plans of today have few evaluation activities so there has been no way of knowing the extent to which the execution of plans are successful or not.

9.2.2 Establishing community trust funds

The governmental sector, including politicians, along with partnerships in the Westfjords and East Iceland regions, could consider how the Western Isles have addressed natural resource management issues. They should consider the possibility of forming community-based trust funds that monitor and develop the natural resources in the area. This might entail moving the locus of the management of the fishing quota, the management of salmon fish farming in the fjords, and the harnessing of geothermal power and electric power from the waterfalls, into the hands of the people. This would make the Westfjords and East Iceland people more effective place-makers in their communities. The political sector should consider empowerment by assigning the *community quota* to community-based trust funds and let the people decide how to harness their own quota. This *community quota* is now a part of the quota system legislation whereby fishing communities must apply for their share. It is the responsibility of the Regional Development Institute to distribute and manage the *community quota* according to the legislation decided by the state.

The Icelandic constitution states that some Icelandic natural resources belong to the people. The management of these natural resources has been under the influence of neo-liberal thoughts, which favours privatisation as a means to create economic growth. Moving decision-making about resource

management to the local level would be a major change in governance structures, because some laws must be changed. However, first and foremost it requires a change in perspectives and discourse, especially from the governmental sector. As seen in chapter seven the discourse among the inhabitants shows frustration with not having any effective decision-making influence on the management of local natural resources. Rennie and Billund's (2015) research about the community trust funds in the Western Isles indicates that such empowerment has increased the quality of life and the well-being of people, and they have become more effective place-makers in their own communities. That is something that Iceland's rural areas need because satisfied people who are proud of their place and show it, are more of an attraction than jobs offered in the area.

9.2.3 A knowledge society partnership

The knowledge society is a key but under-used player when decisions about natural resources management are made that rely on research evidence on the natural resources gathered in each area. Therefore, it is important to form partnerships where universities, research institutions, and knowledge centres take part on an equal basis. The partnership of the University of the Highlands and Islands with local communities would be a model that would suit the Icelandic reality. The vision and the ultimate goal would be that in Iceland there would be one university operating as an umbrella organisation, but all seven universities, the research institutions, and knowledge centres around Iceland would form a partnership on an equal basis. That would be a major structural change, mostly legally, but perspectives and discourse must also change. Knowledge society partnerships in Iceland with rural communities, could be the first step. This partnership and the communities should work together in both strengthening the status of research activities and increasing the courses that can be offered through distance learning. By diversifying what is on offer, the knowledge society would be both a provider of knowledge and a learner of the knowledge the place possesses, increasing opportunities for diversification.

Introducing place-based education into study programmes is one way of fulfilling local people's wishes. It could be done through research and development with the inhabitants in mind, and in developing a curriculum which nurtures local knowledge and skills and encourages discussion on local issues, perspectives, and values. Knowledge about the local natural resources and their utilisation could be as important as resolving difficult

issues. To meet these new demands for knowledge and skills, the knowledge society and universities must adopt a place-based pedagogy which promotes transformative learning and develops curriculum and research projects that are more suited to encouraging collaboration between local place knowledge and academic knowledge, e.g. through validation of community-oriented project work. This will be a future challenge for knowledge society learning and research activities. By doing that, *Quadruple* and *Quintuple helical models* will be adapted to the *Triple Helix model*, where society, culture, and environment work together to support the creation of sustainable and resilient communities (Carayannis and Campbell, 2011; Macdonald and Pálsdóttir, 2013).

9.3 Concluding comments

The participants' discourse about their place being rural or urban shows that irrespective of where people come from, whether they live in the Westfjords, East Iceland, or the Western Isles of Scotland, they have the same understanding of the basic concepts of rural development. For people a rural place becomes urban if basic service institutions, such as shops, a school, or a health clinic can be found, even if there are few people living there. Being able to live their daily life with the basic facilities, along with a sense of place, seems to be what matters in people's lives.

This distinction between rural and urban suggests that people do not look at themselves as rural inhabitants, even though the place they live in is classified as rural. Such a view towards the place and space in which people live influences the discourse about the knowledge society and rural development. The discourse revolves around transforming the rural into urban in response to the demand from the inhabitants and the policy of getting the same infrastructure and opportunities in the rural setting as is found in the urban one. That is thought to increase the well-being of people and quality of life, and to be the key to economic and population growth in rural areas. I believe that understanding how rural people look at themselves and place will shed some light on developments in policy and rural places over the coming years.

The knowledge society is a key player if the criteria discussed above are to be invoked in planning and development. The reason lies in the fact that empowered inhabitants become strong place-makers in their own communities, and this requires substantial local and scientific knowledge to be able to take decisions and respond to problems that can be wicked. Educational standards have increased with on-line learning courses and

research activities in rural areas in Iceland. However, Icelandic universities need to be more active in designing and providing course programmes and research activities that are not only carried out in the local areas, but that are also based there in order to strengthen both communities and inhabitants.

The establishment of the community trust funds on the Western Isles has been successful and people are empowered to make decisions based on local and scientific knowledge. The reason for this success is that the knowledge society on the Western Isles has, for many years, looked at itself as one of the key players in rural development in increasing educational standards by offering activities that take into account both local and scientific knowledge. This has strengthened the status of the inhabitants and made them more active place-makers.

This research has shown that rural development policy in Iceland has not been effective in changing the status of rural areas for the better. The population decline continues and some rural places might soon be reaching the point of no human habitation. The recent discourse does not address such a scenario and it seems that everybody is afraid of the discussion. Avoiding such a discussion reminds one of the big elephants in the living room, everybody knows it is there but nobody wants to admit it or talk about it and everyone acts as if it is not there.

This thesis suggests that a new approach is needed. I propose the need for a radical approach that will generate contention. My decision to propose these three criteria is intended to get those who work in the fields of rural development and the knowledge society to respond to the elephant in the living room and take appropriate actions. It is important to acknowledge that we are dealing with a *wicked problem*, which will not be solved once and for all, but we can learn to manage it.

References

- Abel, N., Wise, R. ., Colloff, M., Walker, B. H., Butler, J. R. A., Ryan, P., Norman, C., Langston, A., Anderies, J. M., Goddard, R., Dunlop, M., & O'Connell, D. (2016). Building resilient pathways to transformation when 'no one is in charge': insights from Australia's Murray-Darling Basin. *Ecology and Society*, 21(2): 23.
- Aðalsteinsdóttir, A. H. (2012). The characteristics of groups of people that emigrate from Iceland in economic crises (in Icelandic). BA thesis in Faculty of Economics. University of Iceland. Retrieved in October 2016 from <http://skemman.is/stream/get/1946/13110/31533/1/ArnaLokaritgerd.pdf>
- Albulescu, I., & Albulescu, M. (2014). The university in the community. The university's contribution to local and regional development by provident education services for adults. *Procedia – Social and Behavioral Science*, 142, 5-11.
- Althingi. (1999). Parliamentary Resolution about a policy in regional development for 1999 – 2001 (in Icelandic). Nr. 6/123. Retrieved in December 2013 from <http://www.althingi.is/altext/123/s/0957.html>
- Althingi. (1998). Laws about universities nr. 136/1998 (in Icelandic). Retrieved in April 2012 from <http://www.althingi.is/lagas/132b/1997/136.html>.
- Althingi. (2002). Proposal for a parliamentary resolution about regional development policy for 2002 – 2005. Nr. 30/127. Retrieved in January 2014 from <http://www.byggdastofnun.is/static/files/Byggdaaetlun0205/byggdaaetlun0205.pdf>
- Althingi. (2004). The Minister of Industry and Innovation's report about the regional development plan for 2002 – 2005 progress (in Icelandic). Retrieved in January 2014 from <http://www.byggdastofnun.is/static/files/Byggdaaetlun0205/skyrsla%20idnadarradherra.pdf>

- Althingi. (2005). University in Ísafjörður. A formal question from the parliamentarian Kristinn H. Gunnarsson to the Minister of Education, Science and Culture Þorgerður Katrín Gunnarsdóttir (in Icelandic). Retrieved in March 2014 from <http://www.althingi.is/skodalid.php?lthing=131&lidur=lid20050309T153730>
- Althingi. (2006). Higher Education Institution Act no. 63/2006. Retrieved in April 2012 from <http://eng.menntamalaraduneyti.is/media/MRN-PDF-Althjodlegt/Higher-Education-Act-no.-63-2006nytt.pdf>
- Althingi. (2011). Parliamentary resolution about regional development policy for 2010 – 2013. Nr. 23/139 (in Icelandic). Retrieved in January 2014 from <http://www.althingi.is/alttext/139/s/pdf/1328.pdf>
- Althingi. (2013). Concepts (in Icelandic). Retrieved in December 2013 from <http://www.althingi.is/vefur/hugtok.html#thinst>
- Althingi. (2014). A parliamentary resolution's proposal about regional development policy for 2014 – 2017 (in Icelandic). Retrieved in January 2014 from <http://www.althingi.is/alttext/143/s/pdf/0468.pdf>
- Alþýðublaðið*. (1981). Adult learning class established in the Ísafjörður college (in Icelandic). Retrieved in March 2014 from http://timarit.is/view_page_init.jsp?issId=236898&lang=1
- Amin, A. (2004). Regions unbound: towards a new politics of place. *Geografiska Annaler*, 86B (1), 33-44.
- Andersen. M. L. (2006). *Thinking about women. Sociological perspectives on sex and gender* (6th ed.). Pearson, Allyn & Bacon.
- Andrésdóttir, G. H. (2013). Built-up area formation and rural development in Iceland (in Icelandic). A BA thesis at the University of Akureyri. Retrieved in July 2015 from [http://skemman.is/stream/get/1946/15391/34618/1/%C3%9Ee\\$0301ttby\\$0301lismyndun_og_bygg%C3%B0a%C3%BEro\\$0301un_a\\$0301_I\\$0301slandi.pdf](http://skemman.is/stream/get/1946/15391/34618/1/%C3%9Ee$0301ttby$0301lismyndun_og_bygg%C3%B0a%C3%BEro$0301un_a$0301_I$0301slandi.pdf)
- Angelstam, P., Andersson, K., Annerstedt, M., Axelsson, R., Elbakidze, M., Garrido, P., Graham, P., Jönsson, K., Pedersen, S., Schlyter, P., Skärbäck, E., Smith, M., & Stjernquist, I. (2013). Solving problems in social-ecological systems: definition, practice and barriers of transdisciplinary research. *AMBIO*, 42, 254-265.

- Arnarson, M., Kristjánsson, Þ., Bjarnason, A., Sverdrup, H., & Ragnarsdóttir, K. V. (2011). The Icelandic economic collapse. A system analysis perspective on financial, social and world systems links. University of Iceland, Reykjavík. Retrieved in January 2016 from <http://skemman.is/en/stream/get/1946/9908/24833/2/IcelandicBankReportPrintedVersion.pdf>
- Armstrong, H. W., Giordano, B., Kizos, T., Macleod, C., Olsen, L. S., & Spilanis, I. (2012). The European regional development fund and islands regions: An evaluation of the 2000-06 and 2007-13 programs. *Islands Studies Journal*, 7(2), 177-198.
- Árnason, S., & Agnarson, R. (2005). Fisheries as the main industry in Iceland (in Icelandic). *Fjármálatíðindi*, 52(2), 14-35.
- Ásgeirsson, G. (2012). The quota system in the fishing industry: Its creation and effect on settlements and communities (in Icelandic). A BA. thesis in Faculty of Humanities. Retrieved in February 2014 from http://skemman.is/en/stream/get/1946/11547/28678/1/Gu%C3%B0mundur_%C3%81sgeirs.pdf
- Austurbrú. (2012). Austurbrú Charter (in Icelandic). Retrieved in March 2014 from <http://www.austurbru.is/static/files/PDF/2014/skipulagsskra-fyrir-austurbru-ses-2014.pdf>
- Bachtler, J., & Yuill, D. (2001). *Policies and strategies for regional development: a shift in paradigm*. University of Strathclyde, European Policies Research Centre.
- Baker, C. (2015). From nation-building to neoliberalism: Agriculture, change and the social imaginary Australia. A paper presented at the annual conference of the Australian Sociological Association 2015. Retrieved in November 2016 from <https://www.tasa.org.au/wp-content/uploads/2015/11/TASA-2015-Conference-proceedings.pdf#page=195>
- Balfour, R. J., Mitchell, C., & Molestane, M. (2008). Troubling contexts: Toward a generative theory of rurality as education research. *Journal of Rural and Community Development*, 3(3), 95-107.
- Barca, E., McCann, P., & Rodríguez-Pose, A. (2012). The case for regional development intervention: place-based versus place neutral approaches. *Journal of Regional Science*, 52(1), 134-152.

- Barber, J. P. (2012). Integration of learning: a grounded theory analysis of college students' learning. *American Educational Research Journal* 49(5), 590-617.
- Benediktsson, K. (2001). Beyond productivism: regulatory changes and their outcomes in Icelandic farming. In *Developing Sustainable Rural System*, 75-87, (K. Kim., I. Bowler & C. Bryant, A. (Ed.). Pusan: PNU Press.
- Beerens, E. (2008). University policies for the knowledge society: Global standardization, local reinvention. *Perspectives on Global Development and Technology* 7(1), 15-31.
- Berg, B.L. (2009). *Qualitative research methods for the social science*, 7th edition. Allyn & Bacon, Boston.
- Biesta. G. (2007). Why 'what works' won't work: evidence-based practice and the democratic deficit in educational research. *Educational Theory* 57(1), 1-22.
- Bjarnason, Th., & Thorlindsson, Th. (2006). Should I stay or should I go? Migration expectations among youth in Icelandic fishing and farming communities. *Journal of Rural Studies* 22, 290-300.
- Björnsdóttir, A., Hansen, B., & Jóhannsson, Ó. H. (2008). The influence of teachers in operation of basic schools in Iceland. *Scandinavian Journal of Educational Research*, 52(5), 513-526.
- Blanch, M. P. (2015). Women's eco-entrepreneurship: a possible pathway towards community resilience? *Journal of Depopulation and Rural Development Studies*, 18, 65-89.
- Boronski, T., & Hassan, N. (2015). *Sociology of Education*. London. SAGE publication.
- Bosworth, G., Annibal, I., Carroll, T., Price, L., Sellick, J., & Shepherd, J. (2015). Empowering local action through neo-endogenous development; the case of LEADER in England. *Sociologia Ruralis*, 1-23.
- Bowers, C. A. (2008). Why a critical pedagogy of place is an oxymoron. *Environmental Education Research*, 14(3), 325-335.
- Brint, S. (2001). Gemeinschaft revisited: A critique and reconstruction of the community concept. *Sociological Theory* 19(1), 1-23.
- Bryden, J. M., & Richard, C. (2000). Information technology and rural development in the Scottish Highlands and Islands: A preliminary review of the issues and evidence. *Geocarrefour* 75(1), 71-77.

- Bryden, J., & Geisler, C. (2007). Community based land reform: Lessons from Scotland. *Land Use Policy*, 24, 24-34.
- Buckingham, S. (2004). Eco-feminism in the twenty-first century. *The Geographical Journal*, 170(2), 146-154.
- Byrne, A., Duvvury, N., Macken-Walsh, A., & Watson, T. (2013). *The rural economy development programme (REDP)*. A RERC Working paper series. Retrieved in July 2015 from www.tnet.teagasc.ie/lerc/
- Carayannis, E. G., & Campbell, D. F. J. (2011). Open innovation diplomacy and a 21st century fractal research, education and innovation (FREIRE) ecosystem: Building on the quadruple and quintuple helix innovation concepts and the 'Mode 3' knowledge production system. *Journal of the Knowledge Economy*, 2, 327-372.
- Carayannis, E. G., & Campbell, D. F. J. (2012). Mode 3 Knowledge Production in Quadruple Helix Innovative Systems. Twenty-first-century democracy, innovation and entrepreneurship for development. *Business* 7, 1-63.
- Carayannis, E.G., & Rakhmatullin, R. (2014). The quadruple/quintuple innovation helixes and smart specialisation strategies for sustainable and inclusive growth in Europe and beyond. *Journal of the Knowledge Economy* 5, 212-239.
- Charmaz, K. (2009). *Constructing grounded theory – A practical guide through qualitative analysis*. Los Angeles, Sage Publication.
- Chatterton, P., & Goddard, J. (2000). The response of higher education institutions to regional needs. *European Journal of Education*, 35(4), 475-496.
- Cheshire, L., Esparcia, J., & Shucksmith, M. (2015). Community resilience, social capital and territorial governance. *Journal of Depopulation and Rural Development Studies*, 18, 7-38.
- Christopherson, S., Michie, J., & Tyler, P. (2010). Regional resilience: theoretical and empirical perspectives. *Cambridge Journal of Regions, Economy and Society* 3, 3-10.
- Colapinto, C., & Porlezza, C. (2012). Innovation in creative industries: from the quadruple helix model to the systems theory. *Journal of the Knowledge Economy* 3, 343-353.
- Collini, S. (2012). *What are universities for?* London. Penguin Books.

- Commission for rural communities. (2006). *What is rural?* A document retrieved in October 2006 from www.ruralcommunities.gov.uk
- Comhairle nan Eilean Siar. (2013). *Creating communities of the future*. A document retrieved in April 2014 from <http://www.cne-siar.gov.uk/creatingcommunities/>
- Cooke, P., & Leydesdorff, L. (2006). Regional development in the knowledge-based economy: The construction of advantage. *Journal of Technology Transfer*, 31(1), 5-15.
- Cresswell, T. (2015). *Place – a short introduction*. (2nd ed.). London, Blackwell Publishing.
- Cunningham, P. (2012). Structure and systems and bodies and things: historical research on primary schooling and its professional relevance. *History of Education* 41(1), 73-86.
- Dawley, S., Pike, A., & Tomaney, J. (2010). Towards a resilient region? *Local Economy*, 25(8), 650-657.
- Dodds, S. (1997). Towards a science of sustainability: Improving the way ecological economics understands human well-being. *Ecological Economics*, 23, 95-111.
- Dowling, J. (2011). *'Just' a fisherman's wife: a post structural feminist exposé of Australian commercial fishing. Women's contributions and knowledge, 'sustainability' and 'crisis'*. Cambridge Scholar Publishing, Newcastle upon Tyne.
- Duke, C. (2002). Cyperbole, commerce, and internationalization: 'Desperate hope and desperate fear'. *Journal of Studies in International Education* 6(2), 93-114.
- Du Pisani, J. A. (2006). Sustainable development – historical roots of the concept. *Environmental Sciences*, 3(2), 83-96.
- Edvardsdóttir, A. G. (2004). Does gender affect values of Icelandic principals? *Tímarit um menntarannsóknir*, 1, 71-82.
- Edvardsdóttir, A. G. (2013). Place and space for women in rural area in Iceland. *Education in the North*, 20(Special Issue), 73-89.
- Eðvarðsson, I. R. (2001). Higher education and residence (in Icelandic). *Uppeldi og menntun*, 10(1), 129-147.

- Egilsstaðir College*. (n.d.). About the school (in Icelandic). Retrieved in March 2014 from <http://www.me.is/skolinn.html>
- Eiríksson, P. (2014). The importance of Hamburg's trade in Iceland in 15th and 16th century (in Icelandic). MA thesis in Faculty of Humanities. University of Iceland. Retrieved in October 2016 from <http://skemman.is/item/view/1946/17588>
- Einarsdóttir, G. S. (2013). *Oh city, my city. The city and Icelandic modern poetry* (in Icelandic). BA thesis in Literature, University of Iceland. Retrieved in January 2016 from http://skemman.is/stream/get/1946/14925/35481/1/BA-ritger%C3%B0_loka%C3%BAtg%C3%A1fa.pdf;jsessionid=9F527F2BA300ADC2260CAD24B68590E3
- Ellis, F., & Biggs, S. (2001). Evolving themes in rural development 1950s-2000s. *Development Policy Review*, 19(4), 437-448.
- Elo, S., Kääriäinen, M., Kanste, O., Pölkki, T., Utriainen, K., & Kyngäs H. (2014). Qualitative content analysis: A focus on trustworthiness. *Sage Open* 4(1), 1-10.
- European Commission. (2013). *Overview of CAP reform 2014-2020*. A policy paper no. 5. Retrieved in July 2015 from http://ec.europa.eu/agriculture/policy-perspectives/policy-briefs/05_en.pdf
- European Commission*. (n.d.). Leader Gateway. Retrieved in March 2014 from <http://enrd.ec.europa.eu/leader/>
- European Foundation for the Improvement of Living and Working Condition. (2005). *Knowledge society and Euphoria*. A report retrieved in May 2013 from <http://www.eurofound.europa.eu/pubdocs/2004/14/en/1/ef0414en.pdf>
- European Union*. (2013). Regional policy - Inforegio. Purpose. Retrieved in May 2013 from http://ec.europa.eu/regional_policy/what/index_en.cfm

- Eurostat. (2011). *Regions in the European Union. Nomenclature of territorial units for statistics NUTS 2010/EU 27*. Eurostat. European Commission. Retrieved in March 2013 from http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-RA-11-011/EN/KS-RA-11-011-EN.PDF
- Etzkowitz, H., & Leydesdorff, L. (1995). The triple helix-university-industry-government relations: a laboratory for knowledge based economic development. *EASST Review 14*, 14-19.
- Explore Inverness. (n.d.). *Explore Scotland*. Retrieved in October 2016 from <http://www.explore-inverness.com/>
- Faggian, A., McCann, P., & Sheppard, S. (2007). Some evidence that women are more mobile than men: Gender differences in U.K. graduate migration behaviour. *Journal of Regional Science 47*(3), 517-539.
- Fairclough, N. (2008). *Analysing discourse. Textual analysis for social research*. (6th ed.). Routledge.
- Falconer, L., Hunter, D. C., Telfer, T. C., & Ross, L. G. (2013). Visual, seascape and landscape analysis to support coastal aquaculture site selection. *Land Use Policy, 34*, p. 1-10.
- Fetherston, B., & Kelly, R. (2007). Conflict resolution and transformative pedagogy. A grounded theory research project on learning in higher education. *Journal of Transformative Education, 5*(3), 262-285.
- Ferkany, M., & Whyte, K. P. (2012). The importance of participatory virtues in the future of environmental education. *Journal of Agricultural and Environmental Ethics, 25*, 419-434.
- Fitzsimons, P. (2006). Third way. Values for education? *Theory and Research in Education, 4*(2), 151-171.
- Flint, R. W. (2010). Seeking resiliency in the development of sustainable communities. *Human Ecology Review, 17*(1), 44-57.
- Forsberg, G., & Lindgren, G. (2013). Regional policy, social networks and informal structures. *European Urban and Regional Studies 0*(0), 1-15.

- Fägerlind, I., & Strömqvist, G. (2004). *I. Higher education reform in the global context – What ever happened to the Nordic model? In Reforming higher education in the Nordic countries – studies of change in Denmark, Finland, Iceland, Norway and Sweden*. Fägerlind & Strömqvist (Eds). A UNESCO report. Retrieved in March 2014 from <http://unesdoc.unesco.org/images/0013/001390/139015e.pdf>
- Gallacher, J. (2006). Widening access or differentiation and stratification in higher education in Scotland. *Higher Education Quarterly* 60(4), 349-369.
- Gallagher, G. (2005). *An examination of ethical issues pertaining to educational research*. Dublin Institute of Technology. A paper retrieved in May 2012 from <http://level3.dit.ie/html/issue3/ggallagher/ggallagher.pdf>
- Gibbons, M., Limoges, C., Nowotny, H., Schwartzmann, S., Scott, P., & Trow, M. (1994). *The new production of knowledge. The dynamics of science and research in contemporary societies*. Sage Publication, London.
- Giddings, B., Hopwood, B., & O'Brien, G. (2002). Environment, economy and society: fitting them together into sustainable development. *Sustainable Development*, 10(4), 187–196.
- Gough, A. (1999). Recognising women in environmental education pedagogy and research: toward an eco-feminist poststructuralist perspective. *Environmental Education Research*, 5(2), 143 -161.
- Greenwood, D. A. (2009). Place, survivance, and white remembrance: a decolonizing challenge to rural education in mobile modernity. *Journal of Research in Rural Education*, 24(10), 1-6.
- Gruenewald, D. A. (2003). Foundation of place: a multidisciplinary framework for place conscious education. *American Educational Research Journal* 40(3), 619-654.
- Guðmundsson, G. (2012). *Sociology of Education* (in Icelandic), 2nd edition. Reykjavík, Skrudda.
- Gunnarsson, B. (2013). The status of fish farming in land use planning in Iceland 2013 (in Icelandic). A BS thesis in Economic and Science Studies from the University of Akureyri. Retrieved in October from http://skemman.is/en/stream/get/1946/15265/35405/1/Sta%C3%B0a_sj%C3%B3kv%C3%Aaeldis.pdf

- Gústafsdóttir, G. (2013). Femininity as a discourse (in Icelandic). *In the conference journal of Sögubing*, 2012, p. 1-13.
- Hall, A., Jónsson, Á., & Agnarsson, S. (2002). *Settlements and residence. The development of settlements formation* (in Icelandic). Institution of Economic Studies – University of Iceland. A report retrieved in July 2013 from <https://notendur.hi.is/ajonsson/kennsla2006/Master-7.pdf>
- Hammersley, M. (2006). *Educational research. Policymaking and practice*. London. Sage Publication.
- Hansen, B. (2013). Transnational influence and educational policy in Iceland (chapter 4). In L. Moos (ed.). *Transnational influences on values and practices in Nordic Educational Leadership: Is there a Nordic model?* Studies in Educational Leadership 19, Springer Science Business Media Dordrecht.
- Haraldsson, S. (2009). The Lifelong Learning Centre of the Westfjords – Ten years anniversary (in Icelandic). An article published on *Bæjarins besta*. Retrieved in July 2015 from <http://www.bb.is/pages/79?NewsID=137714>.
- Harðarson, Ó., & Sindradóttir, J. Í. (2012). *Iceland economy regions. Statistic Iceland* (in Icelandic). A paper retrieved in September 2015 from <http://www.hagstofa.is/lisalib/getfile.aspx?itemid=14234>
- Hargreaves, A. (2004). Building communities of place: Habitual movement around significant places. *Journal of Housing and Built Environment*, 19(1), 49-65.
- Harman, G. (2004). New directions in international higher education: Australia's development as an exporter of higher education services. *Higher Educational Policy*, 17, 101-120.
- Haslam, R., & Waterson, P. (2013). Ergonomics and Sustainability. *Ergonomics* 56(3), 343-347.
- Hávarðsson, H. Ö. (2010). *Bildudalur, settlement and quota ownership* (in Icelandic). A BA thesis in Faculty of Humanities. University of Iceland. Retrieved in February 2014 from http://skemman.is/stream/get/1946/4696/13495/1/bildudalur-byggd_og_kvoti2010.pdf

- Hávarðsson, S. (2015). Norwegians invest in salmon farming in East Iceland (in Icelandic). Retrieved in September 2016 from <http://www.visir.is/norskir-kaupa-i-laxeldi-a-austurlandi/article/2015151119326>
- Head, B. W. & Alford, J., (2013). Wicked problems: implications for public policy and management. *Administration & Society* 20(10), 1-29.
- Hedin, S. (Ed.). (2009). *Higher education institutions as drivers of regional development in the Nordic countries* (Nordregion WP 2009:3). A report retrieved in February 2011 from <http://www.nordregio.se/inc/openitem.asp?id=76230&nid=2112>
- Heiðarsson, J. Þ., Jóhannesson, H., & Ólafsson, K. (2007). *Oil Refinery in the Westfjords. An evaluation on some sociological factors*. Report written for the Association of the Municipalities of the Westfjords (in Icelandic). The University of Akureyri Research Centre. Retrieved in May 2011 from www.rha.is.
- Heng, L. H., Othman, N. F. M., Rasli, A. M., & Iqbal, M. J. (2012). Fourth pillar in the transformation of production economy to knowledge economy. *Procedia – Social and Behavioural Sciences* 40, 530-536.
- Herbertsson, T. Þ., & Eyþórsson, G. Th. (2003). *People and businesses: About residence and working conditions in rural areas* (in Icelandic). A report. University of Akureyri Research Centre & Institution of Economic Studies. Reykjavík, Gutenberg. Retrieved in April 2013 from <http://www.atvinnuvegaraduneyti.is/media/Acrobat/buseta.pdf>
- Hewitt, S. (2009). *Discourse analysis and public policy research*. Centre for Rural Economy Discussion Paper Series No. 24. Centre for Rural Economy, Newcastle University. A paper retrieved in July 2014 from <http://www.ncl.ac.uk/cre/publish/discussionpapers/pdfs/dp24Hewitt.pdf>
- Highlands and Islands Enterprise. (2011). *Area profile for Highlands and Islands*. A report retrieved in January 2014 from <http://www.hie.co.uk/regional-information/economic-reports-and-research/archive/area-profiles.html>
- Highlands and Islands. (2014a). *Wikipedia*. Retrieved in January 2014 from http://en.wikipedia.org/wiki/Highlands_and_Islands
- Hills, G. J., & Lingard, R. (2003). *UHI – the making of a university*. Edinburgh Dunedin Academic Press.

- Hogan, A., Carson, D., Cleary, J., Donnelly, D., Houghton, K., Philips, R., & Tanton, R (eds). (2014). *Community adaptability tool. Securing the wealth and wellbeing of rural communities*. A report done for the Australian Government as a part of RIRDC project no. PRJ-008426.
- Holling, C. S. (2004). From complex regions to complex worlds. *Ecology and Society* 9(1), 1-10.
- Holling, C. S. (2009). Collapse and renewal. *People and place* 1(13), 1-7.
- Hopwood, B., Mellor, M., & O'Brian G. (2005). Sustainable development: mapping different approaches. *Sustainable development*, 13(1), 38-52.
- Horlings, L. G. (2015). Values in place: A value-oriented approach toward sustainable place-shaping. *Regional Studies, Regional Science* 2(1), 256-273.
- Humm. M. (1995). *The dictionary of feminist theory* (2nd ed.). Ohio State University Press.
- Hummelbrunner, R. (2007). Systemic evaluation in the field of regional development. In Williams, B., & Iman, I. (2007). *System concepts in evaluation. An expert anthology*, 161-180. Point Reyes, CA: American Evaluation Association.
- Icelandic Regional Development Institute. (1999). *Settlements in Iceland. Operations in regional development* (In Icelandic). A report retrieved in December 2013
http://rafhladan.is/bitstream/handle/10802/3187/byggdir_a_islandi.pdf?sequence=1
- Icelandic Regional Development Institute. (2001). *Realization of the Parliamentary Resolution in Regional Development in 1999–2001* (in Icelandic). A report retrieved in December 2013 from
http://www.byggdastofnun.is/static/files/Byggdaaetlun9901/framkvaemd_thingsalyktunar.pdf
- Icelandic Regional Development Institute. (2004a). *Settlements in attack and defence: The Westfjords area* (in Icelandic). A report retrieved in January 2014 from
<http://www.byggdastofnun.is/static/files/Skyrslur/svot2004/Vestfiridir.pdf>.

- Icelandic Regional Development Institute. (2004b). *Settlements in attack and defence: East Iceland* (in Icelandic). A report retrieved in January 2014 from <http://www.byggdastofnun.is/static/files/Skyrslur/svot2004/Austurland.pdf>
- Icelandic Regional Development Institute. (2005). *Conditions and prospects in regional development. An enclosure with the parliamentary resolution of regional development plan for 2006-2009* (in Icelandic). A report retrieved in January 2014 from <http://www.byggdastofnun.is/static/files/Byggdaaetlun0609/Astand%20og%20hrofur.pdf>
- Icelandic Regional Development Institute. (2006b). *Regional development plan 2006-2009*. (In Icelandic). A report retrieved in October 2013 from <http://www.byggdastofnun.is/static/files/Byggdaaetlun0609/byggdaaetlun0609.pdf>
- Icelandic Regional Development Institute. (2009). *Conditions and prospects in regional development. An attachment with the parliamentary resolution of regional development plan for 2010-2013* (In Icelandic). A report retrieved in January 2014 from http://www.byggdastofnun.is/static/files/Byggdaaetlun1013/Fylgirit_Byggdaaetlunar_11.09.pdf
- Icelandic Regional Development Institute. (2013). *Regional Development in Iceland. Status Analysis 2013. An attachment with the parliamentary resolution of regional development plan for 2014–2017* (in Icelandic). A report retrieved in January 2014 from <http://www.byggdastofnun.is/static/files/Skyrslur/stodugreining-2013-11-11.pdf>
- Ingólfsson, B. F. (2016). Iceland's project list: Salmon fishing or Salmon fish farming? (in Icelandic). An MPM thesis from Reykjavík University. Retrieved in October 2016 from http://skemman.is/stream/get/1946/25618/54678/1/MPM_Bj%C3%B6rn_Ritger%C3%B0in_FINAL_Final.pdf

- Isserman, A. M. (2002). Defining regions for rural America. *The new power of regions: A policy focus for rural America*. Paper presented at a conference sponsored by the Centre for the Study of Rural America. Retrieved in May 2012 from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.193.3061&rep=rep1&type=pdf>
- Jansson, A. (2013). The hegemony of the urban/rural divide: cultural transformations and mediatized moral geographies in Sweden. *Space and Culture*, 16(1), 88-103.
- Johnson, J. T. (2012). Place-based learning and knowing: critical pedagogies grounded in indigeneity. *GeoJournal* 77(6), 829-836.
- Jóhannesson, I. Á. (2010a). Historical discourse analysis as professional and political reflexivity. In Jaakko Kauko et al. (Ed.). *Restructuring the truth of schooling – Essays on discursive practices in the sociology and politics of education*, 133-149. Finnish Education Research Association (FERA).
- Jóhannesson, I. Á. (2010b). The politics of historical discourse analysis: a qualitative research method? *Discourse: Studies in the Cultural Politics of Education* 31(2), 251-264.
- Jóhannesson, H. (2003a). *Building up growth poles. New approaches in regional development* (in Icelandic). Presented at the Association of the Municipalities of the Westfjords annual meeting. Retrieved in February 2014 from http://fjordungssamband.is/fjordungssambandid/48_fjordungsting/flokkur/35/
- Jóhannesson, H. (2003b). About the population movement in the 20th century and the effort to restrain the flow (in Icelandic). In *Afmælikveðja til Háskóla Íslands* (p. 157-173). Reykjavík, Hollvínasamtök Háskóla Íslands and Bókaútgáfan Hólar.
- Jóhannesson, H. (2007). 11. An overview of rural development in Iceland. *Continuity or transformation? Perspectives on rural development in the Nordic countries*, Andrew K. Copus (Ed). Nordic Center for Spatial Development (Nordregio). Retrieved in September 2013 from <http://www.nordregio.se/en/Publications/Publications-2007/Continuity-or-Transformation-Perspectives-on-Rural-Development-in-the-Nordic-Countries/>

- Jóhannesson, H. (Ed.), Jóhannsson, E., Ólafsson, K., Heiðarson, J. Þ., Jólensdóttir, S. S., & Sigurbjarnarson, V. (2010). *Final report: Status in 2008 and main effects 2002–2008* (in Icelandic). A research report nr. 9. Research on sociological effects of aluminium and hydropower station projects in East Iceland. The University of Akureyri Research Centre. Retrieved in May 2011 from http://www.rha.is/static/files/Rannsoknir/2010/Samfelagsahrif_alvers_og_virkjunar_A-landi_lokaskyrsla_2010.pdf
- Jóhannsdóttir, G. (2008). Destination University – or what? (in Icelandic). *Tímarit um menntarannsóknir. Journal of Educational Research*, 5, 27-45.
- Jóhannsdóttir, Th. (2010). *Teacher education and school-based distance learning: individual and systemic development in schools a teacher education program*. A PhD thesis in Education. Reykjavík, University of Iceland, School of Education.
- Jónasson, J. T. (2004). IV. Higher education reforms in Iceland at the transition into the twenty-first century. In *Reforming higher education in the Nordic countries – studies of change in Denmark, Finland, Iceland, Norway and Sweden*. Fägerlind & Strömqvist (Eds). A UNESCO report. Retrieved in March 2014 from <http://unesdoc.unesco.org/images/0013/001390/139015e.pdf>
- Jónsson, G. (2010). Chapter 5. Coming to terms with Europe Iceland's entry into EFTA and its implication. In *EFTA 1960–2010. Elements of 50 years of European history* (Ed. Kåre Bryn & Guðmundur Einarsson). European Free Trade Association.
- Jones, M., & Woods, M. (2012). New Localities. *Regional Studies* 47(1), 29-42.
- Karlsdóttir, A., & Ingólfssdóttir, A. (2011). Gendered outcomes of Socio-economic restructuring: A tale from a rural village in Iceland. *NORA – Nordic Journal of Feminist and Gender Research*, 19(3), 163-180.
- Karlsdóttir, E. G., Þorgrímsdóttir, S. K., Þórðardóttir, S. E. & Árnason, S. (2012). *Communities, economy and population development in settlements with a decrease in population over a period of long time* (in Icelandic). A report written by The Regional Development Institute. Retrieved in July 2016 from https://www.byggdastofnun.is/static/files/Skyrslur/Samfelag/Samfelag_atvinnulif_og_ibuathroun_skyrslan_i_heild.pdf

- Karlsson, C., & Olsson, M. (2015). *Functional economic regions, accessibility and regional development*. Paper no. 415 in CESIS Electronic Working Paper Series. The Royal Institute of Technology Centre for Excellence for Science and Innovation Studies. Retrieved in July 2015 from <https://static.sys.kth.se/itm/wp/cesis/cesiswp415.pdf>
- Keune, M. (2001). *Regions, Regional institutions and Regional Development*. SEED working paper nr. 16. International Labour Office, Geneva. Retrieved in April 2011 from http://www.protlcuem.gob.mx/swb/work/models/economia/Resource/965/1/images/cipi_1ldesregional.pdf
- Kolehmainen, J., Irvine, J., Stewart, L., Karacsonyi, Z., Szabó, T., Alarinta, J., & Norberg, A. (2016). Quadruple helix innovation and the knowledge-based development: lessons from remote, rural and less-favoured regions. *Journal of the Knowledge Economy*, 7, 23-42.
- Kotilainen, J., & Vatanen, E. (2014). *Diversities of regional resilience. Case studies from resource periphery in Eastern Finland*. A paper presented at the Regional Studies Association European Conference 'Diverse Regions: Building Resilient Communities and Territories' in Izmir, Turkey in June. Retrieved in July 2015 from http://www.regionalstudies.org/uploads/Juha_Kotilainen__Eero_Vatanen_PDF.pdf
- Kristinsdóttir, G., & Macdonald, M.A. (2003). Learning to teach in Iceland 1940-1962. Transition in society and teacher education. Part 1. *Tidskrift för lärarutbildning och forskning* 10(3-4), 23-47.
- Krull, E. (2007). Promoting teacher education curricula by using methods of historical research: Estonian case. *TRAMES* 11(61/56), 69-85.
- Kvale, S. (1996). *Interviews. An introduction to qualitative research interviewing*. Sage Publication.
- Kwapong, O. (2008). A case for using open and distance learning (ODL) to widen access to tertiary education to women. *International Journal of Instructional Technology and Distance Learning*, 5(5), 47-57.
- Langley, P., & Mellor, M. (2002). Economy, sustainability and sites of transformative space. *New Political Economy*, 71(1), 49-65.
- Larner, W. (2005). Neoliberalism in (regional) theory and practice: The stronger communities' action fund in New Zealand. *Geographical Research*, 43(1), 9-18.

- Lárusdóttir, S. H. (2013). Education leadership and market values: A study of school principals in Iceland. *Educational Management Administration & Leadership*, 1-21.
- Leach, M. (2007). Earth mother myths and other eco-feminist fables: how a strategic notion rose and fell. *Development and Change* 38(1), 67-85.
- Lews Castle College, (2013). *Lews Castle College UHI. Strategic plan 2013-17*. Paper retrieved in March from <http://www.lews.uhi.ac.uk/about-us/publications/LCCSTRATEGICPLANfebruary2013Finalapproveddocument.pdf>
- Liepins, R. (2000a). New energies for an old idea: reworking approaches to 'community' in contemporary rural studies. *Journal of Rural Studies* 16(1), 23-35.
- Liepins, R. (2000b). Exploring rurality through community: discourses, practices and spaces shaping Australian and New Zealand rural communities. *Journal of Rural Studies*, 16(3), 325-341.
- Lindberg, G., Copus, A., Hedström, M., & Perjo, L. (2012). *CAP rural development policy in the Nordic countries: What can we learn about implementation and coherence?* Nordic Center for Spatial Development (Nordregio). A report retrieved in May 2013 from <http://www.nordregio.se/Publications/Publications-2012/CAP-Rural-Development-Policy-in-the-Nordic-countries/>
- Lotz-Sisitka, H., Wals, A. E. J., Kronlid, D., & McGarry, D. (2015). Transformative, transgressive social learning: rethinking higher education pedagogy in times of systemic global dysfunction. *Current Opinion in Environmental Sustainability*, 16, 73-80.
- Lúðvíksson, K. (2014). Norwegian farmed salmon is a threat to Icelandic wild salmon (in Icelandic). Retrieved in September 2016 from <http://www.visir.is/norskur-eldislax-ogn-vid-islenska-laxastofna/article/2014140329677>
- Macdonald, A., & Pálsdóttir, A. (2013). Case-based studies: a critical pedagogy of place in international education in Iceland. *Education in the North*, 20(Special issue), 55-72.
- MacKinnon, D., & Derickson, K. D. (2013). From resilience to resourcefulness: A critique of resilience policy and activism. *Progress in Human Geography*, 1-18.

- Maguire, B., & Cartwright, S. (2008). *Assessing a community's capacity to manage change: A resilience approach to social assessment*. A report for the Australian Government Bureau of Rural Sciences. Retrieved in May 2014 from http://www.cedarscenter.com/resources/Community_Capacity_to_manage_change--Resilience_approach_to_social_assessment.pdf
- Mallory, C. (2013). Locating ecofeminism in encounters with food and place. *Journal of Agriculture and Environmental Ethics*, 26(1), 171-189.
- Marsden, K. (2012). Aquaculture and fisheries (Scotland) Bill. A SPICe briefing for the Scottish Parliament. Retrieved in October 2016 from http://www.parliament.scot/ResearchBriefingsAndFactsheets/S4/SB_12-68.pdf.
- Marshall, N. A & Marshall, P. A. (2007). Conceptualizing and operationalizing social resilience within commercial fisheries in northern Australia. *Ecology and Society* 12(1), 1-14.
- Margarian, A. (2013). A constructive critique of the endogenous development approach in the European support of rural areas. *Growth and Change*, 44(1), 1-29.
- Marginson, S. (2006). Dynamics of national and global competition in higher education. *Higher Education* 52(1), 1-39.
- Marten, G. (2001). *Human ecology – basic concept for sustainable development*. Earthscan Publication. Retrieved in December 2011 from <http://www.gerrymarten.com/human-ecology/tableofcontents.html>
- Martin, R., & Sunley, P. (2013). *On the notion of regional economic resilience: conceptualisation and explanation*. A paper in evolutionary economic geography from Utrecht University retrieved in May 2014 from <http://econ.geog.uu.nl/peeg/peeg.html>.
- Mason, R. (2003). A world of borderless higher education-impact and implications. *The Virtual University: Models and Messages*. A UNESCO report, D'Antoni, S. (Ed.). Retrieved in September 2010 from http://www.unesco.org/iiep/virtualuniversity/media/document/Ch2_Mason.pdf.
- Massey, D. (1991). A global sense of place. *Marxism Today* 35(6), 24-29.
- Matthíasson, Th. (2003). Closing the open sea: development of fishery management in four Icelandic fisheries. *Natural Resources Forum* 27, 1-18

- Mbl.is.* (1988). Adult learning in East Iceland (in Icelandic). Retrieved in March 2014 from <http://www.mbl.is/greinasafn/grein/19530>
- Mbl.is.* (1997). Adult learning in the Westfjords (in Icelandic). Retrieved in March 2014 from - <http://www.mbl.is/greinasafn/grein/349897/>
- Mbl.is.* (1999). An invisible school year ends (In Icelandic). Retrieved in March 2016 from <http://www.mbl.is/greinasafn/grein/466032/>
- Mbl.is.* (2000). In the palace of Hallormsstaður (In Icelandic). Retrieved in March 2016 from <http://www.mbl.is/greinasafn/grein/549087/>
- Mbl.is.* (2005). East Iceland Knowledge Net established (in Icelandic). Retrieved in March 2014 from <http://www.mbl.is/greinasafn/grein/1033602>
- McCall, T. (2010). What do we mean by regional development? A paper retrieved in May 2012 from http://www.utas.edu.au/__data/assets/pdf_file/0006/61935/McCall,T.-2010,-What-is-Regional-Development.pdf
- McCann, P., & Varga, A. (2015). Editorial: The reforms to the regional and urban policy of the European Union: EU Cohesion Policy. *Regional Studies* 49(8), 1255-1257.
- McInerney, P., Smyth, J., & Down, B. (2011). Coming to a place near you? The politics and possibilities of a critical pedagogy of place-based education. *Asia-Pacific Journal of Teacher Education*, 39(1), 3-16.
- Meadows, D. H., Meadows, D. L., Randers, J., & Behrens III, W. W. (1972). *The limits of growth*. New York, Universe Books. Retrieved in December 2015 from <http://www.donellameadows.org/wp-content/userfiles/Limits-to-Growth-digital-scan-version.pdf>
- Mellor, M. (2006). Eco-feminist political economy. *International Journal of Green Economics* 1(½), 139-150.
- Mendle, R. S. (2013). *Co-constructing sustainability: insights from TangMa, an inter-municipal learning project between Tangshan, China and Malmö, Sweden*. A MS thesis in Environmental Studies and Sustainability Science from Lund University Centre for Sustainable Studies. Retrieved in February 2014 from <http://lup.lub.lu.se/luur/download?func=downloadFile&recordId=4254904&fileId=4254929>

- Menntagátt.* (n.d.). Number of secondary schools in Iceland. Retrieved in January 2016 from <http://www.menntagatt.is/skolar/>
- Merriam-Webster Learner's dictionary.* (n.d.). Development. Retrieved in May 2012 from <http://www.learnersdictionary.com/search/development>
- Miller, T. R., Baird, T. D., Littlefield, C. M., Kofinas, G., Chapin, III, F. S., & Redman, C. L. (2008). Epistemological pluralism: reorganizing interdisciplinary research. *Ecology and Society*, 13(2), 1-17.
- Miller, T. R., Erickson-Muños, T., & Redman, C. L. (2011). Transforming knowledge for sustainability: towards adaptive academic institutions. *International Journal of Sustainability in Higher Education*, 12(2), 177-192.
- Miller, F., Osbahr, H., Boyd, E., Thomalla, F., Bharwani, S., Ziervogel, G., Walker, B., Birkmann, J., van der Leeuw, S., Rockström, J., Hinkel, J., Downing, T., Folke, C., & Nelson, D. (2010). Resilience and vulnerability: complementary or conflicting concepts. *Ecology and Society* 15(3), 1-25.
- Ministry of Education, Science and Culture. (2005). *East Iceland's Knowledge Net Institution. An establishment plan and operation* (in Icelandic). A report retrieved in May 2011 from <http://www.menntamalaraduneyti.is/utgafuskra/>
- Ministry of Education, Science and Culture. (2010). *A P'progress report about the knowledge centres in Iceland* (in Icelandic). A report retrieved in May 2011 from www.menntamalaraduneyti.is/utgafuskra/
- Ministry of Industry and Innovation. (2010). *Revision of the economy support system* (in Icelandic). A report retrieved in May 2011 from www.idnadaraduneyti.is/media/rafraen_afgreidsla/Endurskipulagning-stodkerfis-atvinnulifsins-07-12-2010.pdf
- Mooney, J., & Carling, J. (2006). *A region of two cities? Defining city regions in North East England*. A paper presented at the OECD seminar, Defining and Measuring Metropolitan Regions, Paris, November 2006. Retrieved in May 2012 from www.oecd.org/dataoecd/19/7/37836230.pdf
- Moore, J. (2005). Is higher education ready for transformative learning? A question explored in the study of sustainability. *Journal of Transformative Education*, 3(1), 76-91.

- Moulaert, F., & Nussbaumer, J. (2005). The social region beyond the territorial dynamics of the learning economy. *European Urban and Regional Studies*, 12(1), 45-64.
- Murray, A. (2011). Professional development as a cornerstone of a new university: the contribution of the MA in professional development to the UHI story. *Practitioner Research in Higher Education*, 5(1), 22-25.
- Müller, T. (2008). Persistence of women in online degree-completion program. *The International Review of Research in Open and Distributed Learning*, 9(2), 1-18.
- National Record of Scotland. (2013). *Mid-2011 and Mid-2012 population estimates Scotland*. A report retrieved in January 2014 from <http://www.gro-scotland.gov.uk/files2/stats/population-estimates/mid2012/mid-2011-2012-pop-est.pdf>
- National Record of Scotland. (2014). *Small areas population estimates for Scotland mid-2002 to mid-2010 revised following the 2011 census*. A report retrieved in September 2015 from <http://gro-scotland.gov.uk/files//statistics/small-area-population-estimates/2002-2010-revised/sape-publication-mid-2002-2010.pdf>
- Neave, G. (2003). The Bologna Declaration: Some of the historic dilemmas posed by the reconstruction of the community in Europe's systems of higher education. *Educational Policy*, 17(1), 141-164.
- Neskaupsstaður Vocational College*. (n.d.). About the school (in Icelandic). Retrieved in March 2014 from <http://www.va.is/is/skolinn>
- Nielsen, H. (2010). *Universities in Regional Systems of Innovation: Has the rural research centre in Höfn enhanced the interaction between the university and local actors?* A MA thesis from CIRCLE and Lund University. Downloaded in 2011 from http://esst.eu/wp-content/uploads/Nielsen_H_Thesis1.pdf
- Ní Laoire, C. (2007). The 'green green grass of home'? Return migration to rural Ireland. *Journal of Rural Studies*, 23, 332-334.
- Nordberg, K. (2015). Enabling regional growth in peripheral non-university regions - the impact of a quadruple helix intermediate organisation. *Journal of the Knowledge Economy*, 6, 334-356.
- Nybom, Th. (2003). The Humboldt Legacy: Reflection on the past, present and future of the European University. *Higher Education Policy*, 16, 141-159.

- Oliverosson, K. (1990). *From the subsidy system to a healthy state management. About regional development actions in the Nordic countries in last decades* (in Icelandic). A report done for NordREFO and the Icelandic Regional Development Institute. Retrieved in October 2013 from http://www.byggdastofnun.is/static/files/Skyrslur/fra_styrkjakerfi_til.pdf
- Organisation for Economic Co-operation and Development (OECD). (2006a). *Governance strategies to support rural policy in The new rural paradigm: Policies and governance*. A report retrieved in April 2013 from http://www.oecd-ilibrary.org/governance/the-new-rural-paradigm_9789264023918-en
- Organisation for Economic Co-operation and Development (OECD). (2006b). *The state of rural regions in the new rural paradigm: policies and governance*. A report retrieved in April 2013 from http://www.oecd-ilibrary.org/governance/the-new-rural-paradigm/the-state-of-rural-regions_9789264023918-3-en
- Organisation for Economic Co-operation and Development (OECD). (2009a). *The role of agriculture and farm household diversification in the rural economy of the United Kingdom*. A report retrieved in March 2013 from <http://www.oecd.org/agriculture/agricultural-policies/43245626.pdf>
- Organisation for Economic Co-operation and Development (OECD). (2009b). *The role of agriculture and farm household diversification in the rural economy. Evidence and initial policy implications*. A report retrieved in April 2013 from <http://www.oecd.org/agriculture/44559905.pdf>
- Organisation for Economic Co-operation and Development (OECD). (n.d). *Regional development*. Retrieved in April 2012 from <http://www.oecd.org/gov/regional-policy/regionaldevelopment.htm>
- Organisation for Economic Co-operation and Development (OECD). (2010a). *Regional development policies in OECD countries*. A report retrieved in April 2013 from http://www.eukn.eu/fileadmin/Lib/files/EUKN/2013/regional_development_policies_in_oecd_countries.pdf
- Organisation for Economic Co-operation and Development (OECD). (2010b). *Agricultural policies and rural development*. A report retrieved in July 2015 from <http://www.oecd.org/agriculture/44561502.pdf>

- Organisation for Economic Co-operation and Development (OECD)*. (2013). Glossary. Retrieved in March 2013 from <http://stats.oecd.org/glossary/search.asp>.
- Outer Hebrides Community Planning Partnership. (2009). *Forward together. Single Outcome Agreement 2009-2010*. A report retrieved in January 2014 from <http://www.cne-siar.gov.uk/cxdir/externalstrategy/documents/Outer%20Hebrides%20Single%20Outcome%20Agreement.pdf>
- Outer Hebrides Community Planning Partnership. (2011). *Forward together – Single Outcome Agreement 2011-2013*. A report retrieved in January 2014 from http://www.ohcpp.org.uk/index.php?option=com_content&view=article&id=121&Itemid=175
- Outer Hebrides Community Planning Partnership. (2013). *Forward together - Single Outcome Agreement 2013-2023*. A report retrieved in January 2014 from <http://www.cne-siar.gov.uk/cxdir/executiveoffice/documents/Single%20Outcome%20Agreement%202013-23.pdf>
- Ozga, J., & Jones, R. (2006). Travelling and embedded policy: the case of knowledge transfer. *Journal of Education Policy* 21(1), 1-17.
- Ólafsdóttir, A. (2004). An evaluation on the use of information technology in teaching and learning in the University of Akureyri (in Icelandic). *Uppeldi og menntun* 13(2), 147-167.
- Ólafsson, S. (1997). *Settlements in Iceland. research about what causes out-migration* (in Icelandic). A report for the Icelandic Regional Development Institute. Retrieved in January 2014 from http://www.byggdastofnun.is/static/files/Skyrslur/buseta_a_islandi.pdf
- Ólafsson, K. (Ed.), Jóhannsson, E., Heiðarsson, J. Þ., Ingimarsdóttir, R. J., & Sigurbjarnarson, V. (2006). *A study of the social impacts of a power plant and hydroelectric station in East Iceland. Progress report I–A status analysis and beginning of projects* (in Icelandic). Retrieved in February 2014 from http://www.rha.is/static/files/Rannsoknir/2006/Samfelagsahrif_A-land_skyrsla_2006.pdf

- Ómarsson, S. A. (2009). *Icelandic regional policy in the last decades* (in Icelandic). BA thesis in Political studies from University of Iceland. Downloaded in April 2013 from http://skemman.is/stream/get/1946/3607/11148/1/pd_fixed.pdf
- Orach, K., & Schlüter, M. (2016). Uncovering the political dimension of social-ecological system: contributions from policy process frameworks. *Global Environmental Change*, 40, 13-25.
- Paasi, A. (2002). Place and region: regional worlds and words. *Progress in Human Geography*, 26(6), 802-811.
- Pahl-Wostl, C. (2009). A conceptual framework for analysing adaptive capacity and multi-level learning processes in resource governance regimes. *Global Environmental Change*, 19, 354-365.
- Parry, G. (2006). Policy-Participation trajectories in English higher education. *Higher Education Quarterly*, 60(4), 392-412.
- Partridge, E. (2005). *Social sustainability: a useful theoretical framework?* A paper presented at the Australasian Political Science Association annual conference 2005, Dunedin, New Zealand, 28-30 September 2005. Downloaded in November 2012 from www.auspsa.anu.edu.au/proceedings/publications/Partridgepaper.pdf.
- Pálsson, S.H. (2008). *Black letter and Gudbrand's Bible* (in Icelandic). A BA thesis in Faculty of Design and Architecture. Iceland Academy of the Arts. Retrieved in October 2016 from <http://skemman.is/stream/get/1946/2153/6640/1/Lokaritgerd.pdf>
- Peer, V., & Penker, M. (2014). Higher education institutions and regional development: A meta-analysis. *International Regional Science Review*, 228-253.
- Philipson, J., & Symes, D. (2015). Finding a middle way to develop Europe's fisheries dependent area: the role of fisheries local action groups. *Sociologia Ruralis*, 55(3), 343-359.
- Pick, D. (2006). The re-framing of Australian higher education. *Higher Education Quarterly*, 60(3), 229-241.
- Pike, A., Rodrigues-Pose, A., & Tomaney, J. (2006). *Local and regional development*. Routledge.
- Pini, B. (2006). A critique of 'new' rural local governance: the case of gender in a rural Australian setting. *Journal of Rural Studies*, 22, 396-408.

- Pini, B., Moletsane, R., & Mills, M. (2014). Education and the global rural: feminist perspective. *Gender and Education, 26*(5), 453-464.
- Pinch, S. (1998). Knowledge communities, spatial theory and social policy. *Social Policy & Administration 32*(5), 556-571.
- Piselli, F. (2007). Communities, places and social networks. *American Behavioral Scientist, 50*(7), 868-878.
- Pretty, G. H., Chipuer, H. M., & Bramston, P., (2003). Sense of place amongst adolescents and adults in two rural Australian towns: The discriminating features of place attachment, sense of community and place dependence in relation to place identity. *Journal of Environmental Psychology, 23*(3), 273-287.
- Pretty, G., Bramston, P., Patrick, J., & Pannach, W. (2006). The relevance of community sentiments to Australian rural youths' intention to stay in their home communities. *American Behavioral Scientist, 50*(2), 226-240.
- Prime Ministers Office. (2007). *A report about how to strengthen the economy in the Westfjords* (in Icelandic). Retrieved in January 2014 from <http://www.forsaetisraduneyti.is/media/frettir/Vestfjardarnefnd.pdf>
- Prime Minister's Office. (2008). *A report about how to strengthen the economy and communities in the North East area and East Iceland* (in Icelandic). Retrieved in January 2014 from http://www.forsaetisraduneyti.is/media/Skyrslur/Skyrsla_Nordurland-eystra_Austurland.lok.pdf
- Prime Minister's Office. (2011). *Iceland 20/20 – an advance for the economy and community* (in Icelandic). A report retrieved in May 2012 from <http://www.forsaetisraduneyti.is/media/Skyrslur/island2020.pdf>
- Proppé, H. (2004). Here I am, accept it – space, power and opposition in Icelandic coastal communities (in Icelandic). In Erlingsdóttir (Ed.). *Kynjafræði – Kortlagningar, 293-322*, Reykjavík, Institute for Gender, equality and difference, University of Iceland.
- Rennie, F. (2008). Why bother about rural areas? An Inaugural professional lecture. Retrieved from <https://www.lews.uhi.ac.uk/research-enterprise/contact/prof-frank-rennie/WhyBother.pdf>
- Rennie, F., & Billing, S.L. (2015). Changing community perceptions of sustainable rural development in Scotland. *The Journal of Rural and Community Development, 10*(2), 35-46.

- Rinne, R., & Koivula, J. (2005). The changing place of the university and the clash of values: The entrepreneurial university in the European knowledge society. A review of the literature. *Higher Education Management and Policy*, 17(3), 87-122.
- Rittel, H. W. J., & Webber, M. M. (1973). Dilemmas in general theory of planning. *Policy Science*, 4, 155-169.
- Rye, J. F. (2006). Rural youths' image of the rural. *Journal of Rural Studies* 22, 409-422.
- Robinson, G. M., & Carson, D. A. (2015). Resilient communities: transitions, pathways and resourcefulness. *The Geographic Journal*, 1-9.
- Roper, J. (2012). Environmental risk, sustainability discourses and public relations. *Public Relations Inquiry*, 1(1), 69-87.
- Rotarangi, S. J., og Stephenson, J. (2014). Resilience pivots: Stability and identity in a social-ecological-cultural system. *Ecology and Society*, 19(1), 1-10.
- Róbertsson, I. J. (2009). A labour policy in Iceland 1900-2009 (in Icelandic). An MA thesis in Business Studies from University of Iceland. Retrieved in April 2013 from http://skemman.is/stream/get/1946/3590/11129/1/Atvinnustefna_fixed.pdf
- Sachs, J. (2001). Teacher professional identity: competing discourses, competing outcomes. *Journal of Education Policy* 16(2), 149–161.
- Sachs, J. (2003). *Teacher activism: Mobilising the profession*. A paper presented at the British Educational Research Association Conference in Herriot Watt University, Edinburgh. Retrieved in July 2015 from <https://www.bera.ac.uk/wp-content/uploads/2014/01/542065teacheract.pdf?noredirect=1>
- Sachs, J. (2012). *Teacher professionalism: Why are we still talking about it?* A paper presented at the 37th ATEE Conference in Eskisehir, Turkey. Retrieved in July 2015 from http://www.atee1.org/uploads/atee_2012_proceedings.pdf
- Sabau, G. (2010). Know, live and let live: Towards a redefinition of the knowledge-based economy – sustainable development nexus. *Ecological Economics*, 69, 1193-1201.

- Saldaña, J. (2010). *The coding manual for qualitative researchers* (2nd ed.). Sage Publication.
- Sampford, C. (2010). Re-conceiving the good life – the key to sustainable globalisation. *Australian Journal of Social Issues* 45(1), 13-24.
- Schaeffer, P. V., Kahsai, M. S., & Jackson, R.W. (2013). Beyond the rural-urban dichotomy: Essay in honour of Professor A.M. Isserman. *International Regional Science Review* 36(1), 81-96.
- Scott, J. C. (2006). The mission of the university: medieval to postmodern transformations. *Journal of Higher Education*, 77(1), 1–39.
- Scottish Government1. (n.d). About local government in Scotland. Retrieved in August 2016 from <http://www.gov.scot/Topics/Government/local-government/localg>
- Scottish Government2. (n.d). What local authorities do. Retrieved in August 2016 from <http://www.gov.scot/Topics/Government/local-government/localg/whatLGdoes>
- Scottish Government3. (n.d). How local authorities make decisions. Retrieved in August 2016 from <http://www.gov.scot/Topics/Government/local-government/localg/LGstructures>
- Scottish Government4. (n.d). The Scottish Rural Development Programme (SRDP) 2014-2020. Retrieved in August 2016 from <http://www.gov.scot/Topics/farmingrural/SRDP>
- Scottish Government5. (n.d). A rural development programme. Retrieved in August 2016 from <http://www.gov.scot/Topics/farmingrural/SRDP/DevelopmentofSRDP20142020>
- Scottish Highlands. (2014d). *Wikipedia*. Retrieved in January 2014 from http://en.wikipedia.org/wiki/Scottish_Highlands
- Sheridan, A., McKenzie, F. H., & Still, L. (2011). Making visible the 'space of betweenness': understanding women's limited access to leadership in regional Australia. *Gender, Place and Culture*, 18(6), 732-748.
- Shiva, V. (1993). Monocultures of the mind. *Trumpeter*, 10, 4. <http://www.icaap.org/iuicode?6.10.4.11>
- Shortall, S. (2012). The role of subjectivity in knowledge power struggles in the formation of public policy. *Sociology* 47(6), 1088-1103.

- Shortall, S., & Shucksmith, M. (1998). Integrated rural development: Issues arising from the Scottish experience. *European Planning Studies*, 6(1), 73-88.
- Shortall, S., & Shucksmith, M. (2001). Rural development in practice: issues arising in Scotland and Northern Ireland. *Community Development Journal*, 36(2), 122-133.
- Shucksmith, M. (2007). *Disintegrated rural development? Neo-endogenous rural development in an uncertain world*. A seminar paper retrieved in February 2014 from <http://www.ncl.ac.uk/cre/publish/Ageing%20Seminar%20260907/Shucksmith.pdf>
- Simco, N., & Campbell, G. (2011). Developing blended learning in higher education – a case study of the University of the Highlands and Islands. *Practitioner Research in Higher Education* 5(1), 3-8.
- Simmie, J., & Martin, R. (2010). The economic resilience of regions: towards an evolutionary approach. *Cambridge Journal of Regions, Economy and Society* 3, 27-43.
- Skålsens, S. (2004). *Young women in the districts and their expectation for the future*. Paper presented at the conference on gender, environment and societal development in West-Nordic and Arctic countries in November 13th – 14th, at Borgir, University of Akureyri in Iceland.
- Skutull. (1970). Secondary school in Ísafjörður starts its operation (in Icelandic). A newspaper article. Retrieved in March 2014 from <http://timarit.is/files/24117380.pdf#navpanes=1&view=FitH>
- Sneddon, C., Howarth, R.B., & Norgaard, R.B. (2006). Sustainable development in a post-Brundtland world. *Ecological Economics*, 57, 253-268.
- Somerville, M. J. (2010). A place pedagogy for global contemporaneity. *Educational philosophy and theory*, 42(3), 326-344.
- Spillane, J.P. (2006). *Distributed leadership*. Jossey-Bass, San Francisco.
- Sriskandarajah, N., Bawden, R., Blackmore, C., Tidball, K. G., & Wals, A. E. J. (2010). Resilience in learning systems: case studies in university education. *Environmental Education Research*, 16(5-6), 559-573.

- Statistics Iceland.* (2015a). Population in Bolungarvík in 2015. Retrieved in January 2016 from
http://px.hagstofa.is/pxen/pxweb/en/lbuar/lbuar__mannfjoldi__2_bygdir__sveitarfelog/MAN02001.px/table/tableViewLayout1/?rxid=fd446af9-e5d5-4934-9ed6-0612eb366adf
- Statistics Iceland.* (2014b). Population in the Westfjords area in 1991. Retrieved in January 2016 from
http://px.hagstofa.is/pxen/pxweb/en/lbuar/lbuar__mannfjoldi__2_bygdir__sveitarfelogeldra/MAN02119.px/table/tableViewLayout1/?rxid=fd446af9-e5d5-4934-9ed6-0612eb366adf
- Statistics Iceland.* (2015c). Population in the Westfjords area in 2015. Retrieved in January 2016 from
http://px.hagstofa.is/pxen/pxweb/en/lbuar/lbuar__mannfjoldi__2_bygdir__sveitarfelog/MAN02001.px/table/tableViewLayout1/?rxid=fd446af9-e5d5-4934-9ed6-0612eb366adf
- Statistics Iceland.* (2015d). Iceland's population in 2015. Retrieved in January 2016 from
http://px.hagstofa.is/pxen/pxweb/en/lbuar/lbuar__mannfjoldi__2_bygdir__sveitarfelog/MAN02001.px/table/tableViewLayout1/?rxid=fd446af9-e5d5-4934-9ed6-0612eb366adf
- Statistics Iceland.* (2015e). Number of students by sex from 1975-2006. Retrieved in January 2016 from
http://px.hagstofa.is/pxen/pxweb/en/Samfelag/Samfelag__skolamal__4_haskolastig__3_hseldra/SKO04103.px/table/tableViewLayout1/?rxid=fd446af9-e5d5-4934-9ed6-0612eb366adf
- Statistics Iceland.* (2015f). Number of students by sex in 2013. Retrieved in January 2016 from
http://px.hagstofa.is/pxen/pxweb/en/Samfelag/Samfelag__skolamal__4_haskolastig__0_hsNemendur/SKO04104.px/table/tableViewLayout1/?rxid=fd446af9-e5d5-4934-9ed6-0612eb366adf
- Statistics Iceland.* (2015g). Number of distant learning students in 2005, 2009 and 2013. Retrieved in January 2016 from
http://px.hagstofa.is/pxen/pxweb/en/Samfelag/Samfelag__skolamal__0_yfirlit/SKO00005.px/table/tableViewLayout1/?rxid=2e5df7c4-91a6-468f-934d-5c4055302a45

- Stevenson, T. (2002). Communities of tomorrow. *Futures* 34(8), 735-744.
- Stevenson, R. B. (2008). A critical pedagogy of place and the critical place(s) of pedagogy. *Environmental Education Research*, 14(3), 353-360.
- Stimson, R. J., & Stough, R. R. (2008). *Changing approaches to regional economic development: Focusing on endogenous factors*. A paper presented in Argentina on the 13th – 14th of March 2008. Regional Science Association International (RSAI) and Banco Central de la Republic Argentina, 1-23. Retrieved in April 2013 from <http://www.bcra.gov.ar/Pdfs/BCRA/Paper%20STIMSON.pdf>
- Stockdale, A. (2006). Migration: Pre-requisite for rural economic regeneration? *Journal of Rural Studies*, 22, 354-366.
- Stockholm Resilience Centre*. (n.d.). What is resilience? Retrieved in September 2016 from <http://www.stockholmresilience.org/research/research-news/2015-02-19-what-is-resilience.html>
- Sverdrup, U. (2010). 15 years of EEA 1994 – 2009. Some experiences and lessons. In *EFTA 1960-2010. Elements of 50 years of European History* (Ed. Kåre Bryn & Guðmundur Einarsson), 159-175.
- Symes, D., Philipson, J., & Salmi, P. (2015). Europe's coastal fisheries: instability and the impacts of fisheries policy. *Sociologia Ruralis* 55(3), 245-257.
- Tacoli, C. (1998). Rural-urban interactions: a guide to the literature. *Environment and Urbanization*, 10(1), 147–166.
- Technical College Reykjavík*. (n.d.). Schools. Retrieved in March 2014 from <http://en.tskoli.is/schools/>
- The Association of the Municipalities of East Iceland. (2013). *Iceland 20/20 – East Iceland region 2013* (in Icelandic). A report retrieved in February 2014 from <http://stjornarrad.is/media/sl/Soknaraaetlun-Austurlandsmars-2013.pdf>
- The Association of the Municipalities of East Iceland. (2015). *A contract about Iceland 20/20 – East Iceland region 2015 – 2019* (in Icelandic). Retrieved in July 2015 from http://ssa.is/images/stories/skjol/2015/samningur_soknaratlun_2015-2019_undirritadur.pdf

- The Association of the Municipalities of the Westfjords. (2007). *Population development in the Westfjords* (in Icelandic). Presentation for a board meeting in March 2007. Retrieved in January 2014 from http://fjordungssamband.is/fjordungssambandid/ymsar_skyrslur/skra/215/
- The Association of the Municipalities of the Westfjords (2013). *Iceland 20/20 – The Westfjords region 2013* (in Icelandic). A report retrieved in February 2014 from <http://www.stjornarrad.is/media/sl/Soknaraaetlunar-Vestfjarda--2013-lokautgafa.pdf>
- The Association of the Municipalities of the Westfjords. (2015). *A contract about Iceland 20/20 – Westfjords region 2015– 2019* (in Icelandic). Retrieved in July 2015 from http://fjordungssamband.is/verkefni/soknaraaetlun_vestfjarda_2015-2019/
- The cod wars (in Icelandic). (2013). *Wikipedia*. Retrieved in October 2013 from <http://is.wikipedia.org/wiki/%C3%9Eorskastr%C3%AD%C3%B0in>
- The Scottish Government. (2010). *Speak up for rural Scotland*. A report retrieved in May 2012 from www.scotland.gov.uk/Resource/Doc/319168/0102002.pdf
- The Scottish Government. (2011). *Our rural future. The Scottish Government's response to the Speak up for rural Scotland consultation*. A report retrieved in May 2012 from www.scotland.gov.uk/Resource/Doc/344246/0114504
- Thomson, D. (2001). Hebrides and west coast of Scotland: The social and cultural importance of the coastal fishing communities and their contribution to food security. In a FAO report: *Understanding the culture of fishing communities: A key to fisheries management and food security*. (Ed. McGoodwin). Retrieved in February 2014 from <http://www.fao.org/docrep/004/y1290e/y1290e0i.htm#bm18>
- Tizard, J., Minty, I., & Newton, D. (2001). Meeting the staff development challenges presented by creating a university. *Active Learning in Higher Education* 2(2), 164-179.

- Tomaney, J. (2010). *Place-based approaches to regional development: global trends and Australian implications*. A report for the Australian Business Foundation. Retrieved in September 2013 from http://seqrda.com/wp-content/uploads/2012/09/Tomaney_Rev.Final_Colour-ABF-report2.pdf
- Trow, M. (1999). From mass higher education to universal access: the American advantage. *Minerva*, 37, 303–328.
- Turunen, T.A., & Rafferty, J. (2013). Insights beyond neo-liberal educational practices: the value of discourse analysis. *Educational Research for Policy and Practice* 12, 43-56.
- Twine, R. T. (2001). Eco-feminism in process. Paper retrieved in July 2012 from <http://richardtwine.com/ecofem/ecofem2001.pdf>
- Tönnies, F. (1887). Community and society. From C.P. Loomis (ed). *Community and Society* (1963). Retrieved in October 2016 from <https://web.natur.cuni.cz/ksgrrsek/novyurrlab/user/documents/petra/Komunity/tonnies.pdf>
- United Nations Educational, Scientific and Cultural Organisation (UNESCO). (2005). *Towards a knowledge society*. A report retrieved in May 2012 from <http://unesdoc.unesco.org/images/0014/001418/141843e.pdf>
- University Centre of the Westfjords*. (n.d.). About the University Centre. Retrieved in March 2014 from http://www.uw.is/the_university_centre_of_the_west_fjords/about_the_university_centre/
- University of Akureyri*. (n.d.). Faculty of natural resource science. Retrieved in March 2014 from <http://english.unak.is/business-and-science/faculty-of-natural-resource-sciences>
- Unnarsson, K. M. (2013). Matthías has brought 150 jobs to Bíldudalur (in Icelandic). Retrieved in September 2016 from <http://www.visir.is/matthias-maettur-til-ad-skapa-150-storf-a-bildudal/article/2013130609763>
- Välilmaa, J., & Hoffmann, D. (2008). Knowledge society discourse and higher education. *Higher Education* 56(3), 265-285.

- Verstad, B. S. (2001). Rural youth, gender construction and visions of a rural future. In Eðvarðsson (Ed.), *Bright summer nights and long distances. Rural and regional development in the Nordic-Scottish Context*, 94-115. Akureyri, University of Akureyri.
- Vísir. (2010). Remember the pioneers (in Icelandic). Retrieved in March 2014 from <http://www.visir.is/minnast-frumkvodla/article/2010718955475>
- Vísir. (2014). This school teaches you to cook, wash floors, knit, iron and weave (in Icelandic). Retrieved in March 2016 from <http://www.visir.is/thessi-skoli-kennir-ther-ad-elda,-skura,-prjona,-strauja-og-vefa/article/2014141209017>
- Walker, B. H., Holling, C. S., Carpenter, L. H., & Kinzig, A. P. (2004). Resilience, adaptability and transformability in social-ecological systems. *Ecology and Society* 9(2), 1-9.
- Walker, B. H., Gunderson, L. H., Kinzig, A. P., Folke, C., Carpenter, S. R., & Schultz, L. (2006). A handful of heuristics and some propositions for understanding resilience in social-ecological systems. *Ecology and Society* 11(1), 1-15.
- Ward, N., & Brown, D. L. (2009). Placing the rural in regional development. *Regional Studies* 43(10), 1237-1244.
- Warén, V. Ö. Á. (2012). *Possible impacts on Icelandic communities due to Iceland's EU membership* (in Icelandic). A BA thesis in politics from University of Iceland. Retrieved in September from http://skemman.is/stream/get/1946/10571/26338/1/BA_VW.pdf
- Welsh, M. (2014). Resilience and responsibility: governing uncertainty in a complex world. *The Geographical Journal*, 180(1), 15-26.
- Williams, C. C., & Millington, A.C. (2004). The diverse and contested meanings of sustainable development. *The Geographical Journal*, 170(2), 99-104.
- Wilson, G. (2010). Multifunctional 'quality' and rural community resilience. *Transaction of the Institute of British Geographers*, 35(3), 364-381.
- Xu, L., Marinova, D., & Guo, X. (2015). Resilience thinking: a renewed system approach for sustainability science. *Sustainability Science*, 10, 123-138.

Yin, R.K. (2011). *Qualitative research from start to finish*. Guilford Press, New York.

Ziegler, R., & Ott, K. (2011). The quality of sustainability science: a philosophical perspective. *Sustainability: Science, Practice & Policy*, 7(1), 31-44.

Zink, K. J. (2013). Designing sustainable working systems: The need for a system approach. *Applied Ergonomics xxx*, 1-7.

Appendixes

Appendix 1

Place and space for women in a rural area in Iceland

Anna Guðrún Edvardsdóttir

School of Education, University of Iceland

Abstract

The aim of this article is to explore what happens when women in Iceland try to reinhabit their 'place' in the community by undertaking university studies through distance learning. The research builds on interviews with eight women from the remote Westfjords area in Iceland. They had all taken a higher educational degree through distance learning while living in their hometown, and were still living there on completion of their studies.

My argument is that women use education to strengthen their status, place and space in a rural community. The findings show however, that because their study is mostly in the field of the private sphere of life, they only strengthen their status inside that field, not extending their action space within the community. On the surface it looks as if they are studying for themselves, but under the surface, it becomes clear that the area they choose to study fits the needs of the community; that is, a profession that is lacking.

Keywords: place-based approach, rural areas, women, university education, eco-feminism

Introduction

Since the 1960s, higher education development in the Nordic countries has been presented as a policy tool which could boost regional development. It has been suggested that several good practices have to be in place for optimal benefits of higher education institutions for regional development purposes (Hedin, 2009):

- a match between the education offered and the regional labour force demand,
- an emphasis on project or problem based learning and student outplacement,
- the availability of entrepreneurship programmes, and
- adaption of an up-skilling and life-long learning approach.

Iceland has evolved rapidly from a primary production society to a knowledge-based society. At the same time there has been a decrease in agricultural and fisheries occupations in Iceland, as in other market societies. Such evolution is mostly observed in urban areas and the growth of cities is a main characteristic of market societies. Migration from rural to urban areas is an observable phenomenon worldwide. Research in Iceland has shown that people prefer to reside in urban areas because they value the diverse opportunities available there (Icelandic Regional Development Institute, 2006, Bjarnason and Thorlindsson, 2006).

In the last 20 years, several regional development plans have been produced by the Icelandic government where a political discourse about rural area reinforcement can be found. The three main goals in the

government's regional development plan for 2006 – 2009 concerned the development of higher education, research activities and innovation in rural areas. Efforts were made to build a knowledge society system that would strengthen the economy of rural areas (Icelandic Regional Development Institute, 2006). The same goals appeared again in the development plan from 2011, called "Iceland 20/20 – an advance for the economy and community" that is for the whole of Iceland until 2020 with an emphasis on knowledge, sustainability and welfare (Prime Minister's Office, 2011). The discussion does not revolve around any intrinsic value of educational development or knowledge creation, but rather the direct connection between such development and the jobs it can create. In this article I intend to consider the role of gender in promoting higher education in rural areas, and in particular, the choices that women in rural areas make when new educational opportunities become accessible.

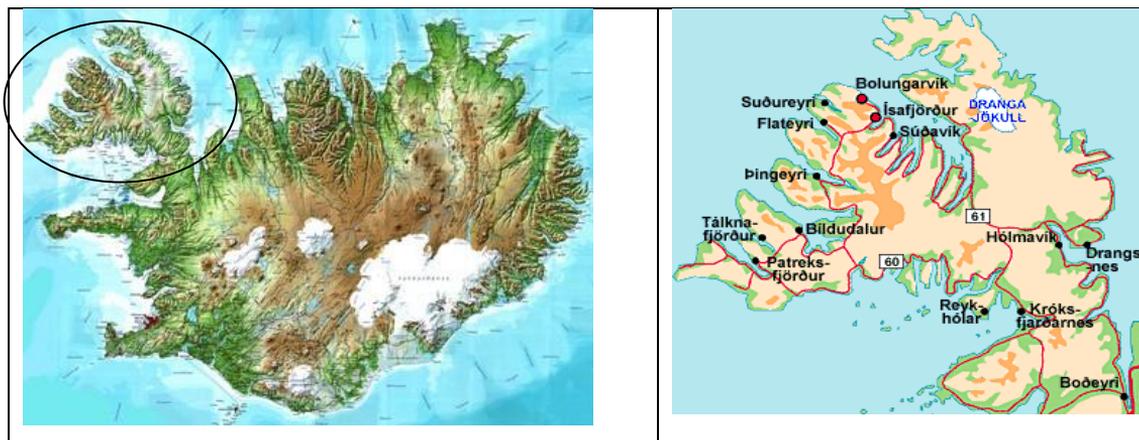
According to the Act no. 63/2006 (p.1) on higher education institutions, a university is "an independent educational institution which conducts teaching, research, preservation and search for knowledge, and creativity in the fields of science, education, technology or arts." It continues, "The role of Higher Education Institutions is contributing to the creation and dissemination of knowledge and skills to students as well as society in general." (Act no. 63/2006, p.1) In order to serve the higher educational needs of rural areas, universities have developed distance learning options and today most Icelandic universities offer all or part of their studies through distance learning (Eðvarðsson and Óskarsson, 2010). What is relevant is that at first such programmes were considered a solution for individuals living in rural areas, but today any individual, irrespective of place of residence has a choice to pursue an education through distance learning or traditional methods (Jóhannsdóttir, 2010).

The research area

The Westfjords, 22.271 square km, (Figure 1) are the northwest part of Iceland, which is 103.000 square km (<http://en.wikipedia.org/wiki/Westfjords>). The area has many deep fjords, steep mountains, a harsh landscape, diverse birdlife and rich fishing grounds. The villages are based in the fjords and rely mostly on fisheries and services that are linked to the fishing industry (<http://www.vestfiridir.is/index.php?page=baindex&web=1>).

Figure 1. Iceland (www.extremeiceland.is)
(www.travelnet.is)

The Westfjords



The population in the Westfjords has been decreasing from 10.000 inhabitants in 1971, 10.500 in 1981, 9.722 in 1991 and 6.955 in 2011 (Statistics Iceland, 2012). The main reasons for this decrease are the introduction of the quota system legislation on fisheries, the quota ownership change with associated difficulties, bankruptcy of companies in the fishing industry and major natural disasters (The Association of the Municipalities in Westfjords, 2007).

In recent years there have been changes in the fishing industry because of new technology and transfers of quota ownership. Fishing quotas moved from one community to another and new technology was introduced into the fishing plants, creating a job loss in the industry, especially for women. In the Westfjords area, people moved away when they lost their jobs, because there were no other job opportunities (Jóhannesson, Jóhannsson, Heiðarsson, Ólafsson, Jóelsdóttir, and Sigurbjarnarson, 2010; Heiðarsson, Jóhannesson, and Ólafsson, 2007).

In Iceland, about 20.000 students are registered in universities every year of which 60% are women. About 3.000 of them are registered as distance learning students and about 120 live in the Westfjords area with the majority, 80 of them, women, or 67% (Statistics Iceland, 2012).

The theoretical framework

The theoretical approaches that I use in the research are place-based education; especially theories about dimensions of place, eco-feminism, with emphasis on the eco-feminist political economy and theories about “the good life” which is linked to the social dimension of sustainability.

According to several educators, place is pedagogical (Gruenwald, 2003, Somerville, 2010, Stevenson, 2008, Bowers, 2008) and by introducing

such pedagogies, place-based education “will address such questions as how to develop sustainable communities and places” (Somerville, 2010, p.362). Gruenewald (2003) states that “places make us”, (p.621) where our identity and our possibilities are shaped and “places teach us how the world works and how our lives fit into the spaces we occupy” (Gruenewald, 2003, p.621). It could be helpful to look at the ecological dimension of place, especially the discourse of eco-feminism which says “that historical patterns of domination and control over women are connected to the patterns of domination over the land” (Gruenewald, 2003, p.635) or in the case of fishing communities in Iceland, the sea (Gruenewald, 2003, Shiva, 1993, Twine, 2001, Manion, n.d, Williams and Millington, 2004, Buckingham, 2004, Leach, 2007). The perspective of the eco-feminist political economy reveal women’s status in a male-dominated economic systems, which values men’s works more than women’s (Mellor, 2006, Langley and Mellor, 2002, Buckingham, 2004, Leach, 2007) The sociological and political dimensions of ‘place’ which emphasise power relations and acceptance of the social space can be helpful in understanding these relations at the political level (Gruenewald, 2003, Mellor, 2006, Langley and Mellor, 2002, Leach 2007). How can education address this dilemma? As more women than men attend university studies, gender perspectives concerning women as place makers become an important factor in rural development.

Formal education often neglects to take into the account the importance of how place affects our lives, our culture and how we value things and see the world. It is the knowledge that each place has created, that inhabitants in a place have about various things of that place; “the local knowledge”, which normally is questioned and not valued by outsiders (Gruenewald, 2003, Greenwood, 2009, Shiva, 1993, Somerville 2010, Bowers, 2008, Gough, 2012). Gruenewald describes five dimensions of place that shape the development of a socio-ecological, place-conscious education. Those dimensions are: the perceptual, the sociological, the ideological, the political and the ecological. In order to address the issue of knowledge development in rural areas I will focus on the ecological, sociological and political dimensions of place (Gruenewald, 2003).

Theories of well-being concerning individuals and communities can shed some light on how local knowledge, along with scientific knowledge, can create sustainable and relevant knowledge of a particular place. Well-being of people and communities, or “the good life”, has often focused on economic welfare, linking economic growth in a place or a community to the well-being of people (Dodds, 1997, Hopwood, Mellor and O’Brien, 2005). This is the way the Western societies have evaluated how sustainable life is best met. That kind of lifestyle has also been sought after elsewhere by other nations. Sustainable life emphasises the balance among economy, environment and well-being, which is not in place when the focus is only on the economic growth (Sampford, 2010, Shiva, 1993, Langley and Mellor, 2002).

The ecological dimension of place

The ecological dimension of place focuses on the relationship among the environment, economy and well-being of people living in a certain place. This dimension asks questions about the modern economy and how it might damage and destroy the ecological system of human and non-human communities. Universities and educational institutions have emphasised growth in the global economy and environment, and the well-being of a place and its people comes second. In order to work towards and maintain some equilibrium among the environment, economy and social factors in a place, it is necessary to focus locally; meaning to act in a sustainable way in the place you live in and take into account the local knowledge that can be found there (Gruenewald, 2003, Greenwood, 2009, Shiva, 1993, Twine, 2001, Manion, n.d, Williams and Millington, 2004, Buckingham, 2004, Leach, 2007).

Universities and higher educational institutions must create a balance between scientific knowledge and local knowledge of a place in order to educate and serve people in that particular place. They should not only be providers of knowledge, but also learners of that 'place' knowledge. In a system of educational provision and institutional learning, sustainable knowledge can be created.

The sociological and political dimension of place

People live in a place, which holds their culture and their identity. Humans usually fail to recognise that and tend to take the social space they live in for granted, not thinking about why things are as they are or whether they can be changed. Humans often do not think of a place as a cultural product which represents their choices, values, beliefs and decisions. The relationships among place, identity and culture emerge in the culture, ideology and politics of the place. By saying that people are place makers, then people must become conscious of themselves as place makers and as participants in the socio-political process of place making (Gruenewald, 2003, Mellor, 2006, Langley and Mellor, 2002, Leach, 2007).

Education in a place provides opportunities for learners to participate meaningfully in the process of place-making; meaning that place-based education can make learners more conscious of the spatial dimension of social justice issues, such as democracy, equity, race and gender (Somerville, 2010, Stevenson, 2008, Bowers, 2008). Education should not be such that it ".....limits the possibilities for democracy (and for places) because it diverts the attention of citizens, educators and students from the social, cultural and political patterns involved in place making" (Gruenewald, 2003, p.628).

The focus on the economy in 'place' has been related to male perspectives (Proppé, 2004, Mellor, 2006, Langley and Mellor, 2002, Leach 2007) and to understand better how it can affect the women's status and space in a place, I will consider theories of eco-feminism.

Eco-feminism

Eco-feminism has been defined as a movement “...which argues that patriarchal oppression destroys Nature in the name of profit and progress” (Humm, 1995, p.73) Those who favour that want “...a paradigmatic shift in patriarchal science, knowledge and technology, to a sustainable global economy.....” (Humm, 1995, p.73).

The discourse of eco-feminism is helpful when one wants to understand the relationship between humans and place, focusing on the historical pattern of domination and control over women and how that is connected to the domination of natural resources, both on land and at sea (Shiva, 1993, Manion, n.d, Twine, 2001) and women’s status in a society of a male-dominated economy (Proppé, 2004, Mellor, 2006, Langley and Mellor, 2002, Leach 2007). Women and nature have been constructed by patriarchal, capitalistic societies as something to have “power over”. Looking at a place through an eco-feminist perspective offers a broad range of “social and ecological issues, including local economic livelihood, equity and social justice, resource depletion, ecological limits, cultural and biological diversity, marginalization and resistance, phenomenological experience.....” (Gruenewald, 2003, p.635).

Both men and women use the discourse of biological gender when rationalising gender segregation in the community or place; the discourse about “having power over”. The stronger this male dominated discourse, the more difficult it is for women to change the place they live in (Proppé, 2004, Mellor, 2006, Langley and Mellor, 2002, Leach 2007, Shiva, 1993, Manion, n.d,).

The ‘good life’

A key issue in discussions of sustainability is to find a balance between the ‘good life’ and respecting environmental integrity (Giddings, Hopwood and O’Brien, 2002, Hopwood, Mellor and Brien, 2005). Dodds (1997) talks about four approaches to well-being; well-being as a state of mind, well-being as a human capability, well-being as a state of the world and well-being as the satisfaction of underlying needs. The first two approaches refer to the individual himself/herself; what he/she can do, if he/she is given the freedom within the place he/she occupies, to live the life he/she chooses and is satisfied with in general. The latter two refer more to the place itself or the community and how it can create an environment of well-being for all inhabitants. Both inhabitants in a place and the place itself must have a mutual understanding what basic needs the place should be responsible for and provide. To find out if well-being is achieved within the place, measurable indicators are used. Such indicators are the same worldwide and are used to compare welfare and well-being of people (Dodds, 1997).

Three different perspectives can be found on what “the good life” or the “well-being” means for women (Skålnes, 2004). Those perspectives

are: conservative, modern and alternative. The conservative perspective focuses on family and child raising and women who have this perspective shape their life projects on the basis of that vision. Work and leisure are secondary to this family focus. They do get educated but they tend to study child care work, social work or teaching (Skålens, 2004). When asked about their choice; they stress the possibility of combining job, family and children. They also tend to have a traditional vision towards the labour between men and women. The modern perspective focuses on career goals and women who have that vision, model their life projects on social success, career and family in that order. Such women tend to study economy or management, tourism and social science. They believe that higher education is a must and their choice is based on that view that education will prepare them for the career they want to pursue. They want everything and to manage everything; full-time career, children and an active life. The third perspective is the alternative, which focuses on open-minded environment and women who have that perspective shape their life projects on choosing their life style, even though it is not the traditional way of living. Their choice of career lies in tourism, museum management, arts and crafts and social work. Career is not number one, but to have a job that allows them to live a good life without work and/or family, controlling their every move (Skålens, 2004).

The conceptual framework that I use in the research is place-based in order to understand the women's educational choice and whether it changes their status in the communities. I use an eco-feminist perspective to reveal the male perspective dominance of the rural community's economy, especially in the field of natural resource management.

Methodology

The aim of the study is to find out whether and how women's status and place in a community changes by completing a university degree through distance learning. The research question is: *How does university education change women's status and place in a rural area in Iceland?* For that purpose, I interviewed eight women who all had taken a university degree through distance learning, continuing to live in their hometown while studying and then staying on. My focus is on the women that stayed on after finishing a university degree and whether their status has in any way changed after getting that degree within their communities. What happens to the women who finished their university study and then left is another story and will not be addressed here.

The interviews were taken from November 2009 to June 2010 and the participants were from all over the Westfjords area. I got the information about the women from the University Centre of the Westfjords in Ísafjörður, which gave me a list of women in the region who had graduated with a higher educational degree. From that list I choose those eight women. I wanted my choice to reflect the variety of women that live in the Westfjords area; a broad age range, distribution across the area and

different study lines in different universities as well as that some of them had taken part of their studies in a class-based setting.

I sent them a letter by e-mail, asking for their participation, introducing the aim of the research and the research question. After they had agreed, I sent them some topics for discussion and gave them some time to prepare themselves for the interviews. The red thread in the interview schedule was the women's university study and whether getting a higher educational degree had changed their place and status in the community. Then I travelled to their hometowns and took the interviews, which were individual interviews, at their home or workplace, depending on the women's choice. The interviews were half-open, semi-structured; meaning that even though I placed emphasis on a relaxed atmosphere during the interviews, encouraging the women to feel free to say whatever they thought was relevant, I took the traditional role of interviewer by managing the interviews towards the topics I had sent them for consideration.

The discussion topics were the women's background, their higher educational studies, the communities they lived in, matters concerning equal rights, natural resource management, rural development and gender issues. Each interview took about one hour and was recorded and transcribed. I do not use the women's real names; and there is nothing in the data presented that shows who the women are. The university studies the women had undertaken were in business administration, teaching, nursing, natural science and tourism and they all had jobs in the field of their study.

I chose to use a grounded theory approach to analyse the interviews. Grounded theory is a method that seeks to find theories or frame theories based on the data that has been gathered. It is flexible and allows you to follow leads that come up. It can also help you to focus on what is going on in your data. A grounded theory approach is a tool that can enhance your seeing (Charmas, 2009).

The transcribed interviews were analysed by finding themes in each interview, group the themes in the interviews together in order to find theories that could answer the research question. The themes that could be identified in the interviews were: university studies, the communities, rural development, natural resource management and themes about social justice.

The findings

Background information

The women came all over the Westfjords area. They ranged in age from 27 to 57. Six were married, one was single. They had children and/or grandchildren and had worked in various professions, such as business owners, low paid workers or studying.

Dee: "I have also run a business..... Founded it, ran it and then sold it. I learned a lot during that time, yes; where money and values come from".

Some came to the area as young women to work in the fishing industry, to study or were looking for an adventure. There they had met their partners and stayed on because the partner didn't want to leave.

Ann: "I came here because my relatives lived here at that time, and I decided to study at the high school here, I met my husband in the school."

Others had met their partner in Reykjavík, while he was studying or working and moved with him to his hometown:

Carol: "Yes, I was born and brought up in Reykjavík and moved up here after finishing high school with my husband who was brought up here".

Some couples were both from the area and had decided to move back to the man's hometown:

Karen: "I think, because we are both from the area and our relationships had developed to the point that we talked about having children and wanted them to grow up in the countryside".

The women I interviewed were living in the area because they or their husbands had families there. Another important factor for choosing to live in rural areas is child raising and security. Those factors are valued by the women and is best seen when they compare the city life to the rural life.

Ann: "I haven't found myself in Reykjavík, even though I was brought up there, it's just good to be here. I just feel that every individual matters here... because I know what it's like to live in Reykjavík and the closeness to other people, which might bother some, but not me. I feel safe, I feel safe with my children and that other people know their parents and so on".

To live in a child friendly environment is more valued by these women than living near their blood family. They also talked about the importance of having a job one likes.

Gwen: ".....I decided to go into studying, so I wouldn't have to take a job, that I found boring", not having an education limits your choices."

and the main reason for moving from the area would be of a job loss, especially if it would be their husbands who would lose their jobs.

Karen: "Yes, it would entirely be related to my husband's work... we would not move if I would lose my job".

The women gave different reasons for coming to the area but the reasons why they stayed on were related to their traditional view towards life, which value family matters, especially child raising and small communities in rural areas seem to fit those values.

University studies

The women had always nurtured a dream that one day they would be able to study.

Ann: "No, I just always wanted to go into that field and when the opportunity came, I grabbed it."

They didn't feel they could have done it earlier, because it would have meant moving away from the area and that was too complicated for them with family and children.

Carol: "If studying would have meant that I had to move away from the area, I would not have gone in to studying, that was never an option."

During their studies some women stayed in Reykjavík for a period to complete their studies or because they wanted to experience being in the school with other students.

Gwen: "If I could choose, I would choose class-based learning, but first when I entered the class-based learning, I found, because I had been in distance learning the previous year, that it was a waste of time, sitting in a classroom for a whole day....but then I realised that it was the fellow students, the teachers and the whole environment that mattered."

Their line of study is chosen because it is something that was offered through distance learning.

Karen: "See, my study was chosen because it could be studied through distance learning. Then the choice was limited".

or because they had been working as unskilled workers in that sector and wanted to receive qualifications.

Jane: “...and then I started to work here (in the school) and got good references from the principals and all that. I applied but was afraid that I would be rejected again, but I wanted to be a teacher”

Some of the women ended up learning what was not always their first choice, but rather something that can be studied through distance learning and was practical in the community they were living in.

Karen: “I chose this study line, because we had decided to move back home and we thought that my previous study line was not practical enough there and I knew that this was something that would be useful”.

When asked about their studies, the women stressed that they had gained a lot by studying, e.g. they were more confident, open minded, organised, aware of their own abilities, had gotten a higher salary in their line of work, more job satisfaction and a better life standard.

Jane: “Well, I feel safer with my knowledge and stronger....I’m more organised and have learned other work methods; e.g. teamwork and better communication methods”.

Karen: “Yes, the difference in salary from being an unskilled worker to a skilled worker was great”.

The women all said that they had felt a lot of support while studying. They found family and friends supportive, but not always the community they live in.

Carol: “My family supported me 100%, but it seems that the community didn’t understand what I was going to study, why and what I was going to do with it”.

It seems that these women who enter into higher education are the ones that always had planned to study something someday, but for family matters and location, had not been able to do that. When the opportunity came, with distant learning options, they grabbed it, even though study lines options were limited so in some cases a study line was not what they wanted most. What to study is a consideration for the women and sometimes their decisions seems to be based on what is practical for them, their family and the community.

The communities and natural resources

The women said that the main industry in their communities was the fishing industry and that is where the Westfjords natural resources lie, mainly in the quota system, where there is a lot of money and investment. The women said that the fishing industry is male dominated; meaning that it is

the men that own the boats, the quota, the companies, manage the business and sit on the companies' boards.

Dee: "Who runs the fishing industry? For me, it seems that it is the biggest male dominated industry in the country, women are not there".

Women work in the fish plants. The men manage the sector where the financial resources are, there is the real power.

Mary: "Women don't pursue to fishing, men don't pursue work in the fish plants at the processing line. A woman has to have physical strength to be a fisherman, to sail and to fish, I think".

Dee: "Yes, the male values and beliefs are naturally always dominated, even though we fight for female values and beliefs to be seen; it is somehow that male network is much stronger, and while men have all the financial powers, then women get no power, because money and power go hand in hand".

They all felt their communities to be male dominated, with male values and beliefs; the smaller the community, the more male dominated it was.

Carol: "Male chauvinist community.... just straight out".

The women felt that the economy in their communities was monotonous and that the labour market was gender biased, women worked in the fish factories or in unskilled, low-paid service jobs, men were fishermen, farmers, journeymen and contractors.

Sue: "Well, yes, sort of. Women tend to go into the service sector and caretaking works and then the men are more in the fishing sector and some kind of industry and running a company; if a woman is running a business, it is inside the women's sector".

When asked about the political sector none of the women had gone into local politics, had no interests in politics and no plans of taking part in political activities.

Gwen: "Well, I think that the political sector is male dominated. I say it, because once I was asked to sit in a political board, because they wanted a woman. They were looking for my gender, not my expertise; so I said no".

As seen above, the women identify the fishing industry as the largest industry and at the same time the most male dominated industry in

the area, where money and power go hand in hand. They are excluded from that industry and therefore feel their community to be male dominated. That factor is one of the reasons women move to more urbanized areas, where they seem to feel better, more valued and a feeling of belonging. The women also feel that political activities are male dominated and don't want to go into that field of sphere.

Urban versus rural

When asked to define the differences between rural and urban areas the women had the same understanding. They didn't feel they were living in a rural area because in their mind an urban area is a centre of a population that has some services, e.g. a town of 60 inhabitants is an urban area, if it is able to provide the necessary services, whereas a rural area is the individual farms in the countryside.

Carol: "No, I don't think my town is a rural area, for me it is an urban area, even though the population is about several hundred people. But it has to have some service institutions that we need, like in urban areas, but the rural areas do not have that".

In the women's mind, the villages around Iceland are urban areas and the countryside is rural. To be able to call a community rural or urban depends on the status of the service that can be found there. If there are all the necessary service institutions, e. g. a pre-school, a compulsory school, a health clinic with a doctor and/or a nurse, various shops that sell food and/or clothes, a town hall and a bank, the women felt they live in an urban community. Those are the things you need to live your daily life the same way you can in the capital area, which is the benchmark.

The universities' role and rural development

The women didn't think that Icelandic universities were doing well when I asked them about what they believed to be the universities' role in the development of higher education and research activities in rural areas.

Karen: "In many ways, higher education study should be organized in a way, that you don't have to go to Reykjavík. here people have taken higher education degrees, and then left, it's cheap to live here and study through distance learning, but opportunities are maybe elsewhere".

They felt that universities were not thinking about the people in rural areas or about rural development, but that they ought to do that. They stressed that the chance to have distance higher education in every university subject is important for people in the rural areas and their development.

Dee: "Universities role is, naturally, to educate people to get better jobs for themselves and the community.To be able to study through distance learning has a positive effect for this area; could be an attraction, but it will not prevent out-migration".

Even though lot of things have been done in the higher educational sector, migration from rural areas has not stopped and the women felt that education itself would not prevent people from moving, the labour market was more of a key player in that sense, meaning that if there are no suitable jobs in the area, people leave.

Masculinity, femininity, equal rights and feminism

When asked about the meaning of masculinity and femininity, the women expressed very traditional ideas about them.

Jane: "Well, you know, femininity is naturally the mother figure, the home and children..... masculinity is related to the car, the house and maintenance".

Despite the traditional ideas about masculinity and femininity, all women claimed to be equal-rights minded. They said they were not feminists because in their minds that concept had a negative meaning.

Ann: "I'm equal-rights minded, but I'm not a feminist. Why? Because I feel that it is a negative concept and extreme, like women are superior. Like, if a man and a woman apply for the same job and are equal, the law say you have to hire the woman; I don't see the point".

The women, although claiming to be equal-rights minded persons, seem not to realise, that the discourse about those matters is a patriarchal discourse, which favours male values, norms and beliefs. So they are not able to discriminate between the structure of individual rights and the structure of the patriarchal structure of their communities. Therefore they don't see, that their understanding of feminism strengthens the male dominance.

Discussion

In this research the rural communities the women were living in are traditional fishing communities. Those communities, as the women identified, are male dominated, favouring male values rather than female ones. Eco-feminists argue that the world's economy is male dominated, with neo-classical and capitalistic perspectives where market forces are seen as natural and privatisation of natural resources the best way to create and sustain prosperity and quality of life (Mellor, 2006, Langley and Mellor, 2002, Buckingham, 2004, Leach, 2007). The women find themselves living in a structure of a masculine community, disadvantaged over

ownership and control over land and sea. Such places tend to appeal to conservative women and “tend to hold up as their strongest woman-friendly card good conditions for raising children and family-friendly jobs in the children/youth and care sector” (Skålnes, 2004, p.6). Even though the women saw that the fishing industry was a male industry and that there was the money and the real power, they had that traditional perspective that it was a natural thing, that couldn't be changed, because women had no interest in that industry and that they were not fit to fish. Having such a perspective towards the fishing industry, strengthens the male dominance over the natural resources, money and power and helps to keep things as they are. Because of their traditional perspective their choice of study line was not addressed to the fishing sector and they showed no willingness to enter into that field.

The women I interviewed had that conservative perspective. They valued family life and child upbringing and tended to pattern their lives around those values. Their choice of residence or study lines was not always based on their desire of living there or that the study they chose was not always what they wanted the most; rather the choice was based on what they believed was the best for their families, especially for their children and how that education could fit into the communities they lived in and wanted to continue living in. So it can be said, that the women educate themselves for the benefit of their families and communities.

Research shows that the main reason for choosing to live in rural areas is family ties (Bjarnason and Thorlindsson, 2006, Ní Laoire, 2007, Rye, 2006, Pretty, Bramston, Patrick, and Pannach, 2006). It is believed that it is better to bring up children in rural areas. Those areas are considered to be safe, healthy and relaxed and living in rural areas is more 'natural' than life in urban areas (Bjarnason and Thorlindsson, 2006; Ní Laoire, 2007; Rye, 2006, Pretty, Bramston, Patrick, Jeff and Pannach, 2006). Families stay in rural areas as long as the male partner has a job, even if the economy in rural areas is monotonous. When one loses one's job, it might be difficult to get another one but it is more important that men have jobs. Research have shown that the lack of diversity in the economic sector plays a big role in out-migration from rural areas (Bjarnason and Thorlindsson, 2006, Ní Laoire, 2007, Rye, 2006, Pretty, Bramston, Patrick, Jeff and Pannach, 2006).

Women who pursue an education claim that they gain a lot by getting educated, not only does their economic status improve, but also other things which are more related to themselves. They start to see things differently; they often have to change perspectives, values and beliefs (Moore, 2005). They accept the knowledge they get in their study and consider it as an important one. They seem not to question the contents of their studies and seem not to think about their study in a sustainable way; referring to the economy, environment and social factors. Their perspective is an individual one; e.g. themselves. It can be said that their approach towards what living a “good life” means is well-being as a state of mind and as human capability. Their goal is to get a university degree and to get a qualification for a job that is lacking in their community. The driver for their

study is the desire for a degree, not the knowledge that is provided. The knowledge could be more related to the place they live in and would then be more relevant to the women and the place.

Rural communities where primary production has been the main focus in the economy tend to value education and work that is related to the local economy of technology and difficult working conditions. Higher education is thus less acceptable in a community dominated by mainly male values (Verstad, 2004, Skålnes, 2004). In urban areas, the labour market is diverse and jobs requiring higher education tend to be located in urban areas (Verstad, 2004, Arnardóttir, 2001, Peace, 2003, Wiborg, 2001, Bjarnason and Thorlindsson, 2006, Pretty, Bramston, Patrick and Pannach, 2006; Rye, 2006).

Young people and women are more likely than men to move away from rural areas in order to get a higher education (Bjarnason and Thorlindsson, 2006, Ní Laoire, 2007, Rye, 2006, Pretty, Bramston, Patrick and Pannach, 2006). In order to prevent that, both state and local governments have emphasised distance learning in higher education, but out-migration is continuing (Bjarnason and Thorlindsson, 2006, Ní Laoire, 2007, Rye, 2006, Pretty, Bramston, Patrick and Pannach, 2006). Like the women said, the labour market is more important, if one doesn't get a job, he or she will move. They all stressed that they had of intention in moving from the area unless they couldn't get a job or would lose the one they had.

All around the world the fishing industry is male dominated; women don't fish, they don't run the fishing companies and they don't sit on the company's boards. They don't see themselves as fishermen although they take part in the fishing process, e.g. baiting the line, working in the fish plant or doing the book-keeping. Even though they were doing things that can be called managing the business, they don't see themselves as managers or that they are in a position of having power. In accepting the *status quo* people rationalise the absence of gender in an occupation. Then it is common to use arguments that are linked to intrinsic abilities of masculinity and femininity (Ministry of Fisheries and Agriculture, 2007, Skaptadóttir, 2000, Proppé, 2004, Nadel-Klein, 2000).

Gender equality is written into Icelandic law and prohibits any discrimination between sexes. Despite that, women get paid less than men and take more responsibility in the household and child upbringing. Women are in charge in the domestic sphere and men in the public sphere. Still, women think that gender equality is a fact in Iceland and that feminism is something that is no longer needed and will just destroy that equality. It is a neo-liberal discourse, where the individual's ability is in centre and people should be valued as individuals. This discourse does not take into account the fact that we live in a patriarchal society which favours male values, norms and beliefs. When measuring women and men from that perspective the danger of favouring the men is always there (Ministry of Fisheries and Agriculture, 2007, Proppé, 2004, Ministry of Welfare, 2000, Prime Minister's Office, 2004b).

Conclusions

For these women, “places makes us” (Gruenewald, 2003, p.621). The women realise and accept that they live in patriarchal communities that favour male values and perspectives. In such communities a women’s space for action in the public sphere is limited. Women tend to dominate the private sphere, e.g the home, and men tend to dominate the public sphere, e.g the communities’ main industry, the fishing sector. Women realise that men dominate both the land and the sea, and not only do they accept that fact, but support it by using biological arguments for women’s absence in the industry.

The women are ‘place makers’ in that sense that by taking an higher education degree, they strengthen their action space in traditional women sectors; e.g “the family-friendly jobs in the children/youth and care sector” (Skålnes, 2004, p.6). But their action space does not expand, because they don’t go into the men’s sector; the contractor business, the fishing industry or politics. Their space for power, decisions and action is limited.

In a discussion by Barbara Pini (2006) about women in local authorities in rural Australia, she finds that women who get into the local authorities do not have the same access to power as men, because of ignorance, political inexperience, no access to a network or lack of support from institutions and communities (Pini, 2006). Women’s action space is limited by male discourse, which the whole community maintains. The female discourse is not heard and women’s opinion about the community is of less importance. By strengthening their status and space activities in traditional women sectors, they also strengthen the male discourse, which becomes the dominant one in the communities. Because they have the conservative perspective towards life, where traditional family values are strong, they seem to be happy living in their conservative, traditional male dominated communities and seem not to want any changes.

Rural communities in the Westfjords areas face population decline, especially among young people and women. It is important for the communities to acknowledge that and try to find a way to create a community that meets the demands of “a good life” for young people and women. They have to bring back the women that hold modern and alternative perspectives so a more diverse community can be created. Communities are often willing to do this when their demographic situation show a decline over a long period (Skålnes, 2004). How they will manage, depends on the communities’ resilience. Resilience is the capacity of a system, in this case, a community to adapt to a change (Folke, 2006, Schouten, Van der Heide and Heijman, 2009) and in the case of rural areas “it describes how well a rural area can balance ecosystem, economic and social function” (Schouten, Van der Heide and Heijman, 2009, p.3). Creating sustainable communities where balance between the environment, economy and social factors are in place which favour male and female

values and work equally is something that rural development should be about.

One tool to use for that purpose is the development of higher education through distance learning and I believe that universities and communities in the Westfjords area should work together to increase the offer of study lines that can be studied through distance learning. By diversifying what is on offer, universities would both be a provider of knowledge and a learner of the knowledge the place possesses and increase opportunities for diversification.

Implementing place-based education into their study programmes is one way of fulfilling those demands. It could be done through research and development with inhabitants in mind, and in developing a curriculum which nurtures local knowledge and skills and encourages discussion on issues, perspectives and values. Knowledge about local fish stocks could be as important as learning to resolve difficult issues. To meet these new demands for knowledge and skills university teachers may need to adopt a place-based pedagogy and promote transformative learning and develop a curriculum more suited to encouraging collaboration between local place knowledge and academic knowledge, for example, through validation of community-oriented project work. This will be the future challenge for university-level distance learning with a widely dispersed student group living in varied geographical areas. It might be important for universities to keep in mind certain guiding principles to ensure human well-being, such as equity, social inclusion and interaction, security and adaptability (GEES, 2005).

References

Act no. 63/2006. Higher Education Institution. Downloaded in April 2012 from <http://eng.menntamalaraduneyti.is/media/MRN-PDF-Althjodlegt/Higher-Education-Act-no.-63-2006nytt.pdf>.

Arnardóttir, J. R. (2001). What do women want? Lifelong learning and status on the labour market (in Icelandic). A report. Downloaded in January 2007 from the website www.jafnretti.is.

Bjarnason, Th. and Thorlindsson, Th. (2006). Should I stay or should I go? Migration expectations among youth in Icelandic fishing and farming communities. *Journal of Rural Studies*, 22, p.290 – 300.

- Bowers, C.A. (2008). Why a critical pedagogy of place is an oxymoron. *Environmental Education Research*, 14(3), p.325-335.
- Buckingham, S. (2004). Eco-feminism in the twenty-first century. *The Geographical journal*, 170(2), p.146-154
- Charmaz, K. (2009). *Constructing grounded theory – A practical guide through qualitative analysis*. Sage/Los Angeles.
- Dodds, S. (1997). Towards a science of sustainability: Improving the way ecological economics understands human well-being. *Ecological Economies*, 23, p.95 – 111.
- Eðvarðsson, I. R., and Óskarsson, G.K. (2010). What guides the choice of a study line and a university? The agenda of graduate students at the University of Akureyri (in Icelandic). *Uppeldi og menntun*, 19(1), p.153 – 178.
- Folke, C. (2006). Resilience: the emergence of a perspective for social-ecological systems analyses. *Global Environmental Change* 16, p.253-267.
- GEES. (2005). Education for Sustainable Development for GEES students in UK higher education. Higher Education Academy Subject Center for Geography, Earth and Environmental Science (GEES). Downloaded in February 2011 from <http://www.gees.ac.uk/projtheme/esd/briefing.doc>
- Giddings, B., Hopwood, B. and O'Brien, G. (2002). Environment, economy and society: Fitting them together into sustainable development. *Sustainable Development*, 10(4), p.187 – 196.
- Gough, A. (1999). Recognising women in environmental education pedagogy and research: toward an eco-feminist poststructuralist perspective. *Environmental Education Research*, 5(2), p.143 -161.
- Greenwood, D. A. (2009). Place, survivance, and white remembrance: A decolonizing challenge to rural education in mobile modernity. *Journal of Research in Rural Education*, 24(10), p.1 – 6.
- Gruenewald, D.A. (2003). Foundation of place: A multidisciplinary framework for place conscious education. *American Educational Research Journal* 40(3), p.619 – 654.

Hedin, S. (Editor). (2009). Higher education institutions as drivers of regional development in the Nordic countries (Nordregio WP 2009:3). Downloaded in February 2011 from <http://www.nordregio.se/inc/openitem.asp?id=76230&nid=2112>.

Heiðarson, J. Þ., Jóhannesson, H. and Ólafsson, K. (2007). *Oil Refinery in the Westfjords. An evaluation on some sociological factors*. Report for The Association of the municipalities of the Westfjords (in Icelandic). The University of Akureyri Research Centre (www.rha.is). Downloaded in May 2011 from www.rha.is.

Hopwood, B., Mellor, M. and O'Brien G. (2005). Sustainable development: mapping different approaches. *Sustainable Development*, 13, p.38-52.

Humm, M. (1995). *The dictionary of feminist theory*. Columbus, Ohio State University Press.

Icelandic Regional Development Institute. (2006). Regional development plan 2006 – 2009. (in Icelandic). <http://www.byggdastofnun.is/static/files/Byggdaaetlun0609/byggdaaetlun0609.pdf>

Jóhannesson, H., Jóhannsson, E., Heiðarsson, J. Þ., Ólafsson, K., Jólisdóttir, S. S. and Sigurbjarnarson, V. (2010). *Assessment description in 2008 and an abstract about the effects 2002 – 2008*. (A research report nr. 9) A research on sociological effects of aluminium and hydropower station projects in East Iceland. (in Icelandic). The University of Akureyri Research Centre (www.rha.is). Downloaded in May 2011 from www.rha.is.

Jóhannsdóttir, Þ., J. (2010). *Teacher education and school-based distance learning: Individual and systemic development in schools and a teacher education programme*. (Unpublished doctoral dissertation). Reykjavík. University of Iceland, School of Education.

Langley, P. and Mellor, M. (2002). Economy, sustainability and sites of transformative space. *New Political Economy*, 7(1), p.49-65

Leach, M. (2007). Earth mother myths and other eco-feminist fables: how a strategic notion rose and fell. *Development and Change*, 38(1), p.67-85.

Manion, H.K. n.d. Eco-feminism within gender and development. Downloaded in July 2012 from www.ecofem.org/journal. www.lancasac.uk/staff/twine/ecofem/mainion.pdf.

Mellor, M. (2006). Eco-feminist political economy. *Int. J. Green Economics*, Vol. 1, Nos. ½, p.139-150.

Ministry of Fisheries and Agriculture. (2007). *A committee's report about women's labour in the largest fishing companies* (in Icelandic). Downloaded in May 2011 from www.sjavarutvegsraduneyti.is/media/Skyrslur/Skyrsla_um_storf_kvenna_2007.pdf

Ministry of Welfare. (2000). A report about women's status in rural areas in Iceland (in Icelandic). Downloaded in May 2011 from www.velferdarraduneyti.is/media/acrobat-skjol/Jafnretti.pdf.

Moore, J. (2005). Is higher education ready for transformative learning? A question explored in the study of sustainability. *Journal of Transformative Education*, 3(1), p.76 – 91.

Nadel-Klein, J. (2000). Granny baited the lines: Perpetual crisis and the changing role of women in Scottish fishing communities. *Women's Studies International Forum*, 23(3), p.363 – 372.

Ní Laoire, C. (2007). The 'green green grass of home'? Return migration to rural Ireland. *Journal of Rural Studies*, 23, p.332 -344.

Peace, P. (2003). Balancing power: The discursive maintenance of gender inequality by wo/men at university. *Feminism Psychology*, 13(2), p.159 – 180.

Pini, B. (2006). A critique of "new" rural local governance: The case of gender in a rural Australian setting. *Journal of Rural Studies*, 22, p.396 -408

Pretty, G., Bramston, P., Patrick, J. and Pannach, W. (2006). The relevance of community sentiments to Australian rural youths' intention to stay in their home communities, *American Behavioral Scientist* 50(2), p. 226 – 240.

Prime Minister's Office. (2011). *Iceland 20/20 – an advance for the economy and community* (in Icelandic). Downloaded in March 2012 from <http://www.forsaetisraduneyti.is/media/Skyrslur/island2020.pdf>

Prime Minister's Office. (2004). Women's economic power. A committee's report about women's economic power in Iceland (in Icelandic). Downloaded in May 2011 from www.forsaetisraduneyti.is/media/efnahagsleg_vold_kvenna/EVKskyrsla.pdf

Proppé, H. (2004). Hér er ég, bara kyngdu því – rými, vald og andóf í íslenskum sjávarbyggðum. Í Irma Erlingsdóttir (Ed.), *Kynjafræði – Kortlagningar*. Reykjavík, Rannsóknarstofa í kvenna- og kynjafræðum við Háskóla Íslands. p. 293 – 322.

Rye, J. F. (2006). Rural youths' image of the rural. *Journal of Rural Studies*, 22, p.409 – 422.

Sampford, C. (2010). Re-conceiving the good life – the key to sustainable globalisation. *Australian Journal of Social Issues*, 45(1), p.13 – 24.

Schouten, M., Van der Heide, M. and Heijman, W. (2009). Resilience of social-ecological systems in European rural areas: theory and prospects. Paper prepared for presentation at the 113th EAAE seminar. <http://ageconsearch.umn.edu/bitstream/57343/2/Schouten%20Marleen%20cover.pdf>.

Shiva, V. (1993). Monocultures of the mind. *Trumpeter*: 10, 4. <http://www.icaap.org/iuicode?6.10.4.11>

Skaptadóttir, U., D. (2000). Women coping with change in an Icelandic fishing community: A case study. *Women's Studies International Forum*, 23(3), p.311 – 321.

Skålnes, S. (2004). *Young women in the districts and their expectations for the future*. Paper presented at the Conference on gender, environment and societal development in West Nordic and Arctic Countries in November 13 – 14., 2004 at Borgir, University of Akureyri.

Somerville, M.J. (2010). A place pedagogy for global contemporaneity. *Educational philosophy and theory*, 42(3), p.326-344.

Statistics Iceland. (2012). Taken from the website in February 2012. <http://www.statice.is>.

Stevenson, R.B. (2008). A critical pedagogy of place and the critical place(s) of pedagogy. *Environmental Education Research*, 14(3), p.353-360.

The Association of the municipalities of the Westfjords. (2007). Demographic development in the Westfjords. Downloaded from the website in February 2008 www.fjordungssamband.is/hagnytt/tolfraedi.

Twine, R.T. (2001). Eco-feminism in process. Downloaded in July 2012 from www.ecofem.org/journal.

Verstadt, B.S. (2001). Rural youth, gender construction and visions of a rural future. In Ingi Rúnar Eðvarðsson (Ed.), *Bright summer nights and long distances. Rural and regional development in the Nordic – Scottish Context*, 94 – 115. Akureyri. University of Akureyri,

Wiborg, A. (2001). Education, mobility and ambivalence. Rural students in higher education. *Young*, 9(1), p.23 – 40.

Williams, C.C and Millington, A.C. (2004). The diverse and contested meanings of sustainable development. *The Geographical Journal*, 170(2), p.99-104.

www.travelnet.is/ghi/isl/journey/sv_vf/index

www.extremeiceland.is/useful-information-about-iceland

<http://en.wikipedia.org/wiki/Westfjords>

Appendix 2

Conference and symposium talks

2008	Anna Guðrún Edvardsdóttir. <i>Higher education ad rural development</i> . Symposium at the Doctoral school of Icelands University School of education in June 2008.
2010	Anna Guðrún Edvardsdóttir. <i>Higher education and rural development</i> . Symposium at FUM (The Icelandic Association of Educational Research), a conference in February 2010.
2010	Anna Guðrún Edvardsdóttir. <i>Higher education and rural development</i> . Presentation at the SERA, The Scottish Education Research Association Conference, Stirling in November 2010.
2011	Anna Guðrún Edvardsdóttir. <i>Higher education and rural development-findings from Scotland and Iceland</i> . Symposium at the Doctoral school of Icelands University School of Education in January 2011.
2011	Anna Guðrún Edvardsdóttir. <i>Higher education and rural development – findings from Scotland and Iceland</i> . Symposium at the University Center of the Westfjords in February 2011.
2011	Anna Guðrún Edvardsdóttir. <i>Higher education and rural development – findings from Scotland and Iceland</i> . A conference of Icelandic Sociology in Ísafjörður in April 2011.
2011	Anna Guðrún Edvardsdóttir. <i>Science in service for the local communities</i> . Presentation at a conference about Knowledge centers in rural areas, hosted by the Ministry of Education and Culture in June 2011.
2011	Anna Guðrún Edvardsdóttir. Higher education, rural development and social sustainability. Paper presented at the EDEN Annual Conference <i>Learning and sustainability. The new ecosystem of innovation</i> in Dublin in June 2011.
2011	Anna Guðrún Edvardsdóttir. <i>Science in service for the local communities</i> . Presentation in a conference hosted by the Natural History Institute of East Iceland in Neskaupsstaður in October 2011.
2012	Anna Guðrún Edvardsdóttir. <i>Do education and research activities matter in rural areas?</i> Presentation in a symposium

	held by Nordic Network for Adult Learning in Kiruna, Sweden in February 2012
2012	Anna Guðrún Edvardsdóttir. <i>The knowledge society and rural development. A contradict discourse about knowledge centers in rural areas in Iceland.</i> Presentation at the Icelandic History Symposium in June 2012.
2012	Anna Guðrún Edvardsdóttir. <i>Science in service for the local community.</i> Presentation in a conference at the University Center of the Westfjords in September 2012.
	Anna Guðrún Edvardsdóttir. <i>The knowledge society and rural development. A contradict discourse about knowledge centers in rural areas in Iceland.</i> Presentation at the School of Education annual conference in October 2012.
2012	Anna Guðrún Edvardsdóttir. <i>Place and Space for women in a rural area in Iceland.</i> Presentation at the SERA in Ayr in Scotland in November 2012.
2013	Anna Guðrún Edvardsdóttir. <i>Place and Space for women in a rural area in Iceland.</i> Presentation at a Nordic conference in Nesjavellir in April 2013.
2013	Anna Guðrún Edvardsdóttir. <i>Education in rural areas. The knowledge society's effect on rural development and sustainability of communities.</i> Presentation at a Nordic conference in Reykjavík in September 2013,
2013	Anna Guðrún Edvardsdóttir. <i>Place and space for women in a rural area in Iceland.</i> Presentation at the Center for Women and Gender Research, University of Iceland in Reykjavík in September 2013.
2013	Anna Guðrún Edvardsdóttir. <i>Education in rural areas. The knowledge society's effect on rural development and sustainability of communities.</i> Presentation at the Association of the Municipalities of the South's annual meeting in Hotel Hekla in October 2013.
2016	Anna Guðrún Edvardsdóttir. <i>Discourse differences between regions in Iceland and Scotland.</i> Presentation at the FUM (The Icelandic Association of Educational Research) conference in May 2016.

Appendix 3

A quote from a Scottish participant	My analysis of this quote
<p>Robert: Yea, I think the college is about rural development. Everything we do is rural development in a way, as well as teaching the disciplines and having research students in rural development. I think, that we could maybe relate the college, the college of rural and local development, cause that's what we do. And I think we always have to be alert to that important function and we have not always been good at it and I think particularly in supporting local, small-scale entrepraunal activity, I think we could do better. There are things that we want our students to leave the college, either as graduates or whatever, to have the skills to develop a small businesses of some kind and contribute to the local economy and to understand economic development in a rural context. I think there has to be the next part of what we do and I think that people recognize that's part of our own government , that they see us as major economic driver in the region and have had a key role in rural development and that is way we try to make sure that we have provision, not just here in the main town in the island, but other islands as well, so we have centers down in three other islands, try to extend the provision, to create an employment in the other parts of the islands and to give students opportunities, even at the more remote communities of the islands to study without having to leave their local community, and that's important to us, but it is very difficult to achieve, you know, very difficult, but that is one of the reasons we've develop the on-line courses that we have. We have a center down on Barra which is two hundreds kilometers from here.....</p>	<p>A theme about the knowledge interaction with rural development.</p> <p>A key partner in local development.</p> <p>Economic aspect.</p> <p>The role of the knowledge society is to strengthen the economy in rural areas.</p> <p>The college as a economic driver</p> <p>Distribution of knowledge centres; active partners in rural development.</p> <p>The knowledge society interaction with rural development; create jobs.</p> <p>Learning centres in other parts of the island.</p>

Topics to discuss in interviews

Sent to participants before interviews took place

1. Individual

- age, residence, former employment
- education (formal – unformal)
- family status
- present job
- your mate's work,
- involvement in social activity
- unpaid work
- paid work
- does jobsatisfaction links to good salary or something else?
- Political involvement/influence

2. Education

Do you think that attending to university education had the effect that you have changed in any way or that it have had any effect on your future plans or your family?

Things we will discuss here are, e.g.:

to start an education, to be a student, after getting a degree, what you have gained by getting a university degree, the role of universities and other higher education institutions in rural areas.

3. The community

Has your community or is your community changing in any way, and if so how and why?

Things we will discuss here are, e.g.:

a description of your community, values and beliefs in the community according to sex and age, masculinity – femininity, how is your community doing in adjusting to the changing that has been in the society, natural resource management/ownership in your community, sustainability, involvement in local authorities politics.

4. Rural areas and rural development

Things we will discuss here are e.g.:

a definition of rural versus urban areas, the interaction of the knowledge society and rural development, the role of universities/research institution in rural development, realisation of rural development plans, involvement in rural development plans

5. Equal rights affair

Things we will discuss here are e.g.:

the status of women/ men in your community, power in the community, opportunities for you after graduation, your point of view of equal rights affair, feminism.

Appendix 5

Page 165

Stjórnvöld efla verulega starfsemi núverandi opinberra stofnana á svæðinu. Áhersla verði lögð á aukna rannsóknastarfsemi sem stuðli að nánu samstarfi og samvinnu fyrirtækja og stofnana á svæðinu um rannsóknir...

Háskólar geta skapað sérstök sóknarfæri fyrir svæðisbundna þróun utan áhrifasvæðis höfuðborgarinnar og þá einkum á framboði á störfum fyrir háskólamenntað fólk. Þannig styrkja háskólar líka svæðisbundna nýsköpun.

Page 166

... þekkingarframboð setra getur skapað grundvöll á tilteknum svæðum fyrir nýsköpun, eftt framtakssemi í atvinnulífi og gert staði aðlaðandi til búsetu fyrir menntað vinnuafli.

Stöðva viðvarandi fólksfækkun í smærri byggðakjörnum og í sveitum landsins.

Fjölga velmenntuðum einstaklingum á varnarsvæðum landsins.

Mikilvægt er að fjölga störfum í öllum greinum atvinnulífsins og þá ekki síst þeim störfum sem kalla á menntað starfsfólk.

Nýsköpun sem slík á ekki að vera bundin við eina atvinnugrein heldur þarf hún að miða að því að styrkja búsetu fólks, auk þess að laða nýtt fólk til svæðisins til þess að snúa við þeirri fólksfækkun sem orðið hefur á Vestfjörðum.

Page 167 – 168

Forsenda skilvirks nýsköpunarkerfis í þekkingarsamfélagi nútímans er flæði þekkingar á milli fyrirtækja, háskóla og rannsóknastofnana.

Efla þarf tengsl milli stoðkerfis, atvinnulífs og háskólanna.

Bæta þarf tengingu háskóla og atvinnulífs í rannsóknum og kennslu. Huga þarf að eflingu rannsóknastarfsemi sem sprettur af þörfum atvinnulífs og fer fram á vegum háskóla, einstaklinga eða fyrirtækja, en undir faglegri stjórn sérfræðinga.

Efling stoðkerfis atvinnulífsins. ...það er meðal annars gert með því að leggja áherslu á svæðisbundin þekkingarsetur sem samþætta þverfagleg fræðasvið og staðbundnar áherslur, sérkenni og styrkleika og eru líkleg til að skila auknum árangri í nýsköpun og atvinnuþróun.

Virk samvinna verði milli aðila sem starfa að menningu, menntun og nýsköpun til að styðja við skapandi greinar og frumkvöðlastarf.

Forsenda fyrir framförum og vexti er fólgin í getu atvinnulífsins til þess að stunda rannsóknir og fjárfesta í nýsköpun og þróun.

Lögð er sérstök áhersla á aukið samstarf háskóla, stofnana og fyrirtækja við rannsóknir og nýsköpun.

Page 169

Klasasamstarf hefur verið veigamikill þáttur í því að hnýta saman ólíka hagsmuni.

Talsvert var rætt um aðkomu háskólanna að stoðkerfinu og atvinnuþróun og að þörf væri að efla tengslin þar á milli t.d. með klasasamstarfi.

Stutt verði við myndun klasa þar sem tækifæri er fyrir hendi til ábyrgs vaxtar og áhersla lögð á fjárfestingu í menntun, vísindum og nýsköpun.

Áfram verði lögð áhersla á klasasamstarf, sérstaklega þríliða samstarf fyrirtækja, þekkingarstofnana og hins opinbera.

Í verkefnum menntunar og rannsókna í sóknaráætlun verður byggt á hugmyndafræði þekkingarþríhyrningsins þar sem atvinnulíf, hið opinbera og rannsókna- og menntastofnanir vinna saman að því að byggja upp þessi menntunarúrræði og

skapa þar með sterkari forsendur fyrir uppbyggingu atvinnu og byggðar....

Page 170

Með enn frekara samstarfi þekkingarsetra sín á milli, við háskóla, rannsóknastofnanir og fyrirtæki má nýta mannauð og aðstöðu enn betur og stórauka aðgengi nemenda og fræðimanna að auðlindum menningar og náttúru landsins.

Þekkingarsetrin greina forgangsverkefni og áherslur sem taka mið af styrkleikum hvers svæðis.

Til þess að bæta samkeppnishæfni einstakra svæða er nauðsynlegt að kortleggja hvert svæði fyrir sig og meta styrkleika og veikleika og viðurkenna samkeppnishæfni þeirra.

Kjarni atvinnustefnunnar er bætt samkeppnishæfni, nýsköpun og sjálfbær þróun atvinnulífsins þar sem byggt er á sérstöðu og styrkleikum hvers svæðis eða atvinnugreinar fyrir sig, menntun, rannsóknum og margvíslegum menningar og samfélagslegum þáttum.

Ferðapjónusta, skapandi greinar og þekkingariðnaður verða helstu vaxtagreinar svæðisins ásamt fullvinnslu á staðbundnum hráefnum í arðbæra vöru.

Page 171

Byggja þarf upp háskólamenntun á Vestfjörðum og önnur menntaúrræði sem tengjast kjarnaatvinnugreinum svæðisins.

...skiptir aukin þekking miklu máli, sér í lagi aukin þekking á nýtingarmöguleikum sjávarauðlindarinnar.

...stuðla að nýsköpun í menningarstarfsemi og styðja við menningarstarfsemi sem fjölgar atvinnutækifærum á svæðinu.

Sjálfbæra þróun þarf að útfæra á þremur megin sviðum; efnahags, samfélags og umhverfis.

Tryggja þarf ábyrga og sjálfbæra nýtingu náttúruauðlinda og samkeppnishæft atvinnulíf.

...stuðla að sjálfbærri þróun og atvinnusköpun og tryggja skynsamlega forgangsróðun fjármuna og auðlinda í þágu lífsgæða um land allt.

Leggja áherslu á umhverfismál og sjálfbærni.

Grundvöllur atvinnustefnunnar skal vera fjölbreytni, jafnræði, heilbrigðir viðskiptahættir, jafnrétti og græn atvinnuuppbygging í samræmi við hugmyndafræði sjálfbærrar þróunar.

Meginmarkmið byggðaáætlunar fyrir árin 2014-2017 eru að jafna tækifæri allra landsmanna til atvinnu, þjónustu og annarra lífskjara og stuðla að sjálfbærri þróun byggðarlaga um land allt.

Til þess að ná markmiðum byggðaáætlunarinnar verður hrint í framkvæmd aðgerðum sem falla undir fjögur skilgreind lykilsvið: innviði, sértækar aðgerðir, atvinnumál og opinbera þjónustu.