Curriculum, crisis and the work and well-being of Icelandic upper secondary school teachers

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Abstract
Iceland was one of the first countries to collapse in the global financial crisis of 2008 and it followed the OECD suggestion by opening upper secondary schools for young jobseekers, but without increasing the number of teachers. The upper secondary school level is also in a period of educational change, as it is in many other countries nowadays. The experience of Iceland provides valuable lessons for the international community. The article explores the effect of the economic crisis and the proposition that the policy is imposing on the work, well-being and working conditions of upper secondary school teachers in Iceland. The findings are based on a quantitative data from three surveys on upper secondary school teachers. In total, 52% of registered teachers in the Association of Teachers in Upper Secondary Schools returned the completed questionnaire in 2008, 49% in 2010 and 57% in 2012. The findings reveal significantly longer working days, increased pressure, workload and stress among teachers at the school level following the crisis and implementation of the curriculum, lower job satisfaction and less opportunity to serve students with special educational needs. The analysis suggests a need to invest more in the upper secondary school level as well as to focus on the professional development and well-being of teachers to ensure further improvement to prevent burnout and occupational drop-out.

Keywords: Crisis, educational changes, decentralised curriculum implementation, job satisfaction, occupational stress and workload, upper secondary school teachers

Introduction
The global financial crisis that started in 2007–2008 is considered one of the biggest since the Great Depression of the 1930s. The crisis led to the collapse of many financial institutions and banks, while it also saw the turndown of stock markets and businesses. The unemployment rate has increased in many countries and public institutions have also suffered (Claessens, Dell’Ariccia, Igan and Laeven, 2010). Iceland is no exception. In October 2008, the country’s financial and economic system collapsed when the largest banks went bankrupt. The collapse triggered a domino effect from the banks to public institutions, companies and homes, followed by financial and psychosocial effects throughout the whole of society (Hreinsson, Benediktsdóttir and Gunnarsson, 2010). The school system was not excluded...
from the effects of the crisis. Hereinafter, the effect of the collapse will be called the crisis.

Iceland has been undergoing educational reform since the summer of 2008, and the financial crisis exerted further additional pressure on the process. Legislation on early childhood, compulsory, and upper secondary education was passed in the spring of 2008 followed by national curriculum guides in 2011 that were simultaneously designed and published for the three school levels. The crisis, the legislation and implementation of the curriculum have all had a considerable impact on the education system in Iceland. This experience can provide valuable learning examples for the international community.

In this article, we explore how the economic crisis and the legislation from 2008, followed by a national curriculum released in 2011, have influenced upper secondary school teachers in Iceland. We ask: What characterises the impact of the economic crisis and curriculum implementation at the upper secondary school level in Iceland? Moreover, how has the crisis and implementation of the curriculum affected the work, well-being and working conditions of upper secondary school teachers? These questions will be answered by considering a biennial survey on the work, well-being and working conditions of upper secondary school teachers in Iceland and by exploring various kinds of background information and available documentary data.

**Background and documentary review**

This section provides basic information about the education system in Iceland. We describe the main changes stipulated by the education legislation and the curriculum for schools and teachers at the upper secondary school level. We also situate our study in a review of expenditure and central financial actions, upper secondary school teachers’ work along with domestic and international research on their job satisfaction, well-being, stress, burnout and occupational drop-out.

**The Icelandic education system**

The formal education system in Iceland comprises early childhood (age 1–6 years), compulsory (age 6–16 years), upper secondary (age 16–20 years), and higher education school levels. While most children attend preschool at the early childhood school level, it is not obligatory. The municipalities provide education at these two first levels, but the state operates most upper secondary schools (Compulsory School Act no. 91/2008; Early Childhood Education Act no. 90/2008; Upper Secondary School Act no. 92/2008).

Between 2002–2010, Iceland spent relatively the most on education of all member countries of the Organisation for Economic Co-operation and Development (OECD) (Table 1), or about 8.0% of its gross domestic product, compared to an average of around 6.0% in other OECD countries (OECD, 2006; 2007; 2008; 2009;
Total Icelandic public expenditure on education as a percentage of total public expenditure dropped from no. 4 to nos. 12–13 in the ranking of OECD countries after the crisis began in 2008 (OECD, 2009; OECD, 2011).

**The upper secondary school level**

The upper secondary school level has an average length of four years of study. It is not compulsory for students to study at the school level, but the provision is an educational duty of the state. After completing upper secondary school, students usually seek more specific education at the universities or join the labour market (Ministry of Education, Science and Culture (the MESC; in the references MESC n.d.b.).

The number of first-year students at the upper secondary school level has grown in the last decade (Statistics Iceland, 2013b), and some teachers are experiencing greater pedagogical changes and challenges due to the increased diversity of students (Reynisdóttir and Jóhannesson, 2013). In June 2012, 97% of all 10th graders in compulsory schools applied to enter the upper secondary school level (MESC, n.d.a). Although the educational level of Icelanders is below the OECD average, 85% of all 15–19-year-old Icelanders were registered in schools compared to 82% in other OECD countries for the 2005/2006 school year (OECD, 2008). This difference can be explained by the relatively high upper secondary school drop-out rate (MESC, 2011d).

Iceland has been below-average for a while in the OECD ranking (Table 1) in spending per student at the upper secondary level; indeed, it dropped from 15th place in 2005 to 23rd place in 2010 (OECD, 2006; 2007; 2008; 2009; 2010; 2011; 2012).

**Changes at the upper secondary school level**

The legislation for the upper secondary school level introduced in 2008 (Upper Secondary School Act no. 92/2008) followed by the National Curriculum Guide in 2011 (MESC, 2011a) include many educational changes that create an additional workload and pressure on teachers as will be demonstrated below.

**Changes to education legislation and curriculum development for the upper secondary school level**

The main differences between, on one hand, upper secondary school law no. 80/1996 and the previous curricula for the school level released in 1999 and the revised version in 2004 (MESC, 1999, 2004) and, on the other hand, law no. 92/2008 and the National Curriculum Guide in 2011 (MESC, 2011a) are set out below.

First, a new credit system called “upper secondary school credits” was introduced that takes into account a student’s contribution in terms of estimated time spent on learning, instead of the number of lessons taught each week. Second, curricular design and implementation for schools was decentralised. Now the National Curriculum Guide includes a general section of a moderate length (102 pages) and only has three
Table 1. Key facts about Iceland versus the OECD, on average. Source: Statistics OECD (2007–2012)

|                                      | 2007** | 2008** | 2009** | 2010** | 2011** | 2012** |
|--------------------------------------|--------|--------|--------|--------|--------|--------|
|                                      | Iceland | OECD average | Iceland | OECD average | Iceland | OECD average | Iceland | OECD average | Iceland | OECD average |
| Total public and private expenditure on education as a percentage of Gross Domestic Product | 8.0% | 5.8% | 8.0% | 5.8% | 8.0% | 5.7% | 7.8% | 5.7% | 7.9% | 6.1% | 8.1% | 6.2% |
| Iceland rank*                        | 1 of 28 | 1 of 28 | 1 of 28 | 1 of 28 | 1 of 31 | 1 of 37 |
| Total public expenditure on education as a percentage of total public expenditure | 17% | 13.4% | 18% | 13.2% | 18.1% | 13.3% | 17.4% | 13.3% | 13.1% | 12.9% | 15.3% | 13.0% |
| Iceland rank*                        | 4 of 23 | 4 of 25 | 4 of 27 | 5 of 28 | 12–13 of 31 | 7 of 37 |
| Annual upper secondary expense/student in US Dollars using purchasing power parity | 7,330 | 7,884 | 8,004 | 8,366 | 8,196 | 8,486 | 7,807 | 8,746 | 8,290 | 9,396 | 8,644 | 9,312 |
| Iceland rank*                        | 15 of 25 | 11 of 24 | 17 of 26 | 18 of 27 | 19 of 31 | 23 of 37 |

*After descending values.

**The publishing year. The values represent two years before the publishing year.
compulsory subjects, i.e. Icelandic, Mathematics, and English, across the programmes. The schools have the freedom to retain traditional subjects from the 1999 curriculum or adopt new ones, implement interdisciplinary work and cross-curricular courses according to the needs and diversity of students. The guide has a definite focus on knowledge, skills and competence-based education as imported from the European Commission (2008) instead of the mostly knowledge-based focus of the 1999 curriculum. In addition, there are six fundamental pillars – i.e., literacy, sustainability, democracy and human rights, equality, health and well-being, and creativity – that are meant to guide the curriculum across all sections of school communities from administration to teaching and learning. Third, vocational and academic studies are given equal legal status. Along with a stronger emphasis on programmatic diversity and increased support for students with special needs, this is meant to make upper secondary education more appealing. The aim is to reduce the drop-out rate at the school level and draw a wider variety of students into the schools to raise the national formal education level.

These changes have brought about different responsibilities for upper secondary school teachers whereby their role has expanded from simply teaching to participating in educational reform:

Teachers cooperate with school administrators on the development of school curriculum guides consistent with conditions and special emphasis at each school level. It is the responsibility of teachers to implement professionally in their teaching and other school activities the stipulations of education law and the policy that is specified in the National Curriculum Guide. (MESC, 2011a, p. 12, English version)

However, this addition is not in line with the 2005 upper secondary school teachers wage contract that has not yet been updated and adjusted to the changed role of teachers. The contract includes instructions on how the working time of teachers should be divided between teaching, preparation, evaluation, and other work that reflects the 1999 curriculum (Ministry of Finance, 2005). An interview study with 12 experienced upper secondary school teachers in Iceland (Reynisdóttir and Jóhannesson, 2013) indicates, in harmony with the mentioned changes, that the participating teachers have experienced various changes in their practices. They pointed out additional paperwork, greater diversity in teaching methods and student backgrounds, increased cooperation between teachers, more meetings, the implementation of information technology, and a stronger focus on curriculum writing and implementation.

In addition, all teachers are now required to have a master’s degree, taking effect in 2011 (Act on education and requirements of teachers and school heads at the early childhood, compulsory and upper secondary school levels no. 87/2008). This means that upper secondary school teachers now need to have completed at least five years of university education instead of the minimum four years as before.
The reform stipulated in the 2008 legislation and the 2011 National Curriculum Guide emphasises the decentralisation of curriculum design and the implementation for each school, the competencies and the fundamental pillars, which require the involvement of all educators and other staff members of a school. This provides opportunities for professional development. If the reform is put into practice as intended, some quite profound changes might take place based on a holistic vision of learners’ actions with the use of more diverse teaching and learning methods. Schools that already have a wide mix of study courses can offer an even broader range in the areas of the arts, vocational and academic subjects to meet the needs of an ever more diverse student population in terms of learning abilities, special educational needs, disabilities, and bilingual and foreign language students. However, the developments accompanying the education reform process clearly illustrate the extra pressure, work and expectations being placed on teachers. They have additional responsibilities and an increased focus on their professional development. The changes also apply to their rethinking, designing and changing the curriculum and putting those changes into effect.

Curriculum implementation in turmoil?

Full implementation of both the 2008 legislation and the 2011 National Curriculum Guide for the upper secondary school level has been delayed until 2015 by additional legislation (Additional Act no. 71/2010). The Minister of Education, Science and Culture appointed a committee made up of the main upper secondary school stakeholders. The committee worked from August 2011 to October 2012 to develop new division of the working time for teachers to meet the requirements of the upper secondary school credits, the wider diversity of students, demands for diverse teaching methods and decentralisation of the curriculum design and its implementation in schools. The committee’s aims were also to create more opportunities for cooperation, enhance support, and to keep the ongoing trust in teachers’ professionalism (MESC, 2011b).

The committee’s work ended on 24 October 2012 with an agreement that was then voted against by 74% of the education professionals voting (Icelandic Teachers’ Union election board, 2012). This rejection was followed by a public debate between the Minister of Education, school leaders, teachers and the President of the Association of Teachers in Upper Secondary Schools in an Icelandic newspaper called Fréttablaðið. One school leader said that he had expected a longer delay in implementation due to the lack of cooperation with educators; the Minister did not anticipate such a delay. She was disappointed with the results as she had expected this contract would have improved the inadequate salaries of upper secondary school teachers. One teacher mentioned how amazing it was to expect that teachers would do this extra work on implementation “for free”. The President of the Icelandic Teachers’ Union expressed disappointment with the meagre salary
increase. She further noted that the union would thereafter encourage educators not to participate further in implementation of the curriculum (Fréttablaðið, p. 12, 2012.11.15).

The board members of the Association of Teachers in Upper Secondary Schools explained the situation and their position in a letter to all union members dated 5 December 2012 (Association of Teachers in Upper Secondary Schools, 2012). The letter described various interrelated reasons for their rejection of the agreement: (1) the insufficient salary increase and poor long-term salary development compared with other similar occupations; (2) the unclear implementation strategy and limited dedication of implementation funds; (3) accumulated dissatisfaction with the crisis at the upper secondary school level and the more difficult working conditions; (4) a fear of the new working definitions; and (5) a lack of knowledge regarding the content of the agreement, involving three separate aspects: (a) increased salaries; (b) more educational funds for schools; and (c) further work to prepare the new working definitions of educators. The new working definition means, for example, that teachers who teach different subjects and different and diverse student groups do not have the same teaching load, which is in line with the 2008 legislation (no. 92) which focuses on the work contribution of the student instead of the number of lessons taught each week.

**The government’s action plan for education in times of crisis**

Because education is considered a good investment for individuals and society and an entry ticket to the labour market, the OECD recommends that countries strengthen their education systems, especially in times of crisis. Governments are advised to revise the funding of education at the upper secondary level and in higher education since the age groups usually attending these school levels are vulnerable to unemployment (OECD, 2009).

The Ministry of Education, Science and Culture (2012a) launched two extension projects after the crisis in line with the OECD suggestions: Education – a better way to the future (í. Nám er vinnandi vegur) and Educational opportunities for 25-year-olds and younger (í. Aukin námstækifæri fyrir 25 ára og yngri). Both projects aimed to ensure that all people younger than 25 would be admitted to an upper secondary school, to offer new learning opportunities for jobseekers, and to increase the national formal education level by improving educational access at the upper secondary and university levels. As a result, approximately 1,500 students were placed in seven upper secondary schools in addition to the students already enrolled there (MESC, 2012a).

The actual average ratio between teachers and students has changed during the crisis (Figure 1). After 1999, the student/teacher ratio had dropped mainly due to an increasingly diverse student population at the school level and the more educational opportunities available in diverse programmes (MESC, 2011b and c; Statistics
Iceland, 2013a, Statistics Iceland, 2013b). However, after 2007 the number of
teachers has been almost constant – just over 1,900 teachers – while there has been
a 4% increase in the number of students (from 26,158 to 27,118). This means the
ratio of students to teachers has again risen and is slightly higher than it was in
1999 (latest figures from 2011) (Statistics Iceland, 2013a, Statistics Iceland, 2013b).

The working conditions and salaries of upper secondary school teachers

The total hours spent by upper secondary school teachers with students in class
during the 2003/2004 school year was on average 6% higher in Iceland than
in other OECD countries. Icelandic teachers also have 1,800 working hours a year on
average compared to approximately 1,700 hours in other OECD countries (OECD,
2006).

The annual salary of upper secondary school teachers is among the lowest in
OECD countries when compared with gross domestic product per capita. In 2005,
the average upper secondary school teacher’s salary ratio compared to other OECD
(2007) countries was 0.88, and in 2010 it had dropped to 0.68 (OECD, 2012).

Table 2. Annual upper secondary teacher’s salary (in USD) in public institutions 2008–
2010. Source: Statistics OECD, 2012
The average salary of upper secondary school teachers with 15 years of work experience in Iceland fell 12.1% between 2008–2010 compared to an average 10.2% reduction in the OECD (Table 2). The average teacher salary in 2010 in Iceland was on average 31.8% lower than it was in other OECD countries (OECD, 2012).

In total, 1,376 (73%) of all upper secondary school teachers held at least a full-time upper secondary school position in the 2011/2012 school year. The ratio between part- and full-time positions has been almost constant since 2005, although the number of teachers working more than full-time changed after the crisis began (Figure 2). The majority of upper secondary school teachers had been teaching a number of lessons equivalent to a 100–124% position since 2001, and the ratio of teachers who had taught more than 124% of a full-time position, dropped in the 2009/2010 school year as well as in the 2011/2012 school year (Statistics Iceland, 2013c).

The gap between the salary for a full-time position and the total salary of teachers has decreased since the crisis (Figure 3) in line with the information in Figure 2. The daytime salary has been almost constant since 2010, and in 2010 the total salary decreased below the 2008 level, but it started to rise again in 2011. The gap between daytime and total salary shrank by 10 percentage points between 2008 to 2010 and has been steady since then (Jakobsson, 2012).

The crisis seems to have not only had negative effects. For instance, the number of licensed teachers has increased. In October 2011, the ratio of licensed teachers was 87% compared to 76% in 2008 and 74% in 1999. The gap between the genders...
Job satisfaction, stress, burnout and occupational drop-out

Reform and crisis can impact the work, working conditions, job satisfaction and well-being of faculty members (Fullan 2007; Houtman and Jettinghoff, 2007; Kotter, 1996; Milquet, 2009; Reynisdóttir and Jóhannesson, 2013).

The World Health Organisation (WHO) defines well-being as a component of several factors such as economic and political status, security, freedom and culture that affects the social, mental and physical health of individuals (Corvalan, Hales and McMichael, 2005; Üstün and Jakob, 2005). The occupational well-being of individuals is enhanced when the professional needs of a staff member are constantly met (Doble and Santha, 2008).

WHO defines work-related stress as an imbalance between working demands and environmental or personal resources at work. Workers can experience stress when the work demands placed on them do not match their knowledge, skills, or ability to cope at work. Work-related stress can cause reactions that can affect the physical, mental or social well-being of individuals (Houtman and Jettinghoff, 2007).

According to the European Agency for Safety and Health at Work, occupational stress is the most common health problem in Europe. It negatively affects about 20\% of the workforce in the labour market (Milquet, 2009). Workers’ poor occupational health and reduced working capacity is estimated to cause an economic loss of up to 10–20\% of the gross national product (Houtman and Jettinghoff, 2007). A study

(Figure 4) in licence terms had almost closed in 2008 but is now growing again. In total, 82\% of the male teachers had a teacher licence in 2011/2012 compared to 91\% of the female teachers. However, right before the crisis in 2008, 75\% of the male teachers had a licence compared to 80\% of the female teachers (Statistics Iceland, 2013a).

![Figure 4](image-url)
conducted by Gallup indicated that 27% of Iceland’s labour force had experienced work-related stress, while 42% said they had too much to do (Public Health Institute of Iceland and Administration of Occupational Safety and Health in Iceland, 2008).

The teaching profession experiences high levels of occupational stress and workload (Antoniou, Ploumpi and Ntalla, 2013; Klassen and Chiu, 2010; Ragnarsdóttir, Matthíassdóttir and Sigurðsson, 2010; Schwarzer and Hallum 2008). It is well known that stress can lead to burnout (Evans, 2001; Montgomery and Rupp, 2005; Ingersoll, 2001) and decreased occupational well-being and well-being of individuals (Doble and Santha, 2008; Houtman and Jettinghoff, 2007). Burnout refers to emotional exhaustion, reduced personal accomplishment and depersonalisation. It is common among occupations that are in close professional contact with other people, like teachers (Montgomery and Rupp, 2005).

Job satisfaction includes how faculty members experience the work performed, attitudes towards it and the positive and negative feelings the work causes (Riggio, 2003). Job satisfaction is important for both workers and employers (Ríkisendurskoðun, 2011).

Teachers’ job satisfaction is generally high (Judege, Thoresen, Bono and Patton, 2001; Klassen and Chiu, 2010; Ragnarsdóttir, Matthíassdóttir and Sigurðsson, 2010). The explanation lies in the high level of job performance and the nature of teaching (Judege, Thoresen, Bono and Patton, 2001). Some factors can negatively affect job satisfaction, such as stress, workload, low salary, mentally difficult work, administrative practices and governance (Fisher, 2011; Klassen, User, Bong, 2010; McCarthy, Lambert, Crowe and McCarthy, 2010; Ragnarsdóttir, Matthíassdóttir and Sigurðsson, 2010; Riggio, 2003). An interview study (Guðmundsson and Rafnsdóttir, 2012) of upper secondary school teachers in Iceland showed that inner motivational factors such as the nature of teaching, communication with students, autonomy, responsibility and recognition enrich teachers’ job satisfaction more than external factors like salaries, work environment and the arrangement of the job. This corresponds to research by Cuckburn and Haydn (2004) where they state that the nature of teachers’ work in the classroom, students’ progress, supportive colleagues and the school climate increase their job satisfaction.

It is well known that heavy work demands, occupational stress, burnout and low job satisfaction can lead to occupational drop-out among teachers (Evans, 2001; Ingersoll, 2001 and 2002; Jalongo and Heider, 2006). Altogether, 35% of Icelandic upper secondary school teachers experienced work-related stress in 2006 (Kristmundsson, 2007). A survey performed in 2008 by Ragnarsdóttir, Matthíassdóttir and Sigurðsson (2010) on upper secondary school teachers showed that almost half of the participants claimed their job was mentally difficult. About half reported work-related stress, and the majority of participants said that they worked on job-related tasks at home. Participants who were not satisfied with the governance of their administrators had significantly less job satisfaction than those
who were satisfied. This is in line with research by Bracket, Palomera, Mojsa-Kaja, Reyvs and Salovery (2010). They concluded that the job satisfaction of a secondary school teacher and personal accomplishment increases with supportive school heads.

**Survey data on upper secondary school teachers**

This section explores data made available through a biennial survey via questionnaires conducted by the first author and colleagues at Reykjavik University before the crisis started in 2008 and again in 2010, and in 2012 by the first author. The data collected in these survey waves of the study provide information on the work, well-being and working conditions of upper secondary school teachers in Iceland.

**Participants**

In January or February 2008, all upper secondary school teachers who had attended a teacher faculty meeting in their school, and were members of the Association of Teachers in Upper Secondary Schools, were invited to participate. The response rate was 87% of those attending the meetings. This yields a response ratio of 52% when taking the total number of registered teachers in the association into account. In early 2010 and 2012, every upper secondary school teacher in the association was invited to answer the questionnaire by either participating in a teacher faculty meeting in each school or agreeing in other ways to participate in cooperation with the association’s representative at their school. In total, 49% of teachers in the association participated in the survey in January or February 2010 and 57% in 2012.

The participation in the survey well reflects the gender composition and age distribution in the population of teachers as well as the distribution of upper secondary schools in Iceland (Table 3).

**Instruments**

All of the questionnaires included background questions, questions about professional cooperation, teaching and learning, well-being, workload, working conditions and attitudes to salaries and the number of working hours. Many of the questions from the 2008 wave were retained as monitoring questions, and additional questions were designed to reflect the broader research purpose of the survey wave in 2010 due to the economic crisis and implementation of the legislation. Some of those questions were also kept in the 2012 wave. The focus of the 2012 wave was implementation of the national curriculum published in 2011 as well as a data source for a committee that was aiming to design different working definitions for teachers. The questionnaire in 2008 consisted of 145 questions, in 2010 of 181 questions and in 2012 of 217. The questionnaires were piloted with a diverse group of eight upper secondary school teachers working in several schools (for more information, see Ragnarsdóttir, 2012).
Table 3. Participation scheme

|                          | 2008  | 2010  | 2012  |
|--------------------------|-------|-------|-------|
| **Faculty meeting**      |       |       |       |
| participation N (%)      | 901 (87%) | 901 (52%) | 892 (49%) | 1,043 (57%) |
| Population N (%)         | 901 (52%) |       |       |       |
| **Schools with teachers in the Association of Teachers in Upper Secondary Schools** | | | |
| **Total N**              | 30    | 31    | 32    |
| **Participation N**      | 28    | 31    | 32    |
| **Schools**              |       |       |       |
| **Age distribution**     |       |       |       |
| Population N (%)         | 113 (6%) | 111 (6%) | 84 (5%) | 38 (4%) |
| Participants N (%)       | 43 (5%) | 30 (4%) | 84 (5%) | 38 (4%) |
| Population N (%)         | 324 (18%) | 326 (17%) | 339 (19%) | 323 (33%) |
| Participants N (%)       | 151 (17%) | 156 (18%) | 183 (19%) | 165 (17%) |
| Population N (%)         | 565 (31%) | 551 (29%) | 507 (28%) | 280 (28%) |
| Participants N (%)       | 265 (30%) | 250 (29%) | 507 (28%) | 280 (28%) |
| Population N (%)         | 609 (32%) | 608 (32%) | 595 (32%) | 323 (33%) |
| Participants N (%)       | 280 (32%) | 294 (35%) | 507 (28%) | 280 (28%) |
| Population N (%)         | 234 (13%) | 292 (16%) | 307 (17%) | 165 (17%) |
| Participants N (%)       | 138 (16%) | 122 (14%) | 307 (17%) | 165 (17%) |
| **Gender**               |       |       |       |
| Population N (%)         | 979 (52%) | 997 (53%) | 953 (53%) | 618 (57%) |
| Participants N (%)       | 473 (54%) | 476 (56%) | 618 (57%) | 618 (57%) |
| Population N (%)         | 901 (48%) | 891 (47%) | 838 (47%) | 470 (43%) |
| Participants N (%)       | 400 (46%) | 375 (44%) | 838 (47%) | 470 (43%) |
| **Work experience**      |       |       |       |
| Participants N (%)       |       |       |       |
| <10 years                | 338 (38%) | 329 (37%) | 378 (39%) |
| 11–15 years              | 258 (29%) | 254 (30%) | 299 (32%) |
| 21–30 years              | 171 (20%) | 167 (19%) | 168 (18%) |
| 31–40 years              | 106 (12%) | 107 (12%) | 108 (12%) |
| >41 years                | 11 (1%) | 14 (1%) | 14 (1%) |
The following questions will be considered in this article: The length of the working day was captured with the question, “How long was your working day on average last autumn?” Response categories included: “0–3 hours”, “4–6 hours”, “7–9 hours”, “10–12 hours”, “13–15 hours”, and “>15 hours”. In the analyses, responses to the categories 0–3 and 4–6 hours were combined, as were the categories 13–15 and >15 hours. Paid overtime was captured with the question, “How many hours in paid extra time did you get on average per week last autumn?” Response categories included: “1–5 hours”, “6–10 hours”, “11–15 hours”, “16–20 hours”, “21–25 hours”, “26–30 hours” and “>30 hours”. In the analyses, responses to the categories 11–15, 16–10, 21–25, 26–30 and >30 hours were combined. Job satisfaction was captured with the question, “How is your job satisfaction?” using a scale from 1–10 where 1 is no/low job satisfaction and 10 is good job satisfaction. And all the other questions combined the response categories: “Strongly agree”, “Agree”, “Somewhat agree”, “Somewhat disagree”, “Disagree” and “Strongly disagree”. The analyses included a combination of strongly agree, agree and somewhat agree.

**Procedures and data analyses**

The research was approved by the National Bioethics Committee (licence numbers 07-148, 10-001 and 11-169), and registered with the Data Protection Authority in Iceland. Representatives of the Association of Teachers in Upper Secondary Schools distributed and collected the questionnaires in all cases and followed detailed guidelines.

The data were responses provided in paper questionnaires manipulated in the SPSS 21 statistical software for Windows and that software was also used for the data analysis. Descriptive statistics were used to describe the distribution of the data and the differences between groups within and between datasets were assessed with a chi-squared test. An independent samples t-test was used to assess the mean differences between groups within the same survey wave and a one-sample t-test to assess the mean difference between the survey waves.

**Limitations**

One limitation of the research lies in the impossibility to follow participants between the survey waves to evaluate the changes among participants in all survey waves since participation was anonymous. Another limitation may involve the procedure of the surveys because only teachers participating in a faculty meeting had the opportunity to participate in 2008, but every upper secondary school teacher was offered a chance to participate in the survey waves of 2010 and 2012. The group of teachers who did not attend the faculty meetings may have different attitudes to the educational changes and the crisis than those teachers who attended the meetings. These limitations need to be considered when drawing conclusions.
Findings

We focus on three aspects of our findings that characterise the impact of the economic crisis and curriculum implementation at the upper secondary school level in Iceland: First, teachers’ working hours and how these parameters have changed since 2008; second, the changes in teachers’ job satisfaction, workload, stress and well-being; and third, teachers’ involvement in educational reform.

Teachers’ working hours

The length of the working day decreased between 2008 and 2010 but started to increase again in 2012 (Table 4). In total, 51% of the teachers reported they worked more than nine hours in 2008, compared to 42% in 2010 and 50% in 2012. Upper secondary school teachers had a significantly longer working day in 2012 than in 2010 \( (\chi^2 (6) = 30.5, p < 0.001) \). Despite this increase, the ratio of teachers who received overtime payment within the schools dropped from 84% in 2008 to 78% in 2012, and the difference is significant \( (\chi^2 (2) = 8.9, p < 0.05) \) between the survey waves. In addition to this change, the amount of paid overtime also dropped. In 2008, 34% of teachers received more than 10 hours of paid overtime per week compared to 10% in 2012. The drop in the amount of paid overtime is significant \( (\chi^2 (14) = 197.5, p < 0.001) \).

A similar pattern (Table 4) appeared among those teachers who did not receive paid overtime (in a 100% position). Those teachers worked a similarly long working day in 2008 and in 2010, but their working day was longer in 2012 than it was in 2010. In 2010, 20% of them worked 10 hours or more per day compared to

| Table 4. Length of the working day and paid overtime for extra work |
|---------------------------------------------------------------|
|                  | 2008 N (%) | 2010 N (%) | 2012 N (%) | P-value |
| Length of the working day |                |            |            |         |
| ≤ 6 Hours          | 29 (4%)     | 40 (6%)    | 44 (5%)    | p < 0.01|
| 7–9 Hours          | 342 (45%)   | 377 (52%)  | 387 (45%)  |         |
| 10–12 Hours        | 297 (40%)   | 255 (36%)  | 305 (36%)  |         |
| ≥ 13 Hours         | 89 (11%)    | 48 (6%)    | 122 (14%)  |         |
| Rate of teachers with paid overtime |            |            |            |         |
| 1–5 Hours          | 715 (84%)   | 697 (82%)  | 750 (78%)  | p < 0.05|
| 6–10 Hours         | 192 (27%)   | 279 (40%)  | 388 (54%)  | p < 0.01|
| > 10 Hours         | 242 (34%)   | 167 (24%)  | 74 (10%)   |         |
| Paid overtime      |                |            |            |         |
| 1–5 Hours          | 715 (84%)   | 697 (82%)  | 750 (78%)  | p < 0.01|
| 6–10 Hours         | 192 (27%)   | 279 (40%)  | 388 (54%)  |         |
| > 10 Hours         | 242 (34%)   | 167 (24%)  | 74 (10%)   |         |
42% in 2012, and the difference is significant between the research periods ($\chi^2 (6) = 15.6$, $p < 0.05$).

**Teachers’ job satisfaction, workload, occupational stress, and well-being**

In 2012 (Table 5), 77% of upper secondary school teachers felt that the number of students in each class was a problem compared to 62% in 2008, and the difference is significant ($\chi^2 (10) = 63.7$, $p < 0.001$). In 2012, 35% of teachers had time to support students with special needs compared to 43% in 2008. The difference is also significant ($\chi^2 (10) = 23.5$, $p < 0.01$). The same trend appears with regard to occupational stress; in 2012, 59% of teachers experienced stress at work compared to 43% in 2010, and the difference is significant ($\chi^2 (5) = 64.6$, $p < 0.001$) between survey waves. In 2012, 54% of teachers experienced an uneven workload and an uncompleted task pile compared to 44% in 2008, and again the difference between survey waves is significant ($\chi^2 (10) = 57.2$, $p < 0.001$).

The group of teachers who experienced problems linked to the number of students in class reported the following aspects which differed significantly from those teachers who did not report a problem with the student numbers in each student group in 2012: they disagreed (519 (72%)) with having time to support students with special needs ($\chi^2 (5) = 64.8$, $p < 0.001$), they agreed (417 (73%)) they experienced stress at work ($\chi^2 (5) = 33.6$, $p < 0.001$), and agreed (425 (58%)) they experienced an uneven workload and that uncompleted tasks were piling up ($\chi^2 (5) = 28.0$, $p < 0.001$).

In 2012, more than two-thirds of the upper secondary school teachers claimed they did not have enough time to support students with special needs. Further, a little less than two-thirds experienced stress at work, and more than half the teachers experienced an uneven workload and the piling up of uncompleted tasks. In addition, almost four out of five teachers experienced problems that were linked to the number of students in each class. Those teachers were significantly less satisfied with their job than their colleagues who did not experience such a workload (Table 5).

Teachers’ job satisfaction at the upper secondary school level is relatively high (Table 5), but it dropped between the research periods. Teachers were significantly less satisfied at work in 2010 than they were in 2008 ($t (864) = -2.0$, $p < 0.05$), and their job satisfaction decreased significantly again from 2010–2012 ($t (1132) = -3.8$, $p < 0.001$) followed by increasing shares of teachers scoring job satisfaction with 5 and below on a scale from 1–10.

**Teachers in educational change**

Upper secondary school teachers are generally more positive and secure with regard to the legislation (Table 5). In 2012, 57% of upper secondary school teachers felt that the legislation would strengthen the school level compared to 48% in 2010.
Table 5. Workload, occupational stress, job satisfaction and attitude to the educational change in 2008, 2010 and 2012

|                                                                 | 2008 N (%) | 2010 N (%) | 2012 N (%) | P-value between survey waves | Mean job satisfaction of those who agree in 2012 | Mean job satisfaction of those who disagree in 2012 | t-test         |
|----------------------------------------------------------------|------------|------------|------------|------------------------------|-----------------------------------------------|-----------------------------------------------|---------------|
| I experience a problem linked to the number of students in each class | 526 (62%)  | 585 (69%)  | 736 (77%)  | p < 0.01                     | 7.6 (1.6)                                     | 8.1 (1.5)                                     | t (380.9) = -4.1, p < 0.001 |
| I have time to support students with special needs               | 359 (43%)  | 316 (38%)  | 337 (35%)  | p < 0.01                     | 8.0 (1.5)                                     | 7.6 (1.6)                                     | t (934) = 4.3, p < 0.001  |
| I experience stress at work                                      | na         | 367 (43%)  | 601 (59%)  | p < 0.01                     | 7.3 (1.7)                                     | 8.3 (1.3)                                     | t (1111.7) = -10.9, p < 0.001 |
| I experience an uneven workload and the tasks are piling up      | 378 (44%)  | 366 (43%)  | 551 (54%)  | p < 0.01                     | 7.5 (1.6)                                     | 8.1 (1.5)                                     | t (987.8) = -6.2, p < 0.001 |
| I am worried about my position in the new legislation framework  | na         | 309 (39%)  | 313 (33%)  | p < 0.01                     | 7.3 (1.7)                                     | 8.0 (1.5)                                     | t (537.4) = -6.1, p < 0.001 |
| I feel that the legislation and the curriculum implementation cause increased stress | na         | 322 (40%)  | 483 (51%)  | p < 0.01                     | 7.4 (1.6)                                     | 8.1 (1.5)                                     | t (944.9) = -6.4, p < 0.001 |
| I think that the new legislation will strengthen the school level | na         | 380 (48%)  | 516 (57%)  | p < 0.01                     | 8.0 (1.4)                                     | 7.4 (1.8)                                     | t (730.9) = 6.1, p < 0.001 |
| Participants with job satisfaction ≤ 5                           | 55 (6%)    | 72 (9%)    | 100 (10%)  |                              |                                              |                                              |               |

|                                                                 | 2008 (N = 873) | 2010 (N = 865) | 2012 (N = 1030) | Mean (σ) | Mean (σ) | Mean (σ) |
|----------------------------------------------------------------|----------------|----------------|----------------|----------|----------|----------|
| Mean of job satisfaction on a scale from 1–10                   | 8.0 (1.4)      | 7.9 (1.6)*     | 7.7 (1.6)**   |          |          |          |

na = Not assessed.
*p < 0.05, **p < 0.01.
The difference is significant ($\chi^2 (5) = 32.7, p < 0.001$). In 2012, 33% claimed they were worried about their position in the revised legislation framework compared to 39% in 2010, and the difference is also significant ($\chi^2 (5) = 17.5, p < 0.01$). In 2012, 51% of teachers felt that the legislation and the curriculum implementation had led to greater stress compared to 40% in 2010, and this difference between the survey waves is significant ($\chi^2 (5) = 28.2, p < 0.001$). Those teachers were significantly less satisfied with their job in 2012 than their colleagues who did not experience worries and stress. More than half of the teachers reported they thought the legislation would strengthen the school level and that they were happier at work than those who did not believe in the quality of the legislation.

**Discussion and conclusions**

In this article we have shown examples in both the presented background and the findings of how the economic crisis and the educational changes have affected upper secondary school teachers in Iceland and the school level in general. At the beginning, we asked what characterised the impact of the economic crisis and curriculum implementation at the upper secondary school level in the country and how the crisis and the curriculum implementation had affected the work, well-being and working conditions of upper secondary school teachers.

Before the crisis, Iceland had an upper secondary school system which did not fare too well in international comparisons. The country was well below the OECD countries in spending and continued to drop in the OECD rankings after 2008 (OECD, 2006; 2007; 2008; 2009; 2010; 2011; 2012). It is therefore reasonable to say that the recession at the school level started well before the collapse in 2008.

As noted in the presented background, the number of teachers has been almost constant since the crisis hit Iceland, whereas the number of students at the upper secondary school level has increased (Statistics Iceland, 2013a, 2013b). This means that the student/teacher ratio has increased along with the teachers’ additional work, as the findings clearly show. Teachers experienced bigger problems linked to the student numbers in each class between the survey waves, which is again consistent with teachers reporting that they are not as able to respond to individual student needs in the classroom. The teachers’ responses suggest that current trends in addressing individual needs in the classroom contradict both the legislation (Upper Secondary School Act no. 92/2008) and the National Curriculum Guide (MESC, 2011a) where students are central in all aspects of schooling.

In addition, the ratio of upper secondary school teachers holding more than full-time teaching positions at the upper secondary school level in Iceland dropped between the survey waves despite the longer working days and the lower total wage of teachers (OECD, 2012; Jakobsson, 2012), and the increased student numbers while teacher numbers have remained constant (Statistics Iceland, 2013a, Statistics Iceland, 2013b). The system thus seems to be demanding an increase in workload
and the teachers are working harder. The survey data indicate more difficult working conditions and the perception of teachers that they are not receiving an appropriate reward for their work. The result appears to be less job satisfaction and heightened occupational stress. In 2006, 35% of upper secondary school teachers in Iceland experienced stress at work (Kristmundsson, 2007) compared to 59% in 2012. This is ought to be of great concern since it is well known that a high workload, working demands and occupational stress can lead to low job satisfaction (Fisher, 2011; Klassen, User, Bong, 2010; McCarthy, Lambert, Crowe and McCarthy, 2010; Ragnarsdóttir, Matthíasdóttir and Sigurósson, 2010) and burnout (Evans, 2001; Ingersoll, 2001; Montgomery and Rupp, 2005) that negatively affect individuals’ well-being (Houtman and Jettinghoff, 2007) as well as the well-being of the teaching profession (Doble and Santha, 2008). In line with many international research findings (Evans, 2001; Ingersoll, 2001, 2002; Jalongo and Heider, 2006), these combined working conditions could lead to occupational drop-out and the decreased productivity (Houtman and Jettinghoff, 2007) of the profession.

Many other factors have influenced the upper secondary school level in the last decade. It is therefore difficult to specify what exactly is a consequence of the crisis, what reflects implementation of the 2008 legislation and the 2011 National Curriculum Guide, or even what is an outcome of the country’s social and political changes and tensions in general. The economic crisis appears to be a main reason for the delay in implementing both the 2008 legislation and the 2011 National Curriculum Guide for upper secondary schools (Additional Act no. 71/2010). The government has become more patient with regard to implementing structural and other curricular changes due to the delay. The Icelandic Teachers’ Union believes that teachers should be paid extra for the implementation work, and the union members voted against an agreement with the Ministry of Education, Science, and Culture. The primary reason appears to be that union members believed they were not offered enough money for the perceived extra work involved in implementing the curriculum. Despite these findings, upper secondary school teachers were more positive regarding implementation of the legislation in 2012 than in 2010. This is in line with the interview study with teachers conducted in the spring of 2012 (Reynisdóttir and Jóhannesson, 2013). This attitude gives the schools a greater opportunity to focus more on the implementation and invest in internal operations, such as the quality of teaching and learning through educational reform (Hargreaves and Fullan, 2012) and professional development in good cooperation with the professional capital (Fullan, 2007; Hargreaves and Fullan, 2012) of the teaching profession. However, the implementation may be under serious threat. This is partly due to the economic situation and the current tensions between stakeholders over remuneration and work conditions in general, and in particular to the role of teachers in the implementation process.
It is well documented that change increases stress and insecurity among employees (Fullan, 2007; Hargreaves and Fullan, 2012; Kotter, 1996) and the teaching profession is no exception. In line with international research, our findings suggest that the impact of the legislative and curricular reform have placed extra pressure on teachers in times of crisis and created the described social tensions between stakeholders. It is important to follow a clear implementation strategy for such changes in cooperation with practitioners (Hargreaves and Fullan, 2012; Kotter, 1996). That is crucial since teachers are at the centre of the changes and because teachers have been required to change their practices according to the decentralised curriculum and its implementation (MESC, 2011a); it is thus important to actively involve them in the process (Fullan, 2007; Hargreaves and Fullan, 2012). Administrators who are leading the changes need professional support from the academic community, while the Ministry of Education, Science and Culture, and teachers in general, need time and support to develop as a team within the spirit of the curriculum.

Final words

In general terms, the OECD (2009) recommends revising expenditure on education at upper secondary school levels in times of crisis. Some signs are positive for the school level in Iceland, for instance there are more licensed teachers and extension programmes that are opening up schools to young jobseekers. These extension programmes have had a positive impact on society and on individuals who would otherwise have been vulnerable to unemployment. If such programmes are sustained and if schools manage to keep their licensed teachers, and to even attract more to fill the gaps caused by retirement, these effects could be understood in terms of positive crisis outcomes.

However, the negative outcome is the dramatic rise in occupational stress and workloads. The culture of a school is based on its human resources. Therefore, the focus should be on developing a work culture within schools whereby the well-being, job satisfaction and professional development of human beings are central. This would make it possible to create productive working environments and positive work cultures within schools.

It may be the right time for a considerable educational change at the upper secondary school level in Iceland, and it is possible that the crisis will only have a short-term effect. This view is supported by our findings regarding the more positive attitude of upper secondary school teachers to the educational changes and, in addition, the interview study showing that experienced upper secondary school teachers in Iceland consider the decentralisation of the National Curriculum Guide as one of its greatest advantages (Reynisdóttir and Jóhannesson, 2013). We believe we should divert the focus and invest in internal operations such as the quality of teaching, educational reform (Hargreaves and Fullan, 2012) and professional
development in close cooperation with the professional capital (Fullan, 2007; Hargreaves and Fullan, 2012) of the teaching profession. This is equally relevant to traditional subjects as it is to the development of new or integrated subjects and cross-curricular issues, such as the fundamental pillars of education. In addition, a manifesto (Huber, 2013) of defending and developing both education and educators globally is extremely important for global social capital in general.

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