

Article

Characteristics of the Authority Basis of Icelandic Compulsory School Principals in Comparison to Other TALIS Countries

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Abstract: The purpose of this paper is to explore the authority basis of compulsory school principals in Iceland by making a general comparison to the other participating countries in the OECD Teaching and Learning International Survey (TALIS) 2018, as well as by using Hofstede's cultural dimensions theory. The study utilizes data from principals in 48 of the countries that participated in the TALIS 2018. The authority bases of the principals and of the other governing agents are explored with regard to the key task areas, which range from managerial to curriculum tasks. The authority basis of the principals and the other agents in Iceland has commonalities with most of the other Nordic countries, as well as with Baltic countries, Anglophone countries (except for Canada (Alberta)), and with many Eastern European countries. On the basis of Hofstede's cultural dimensions model, Iceland is "individualist", with a low "power distance", and it allocates more responsibility to the principals and to the other school agents at the school level than it does to the authorities. The major implication of this study for the Icelandic context is the need to enhance and strengthen the role of the school boards in terms of the professional support for principals.

Keywords: principals; TALIS; authority; tasks; culture; Hofstede



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1. Introduction

The purpose of educational policies is to provide guidance for the conduct of schooling. Educational policies guide and influence schooling in the areas of governance, curricula, financial arrangements, the role of staff, to mention a few key areas. Miller [1] reminds us that, "educational policies do not exist in a vacuum, as they are interwoven into the fabric of a national society" (p. 470). Educational policy is, for that reason, in constant development on the bases of the context, the changes in the vision, philosophies, and messages from research, politics, etc.

The structural organization of educational systems and schools is a part of educational policy. In Iceland, municipal authorities operate, govern, and manage compulsory schools with principals, who lead the individual schools. According to the Compulsory School Act (Article 6) [2], the major responsibility of the municipalities is to operate and provide the facilities for schooling, to inspect and monitor the schools on the basis of evaluations of and comparisons with the policy ends, and to provide support for schools and their development. Iceland is divided into 69 municipalities, which vary in size, with the largest municipality operating numerous schools. Smaller municipalities may only run one small compulsory school [3–5]. The municipalities are mandated to establish school boards for policy development and for support for the conduct of schooling [2]. Many larger municipalities establish central offices to provide professional support services with regard to school affairs, while smaller municipalities may contract these services out.

The Compulsory School Act specifies that compulsory schools should be managed and led by principals (Article 7) [2]. Moreover, it states that the role of principals is to provide professional leadership and to be accountable to the municipal authorities with regard to

the school affairs. The role of staff meetings and school councils is for collaboration and the sharing of information. The authority basis of principals, as the directors and leaders of their schools, is therefore considerable.

Miller [1], who bases his observation on evidence from sixteen countries, states that “schools/school leaders are operating in rapidly changing national educational policy contexts that are demanding more from less and a much greater contribution to national economic development” (pp. 469–470). He also states that “schools are being reoriented towards national economic development and less towards social transformation, a fundamental aim of education” (pp. 469–470). This dichotomy can generate tension between the implementation of government policy and educating students according to their potentials and needs.

The tensions between the local authorities and the compulsory school principals in Iceland are part of the historical reality of schooling. Ásmundsson, Hansen, and Jóhannsson [5] studied the ideas that the school boards of compulsory schools have about their influence and impact. The findings indicate that the formal power of the school boards was mainly restricted to monitoring the adherence of the schools to the policy ends in the Compulsory School Act. In practice, however, the school boards extended their role by making policies with regard to the issues that are defined by the act as the tasks of individual schools. Additionally, Róbertsdóttir, Hansen, and Björnsdóttir [6] observe that the working conditions of the principals in Iceland have changed in recent years, and that the role of principals has become more complex. They claim that “the demands of the job continue to escalate”, and that “changes, in addition to causing a heavier workload, have increased the need for support for both new and experienced principals”, from local authorities and professional organizations (p. 18). The support was also quite variable between the municipalities, as the larger municipalities provided more support than the smaller municipalities. Although these tensions may not be regarded as extensive, they indicate signals of a dichotomy.

The friction and tension between the local authorities and the compulsory school principals seems to be, to some extent, nested in the elusiveness of the authority basis of these two parties of interest [5,7,8]. Since Iceland takes part in the TALIS (the OECD Teaching and Learning International Survey [9]), which outlines some of the key task areas of responsibility for principals, it is of interest to explore the authority basis of the compulsory school principals in Iceland, in comparison to those of other TALIS countries.

2. Theoretical Context

2.1. Authority Basis

Authority is often defined as the right to give orders and make decisions—i.e., to have influence over people’s behaviour. Hoy and Miskel [10] state that all organizations are established in order to fulfil goals, and that authority relationships are integral parts of life in organizations. According to Max Weber’s work on the sources of authority, authority can be based on charisma, tradition, and legality. Hoy and Miskel [10] point out that these basic concepts of authority have been extended, depending on the source of the legitimacy, which include: Formal legitimacy, when the authority is established through positions, roles, and regulations; informal legitimacy, when the authority is based on the allegiance of colleagues; or functional legitimacy, when the authority is based on a competency of some sort.

Schein [11] notes that the building blocks of the cultures in groups or organizations are formulated on relationships with different types of power and influence. He defines the “culture” in organizations as the behaviours that are based on the values and assumptions that operate as the frames of reference. Yimo, Chou, and Schubroeck [12] call attention to how group or organizational values are related to the social context, such as in Asian cultures, which are generally hierarchical and directive. Moos [13], on the other hand, observes that the cultures in Nordic organizations are democratic in nature. According to Moos [13], Nordic educational systems are the most decentralized educational systems in the world, and they emphasize relations on the basis of enabling rather than command:

“While Nordic school leaders mobilize teachers and middle leaders, there is a strong tendency in the UK and the USA that the school leaders take over the command” (p. 218). He also states that the preference in Nordic schools is to lead indirectly, with limited interventions from national agencies and politicians.

In a study of the similarities and differences in leadership and organizational justice across several countries, Pillai, Scandura, and Williams [14] conclude that leadership is “culturally contingent”, and “similar across cultures”. Their main conclusion, however, is “that there are more commonalities than differences in the leadership processes of different cultures” (p. 776). The authority bases of school principals is, accordingly, likely to vary somewhat between countries, with their different histories, traditions, and values that act as the frames of reference.

2.2. Task Areas of Principals

It is acknowledged that leaders have an influence on the quality of the educational provision and the achievement of students [15–18]. In their extensive study on the influence of leadership practices on student learning, Louis et al. [18] conclude that principals “are most effective when they see themselves as working collaboratively towards clear, common goals with district personnel, other principals, and teachers” (p. 282). Moreover, they conclude that, in high-performing schools, decision making is participatory in nature, and that the leadership practices are based on collaboration. Conversely, in low-performing schools, it is the opposite.

Many studies on the role and responsibilities of school principals indicate that they are changing. Some of these studies outline the changes in the working environment of principals in relation to new policies and regulations with regard to the use of information and technology, data protection and the processing of personal data, changes in the curricula, the pressure of accountability, and so forth, while others describe the changes in their role with regard to the time spent on significant activity types [19,20].

Hornig, Klasik, and Loeb [20] stress that principals play a critical role in the development of quality schools. In one study, in a large school district in the United States, on the time that principals spend on significant task areas, the authors grouped the task areas into six categories: administration, organization management, day-to-day instruction, instructional programs, internal relations, and external relations. They conclude that, on average, 30% of the daily working hours of principals are spent on administrative responsibilities (supervision, managing schedules, etc.), 20% are spent on organizational management activities (hiring, budgeting, etc.), and around 10% are spent on instruction-related tasks, including professional development work with regard to teachers.

Hansen, Jóhannsson, and Lárusdóttir [21] conducted studies in Iceland over a 25-year period that explored how compulsory school principals spend their time on significant task areas, and how they would have preferred to spend their time on these areas. The findings show that the principals spent most of their time on the area of school management, such as on tasks that involve finance, operations, and office administration. The findings also show that the principals would prefer to spend less time on this task area, and that they would like to spend more time on curriculum work, such as on tasks that are related to curriculum development, teaching methods, educational materials, etc. Furthermore, their findings indicate that the area of staffing (i.e., tasks such as the hiring and evaluation of, and the provision of professional support for, school staff members) takes up increasingly more of their time. The time on tasks may not, however, represent the importance that is placed on these activities, since some activities take more time and are more mandatory than others. The administrative procedures also differed between the school districts and the countries.

In a study project that concerns the nature of the existing research on school principals in 24 countries, Ärlestig, Day, and Johansson [22] state that the functions that are included in their role are, to a large extent, the same: “These are usually administration, instruction, operation, community, inclusion, and school improvement and effectiveness” (p. 5). They

also stress that these functions can vary between school districts and countries, depending on their sizes, aims, structures, locations, socioeconomic environments, etc. As an example, they observe that countries such as Mexico, India, the United States, and Germany have large multilayered school systems that differ widely in accordance with their geographical locations and socioeconomic environments. As a case in point, India has around 1.3 million schools, many of which are in rural areas, whereas, in countries such as Latvia, Estonia, Denmark, and Iceland, the schools are very few.

Moreover, the authors state that, in countries that have centralized administrative control and command structures, the “principals’ attention to instructional leadership is restricted because of too much administration and bureaucracy”, as they are “responsible for implementing government regulations” (p. 5). Moreover, in some countries, the principals have extensive teaching duties, while, in others, they have full responsibility over the school affairs and can decide on the teachers’ salaries according to their performances, such as in England and Sweden. The hiring of principals is also variable. In some countries, they are politically appointed or elected, while, in others, they are selected with equitable selection criteria. Accordingly, the tasks and responsibilities of school principals seem to be quite variable between the countries.

2.3. Cultural Differences

Hoy and Miskel [10] define the “organizational culture” as a “system of shared orientations that hold the unit together and give it a distinctive identity” (p. 177). They observe that the concept of the “organizational culture” in the research on school culture is very limited, but they acknowledge that the concept has been more researched in business organizations and societies in general. The framework, which was developed by Hofstede for comparing cultural elements, is widely used, but it is based on mapping generic cultural values in societies [23–27]. Hofstede’s cultural dimensions are outlined as follows:

The Power Distance. This dimension explains the inequality of the power distribution among the individuals in a society; i.e., the extent to which the less powerful members of organizations and institutions (such as the family) accept and expect that power is distributed unequally.

Individualism/Collectivism. This dimension refers to the power that a group or society has over an individual. In individualistic cultures, people are more autonomous, and their behavior is focused on their personal goals and choices. However, in collectivist societies, group interests dominate individual interests.

Masculinity/Femininity. In this dimension, cultures are divided on the predominance of the gender roles. For example, Japan, German-speaking countries, and some Latin countries display more masculine traits, such as assertiveness, competition, and material success, whereas Nordic countries display more feminine traits, with an emphasis on quality of life, interpersonal relationships, and a concern for the weak.

Uncertainty Avoidance. This dimension refers to an individual’s perception and capability of handling uncertain, unstructured, and unknown situations (i.e., a society’s tolerance for ambiguity).

The Long-Term Orientation (LTO) and the Short-Term Orientation (STO) Dimensions. The LTO dimension represents the virtues that are oriented towards future rewards, while the STO dimension is oriented towards avoiding embarrassing situations, and towards satisfying the needs of the society.

Indulgence versus Restraint. “Indulgence” stands for a society that allows the relatively free gratification of the basic and natural human desires that are related to enjoying life and having fun. “Restraint” stands for a society that controls the gratification of needs and regulates it by means of strict social norms.

Hofstede’s cultural dimensions have evolved over time, but his model is among the first that describes the cultural differences between countries. Kaur and Noman [28] claim that the cultures of the world are becoming increasingly interconnected through the effects of globalization, which facilitates the adoption of new values and beliefs, which are

primarily derived from Western countries; however, these values and beliefs may not be congruent with the traditions and emphases in other parts of the world. In their study on teaching in Malaysia, India, China, and Iraq, which is based on Hofstede's dimensions, the authors conclude, with regard to the changes in teaching practices, that the "biggest shift in teachers' beliefs was in moving away from the concept of power distance and adopting a closer relationship with their students in terms of involvement, discussions, support, and decision-making" (p. 1807).

MacBeath [29] links educational practices with Hofstede's dimensions and points out that low power distances and low uncertainty avoidance are Nordic characteristics. Such societies tend to have power relations that are "consultative or democratic", and have "the ability to feel comfortable in unstructured situations" with "as few rules as possible" (pp. v–vi). MacBeath also warns against "stereotypes and easy generalizations about 'Nordic countries'" (p. vi).

Spillane [30] indicates that differences by country clusters (such as Nordic and Anglophone) may be expected, but cultures as systems of shared orientations are likely to be continuously evolving. School leadership practices are variable between cultures, and, despite sharing many similarities, the task areas and responsibilities of principals change and develop. The authority of school principals, in one context, can be primarily based on legality, while, in others, it can be based on tradition, and so forth. Therefore, the authority bases of school principals are not likely to be the same in all cultural contexts.

It is, accordingly, of interest to explore the authority basis of compulsory school principals in Iceland by a general comparison to other TALIS countries. This will be facilitated by developing a typography of the authority bases of the TALIS countries by clustering the similarities and differences in the attributions of responsibility for school tasks.

The study is guided by the following questions:

- What characterizes the authority basis of compulsory school principals in Iceland in comparison to the other countries that participate in the TALIS?
- What patterns of the responsibility attributions can be identified between the countries in order to generate an international typology of the school authority basis?
- How is the authority basis in Iceland similar and how is it different to other Nordic countries?
- What is the relationship between the authority bases of the participating countries and their cultural characteristics as operationalized in the dimensions that were developed by Hofstede?

3. Materials and Method

The data that was utilized in this study are part of the Teaching and Learning International Survey [9], which is conducted by the OECD Secretariat and the participating countries in collaboration with the European Commission and an international consortium that is led by the International Association for the Evaluation of Educational Achievement (IEA), which includes the IEA Hamburg and the IEA Amsterdam, as well as Statistics Canada [31].

Participation. The data was collected from the principals in schools with ISCED Level 2 pupils from 48 countries that participated in the TALIS 2018. The participation and sampling details are outlined in the OECD documentation [31]. The participating countries were Australia, Austria, Argentina (CABA), Belgium (Flemish and Walloon communities), Brazil, Bulgaria, Canada (Alberta), Chile, China (Shanghai), Colombia, Croatia, Cyprus, the Czech Republic, Denmark, England (the United Kingdom), Estonia, Finland, France, Georgia, Hungary, Iceland, Israel, Italy, Japan, Kazakhstan, Korea, Latvia, Lithuania, Malta, Mexico, the Netherlands, New Zealand, Norway, Portugal, Romania, the Russian Federation, Saudi Arabia, Singapore, the Slovak Republic, Slovenia, South Africa, Spain, Sweden, Taiwan, Turkey, the United Arab Emirates, the United States, and Viet Nam. The sample consisted of 200 schools/principals per country/region as the main requirement. The average participation rate for the principals was 85.9%. If a school

declined participation, a new school that fulfilled the same sampling criteria was included in the sample, which yielded a 91.6% participation rate [31]. A participation rate of 75% or above was achieved by most countries/regions, with 44 of the 48 countries/regions exceeding 75%.

Procedure. The data was collected in 2017 and 2018 by a questionnaire, either online or on paper, which was administered by the authorities in the participating countries in collaboration with the international consortium that supervised the procedures. Confidentiality was promised in an introductory letter. The questionnaire took 45 to 60 min to complete.

The questionnaire. A Questionnaire Expert Group (QEG) developed the TALIS 2018 questionnaire from 2015 to 2017, and they based it on theoretical foundations and the countries' interests and contributions [31]. The principals' questionnaire addresses issues such as professional development, teaching beliefs and practices, school leadership, the school climate, induction and mentoring, feedback, job satisfaction, and background information about the principal and the school. The questionnaire development included a pilot phase with focus groups, a field trial, and extensive psychometric analyses prior to the main survey. Verifications of the national adaptations, translations, and layouts were also conducted [31].

In this study, the responses to Question 20 of the principals' questionnaire are utilized. The question assesses the authority basis of the governing agents (i.e., which agents or bodies bear the responsibilities for a set of important school task areas (i.e., the staffing, the budget, the school policies, the curriculum, and the instruction policies)) [32]. The question reads as follows: "Regarding this school, who has a significant responsibility for the following tasks?" A "significant responsibility" is described as "one where an active role is played in decision making". The principals responded by checking (or not checking) the boxes to indicate which of the five agents they believed had significant responsibility for each of the eleven school tasks, which yielded a total of 55 dichotomous choices. The participants were invited to "mark as many choices as appropriate in each row". The agents and tasks are listed in Table 1.

Analyses. The data analyses were conducted by using the IEA International Database Analyzer (IDB Analyzer, version 4.0.26) [33], the Statistical Package for Social Sciences (IBM SPSS Statistics 24) [34], and the Bowers Research Lab Heatmap Cluster Analysis (HCA) [35–37].

The percentages of the principals that attributed significant responsibility for each task to a specific agent were obtained for each country, and they represent a profile of the authority bases for the school tasks in each country. The averages of these percentages for the TALIS countries were combined, and they were computed and compared to those of Iceland.

The attributions of responsibility to different agents were correlated in order to examine whether attributing responsibility to one agent was associated with attributing responsibility to another. The TALIS correlations were based on the percentage profiles of the individual countries (i.e., $n = 11$ (tasks) \times 47 (countries) = 517 (unless missing values)) for each agent. The Iceland correlations are based on the country's average percentages for each task (i.e., $n = 11$ tasks \times 1 country = 11).

A heatmap (clustergram) was produced in order to explore the similarities and differences between the authority bases of the participating countries. Japan and Argentina (Buenos Aires) are excluded from this analysis because of missing values. The heatmap with a hierarchical cluster analysis (HCA) of the countries and variables was conducted using the Bowers Research Lab Heatmap Cluster Analysis [35,37–40]. The hierarchical cluster analysis is a multivariate method that uses distance measures to arrange datasets in such a way that those data patterns (in this case, the responsibility profiles) that are most similar are moved close to each other, and away from those that are dissimilar [38]. The cluster analysis is appropriate for exploratory purposes, where no hypotheses are put forward, because no prior specifications or statistical criteria are used to determine beforehand what constitutes a distinct cluster. A variety of (dis)similarity measures can be

used as the bases for the arrangement [41]. The heatmap presents a visual representation of the clusters and responses to the individual items [42].

Table 1. Percentages of principals in Iceland and other TALIS countries, on average, who attributed “significant responsibility” for a task to a specific agent.

Task Areas	Principal		Other Members of SMT		Teachers Not in SMT		School Governing Board		Authorities		Task Average	
	TALIS	ICE	TALIS	ICE	TALIS	ICE	TALIS	ICE	TALIS	ICE	TALIS	ICE
Appointing or hiring teachers.	69	99	25	48	6	1	15	1	34	2	30	30
Dismissing or suspending teachers from employment.	60	97	16	20	2	0	18	3	40	7	27	25
Establishing teachers' starting salaries, including setting paycales.	28	8	11	1	1	0	10	0	71	97	24	21
Determining teachers' salary increases.	29	7	11	1	1	0	12	1	71	97	25	21
Deciding on budget allocations within the school.	62	54	33	15	7	2	34	1	32	61	34	27
Establishing student disciplinary policies and procedures.	70	85	57	76	36	83	36	40	17	5	43	58
Establishing student assessment policies.	53	67	48	57	37	62	17	5	49	46	41	47
Approving students for admission to the school.	73	84	29	30	8	1	12	1	29	25	30	28
Choosing which learning materials are used.	44	47	47	45	67	97	15	0	21	8	39	39
Determining course content, including national/regional curricula.	36	48	37	40	44	48	11	7	58	74	37	43
Deciding which courses are offered.	57	77	45	58	32	49	24	7	46	55	41	49
Agent average	53	61	33	35	22	31	19	6	43	43	34	35

Note: ICE = Iceland. The TALIS average figures are the averages of the 47 country means, including Australia, with each country thus contributing equally to the means. Iceland is not included in the TALIS average.

The HCA was conducted on the variables (country percentages) that are standardized (z-scores). The distances between the responsibility profiles are based on the uncentered correlations, and by using an average linkage clustering algorithm [38] (i.e., “the distance measure between two cases is the mean pairwise distances between all items contained in the two cases” (p. 6)). The responsibility scores in different countries are displayed in different shades of red and blue. A high score is represented by a strong red colour, while the blue colour represents low scores. The pale colours represent the central scores. The strongest colours at the extremities of the scales (cold blue and hot red, respectively) range from -3 to $+3$ standard deviations.

A multidimensional scaling analysis (MDS) was conducted on the country profiles of the responsibility allocations by using a city block distance measure. Again, Japan and Argentina (Buenos Aires) were excluded because of the missing values in their responsibility profiles. A two-dimensional model was adopted (albeit, with rather high stress (stress = 0.166) by using Kruskal's Stress Formula 1; RSQ = 0.889).

In order to aid the interpretation of the dimensions, correlations were computed between the country scores on each MDS dimension and the scores that reflected the responsibilities for the school tasks. Furthermore, correlations were computed between the MDS dimensions and Hofstede's cultural dimensions in order to link the responsibilities with deeper cultural characteristics.

4. Results

4.1. Responsibility for School Tasks

In the TALIS, the authority bases of the principals and the other agents with regard to school affairs are explored in terms of eleven key task areas, which range from managerial to curriculum tasks. As is shown in Table 1, the defined agents are the school principals; the other members of the school management team (STM); the teachers who are not members of the school management team; the school governing board; and the authorities. For each task and agent, the table shows the percentage of the principals in Iceland and the averages for the TALIS countries that attribute “significant responsibility” for a task to a specific agent.

As the table shows, there is great variability in the responsibilities that are attributed to each of the five agents. The responsibility allocations also vary considerably by task. On average, in the participating TALIS countries, the principal is attributed the most responsibility. Across tasks, the principal is believed to have “significant responsibility” by 53% of the participants. This is followed by the authorities, who, on average and across tasks, are reported as to have significant responsibility by 43% of the participants. The least responsibility overall is attributed to the school governing board. Furthermore, an examination of the range of responsibility attributions indicates that these attributions varied considerably between the countries.

In Iceland, the average responsibility score for the principals is 61% (i.e., higher than the TALIS average). The average attribution of responsibility to the authorities is the same in Iceland as for the TALIS countries. Conversely, the attribution of responsibility to the school governing board is even lower in Iceland than it is in the TALIS countries, on average (6 vs. 19%). Appointing and dismissing teachers is a significant responsibility for the quasi totality of Icelandic principals, while it is only so for about two-thirds of the TALIS principals. A high proportion of Icelandic principals are also responsible for student admissions. Less than 10% of the Icelandic principals are responsible for establishing starting salaries and subsequent pay increases, compared to about one-quarter of the TALIS principals. The Icelandic principals are also more responsible for instructional matters, such as determining which courses to offer, the course content, and the student assessments, compared to the TALIS principals.

The role of the other members of the SMT is, on average, more important in Iceland than in the TALIS countries on matters such as discipline and the hiring of teachers. The SMT, however, has hardly any responsibility for determining salaries, both in the TALIS, on average, and in Iceland.

As in other countries, the teachers who are not on the SMT in Iceland have hardly any involvement in staffing or financial issues. The responsibility of Icelandic teachers lies in the areas of student discipline, student assessments, choosing the learning materials, and deciding which courses are offered. In these areas, the responsibilities of Icelandic teachers are rated higher than in the TALIS countries, on average.

Much less responsibility is attributed to the school governing board in Iceland compared to the TALIS average. The school boards in Iceland do not seem to have any responsibility at all for most of the tasks, except for student disciplinary issues.

The authorities in Iceland mostly have responsibility for the teachers’ salaries, and to a greater degree than in the TALIS countries on average. They are also more involved in the curricula, compared to the TALIS countries, but they have hardly any responsibility for staffing issues (hiring or dismissing).

To assess the relationships between the attributions of the responsibilities to the different agents, the correlations between the agents’ responsibility profiles were computed for the TALIS and for Iceland separately (Table 2).

A high number of responsibility attributions to the principal are associated with a low number of responsibility attributions to the authorities, and vice versa. This is the case in both Iceland and in the TALIS countries overall. In fact, the higher number of responsibility attributions to the authorities is negatively associated with the responsibility scores of all

of the other agents (i.e., the principal, the others on the SMT, the teachers not on the SMT, and the school governing board), which indicates a polarization, or a dichotomy, in the authority bases between the four school-level agents, on the one hand, and the authorities on the other.

Table 2. Correlations between agents' responsibility attributions: TALIS correlations in lower triangle, and Iceland correlations in upper triangle.

Agents	Principal	Others on SMT	Teachers Not in SMT	School Governing Board	Authorities
Principal	-	0.63 *	0.10	0.30	−0.83 **
Others on SMT	0.45 **	-	0.75 **	0.64 *	−0.60 *
Teachers not on SMT	0.12 **	0.63 **	-	0.51	−0.32
School governing board	0.20 **	0.17 **	0.08	-	−0.32
Authorities	−0.79 **	−0.53 **	−0.39 **	−0.35 **	-

* = $p < 0.05$, ** = $p < 0.01$ (2-tailed). Note: SMT = school management team.

4.2. Patterns of Responsibility Attributions between Countries

There is a large variability between the countries in terms of how the responsibility is attributed. For more than three-quarters of the responsibility attributions, the range from the lowest to the highest percentage for any given task is 70 percentage points or more. To explore the authority basis in Iceland in conjunction with those of other countries, it is necessary to go beyond the TALIS averages and examine the differences at the country level, and how they are grouped. For that purpose, a heatmap with a cluster analysis (HCA) was produced, which shows the responsibility attributions for each task in each country.

The heatmap (Figure 1) presents the findings in the shape of a “tree” (or a “dendrogram”), where each item in the similarity analysis is located on a branch. The countries with similar responsibility profiles are clustered close together on the tree branches. The school tasks by agents are also cluster analyzed. Each row displays the responsibility profile of one country. In Figure 1, the colour of each square (in shades of red and blue) reflects the percentage of the principals in each country who attribute a relatively high (red) or low (blue) degree of responsibility for a certain task to a particular agent. To take an example, the square on the top left of the heatmap is red. This reflects the fact that a relatively high percentage of Latvian participants believe that principals bear “significant responsibility” for “approving students for admission”. The “PRI” suffix indicates that the square represents beliefs about the responsibility of the principals. Furthermore, the red colour of the bottom right square indicates that, in Saudi Arabia, the authorities (the “AUT” suffix) bear a high degree of responsibility for the learning materials compared to the authorities in other countries. The comparisons between the countries on each variable are made in relative terms (i.e., the responsibility is designated as high or low on certain variables in relation to the other countries, and not necessarily in absolute terms).

At the most basic level of differentiation, the cluster analysis splits the countries into *two* main branches. They indicate a dichotomy in the authority bases of the countries, between those where a lot of responsibility rests with the principals and the other agents at the school level (Branch B), while, in other countries, the responsibility lies, to a considerable degree, with the authorities (Branch A). Overall, the percentage profiles of the heatmap's two main branches (Branches A and B) are consistent with Table 2. Each main branch has a set of subclusters. The two main branches consist of the following countries:

Branch A consists of 23 countries, which largely include Mediterranean, Latin American, southeastern European, and Arabic/Muslim countries.

Branch B also consists of 23 countries, which include northern European countries (e.g., Nordic and Baltic states) and Anglophone countries (except for Canada (Alberta)), including Malta and Singapore, who have historic ties with the Anglophone core.

The cluster membership of some countries deviates from these generic descriptions, e.g., Bulgaria and Chile (in Branch B), and Finland and Canada (Alberta) (in Branch A). The

fine-grained analyses of the responsibility attributions (by comparing the country rows) reveal why certain countries fall into unexpected clusters or branches: Canada (Alberta) differs from England and New Zealand in the more limited responsibility that it attributes to the school management teams. Furthermore, China (Shanghai) and Taiwan differ largely in terms of the responsibility that they attribute to school governing boards (it is considerable in Shanghai, but low in Taiwan).

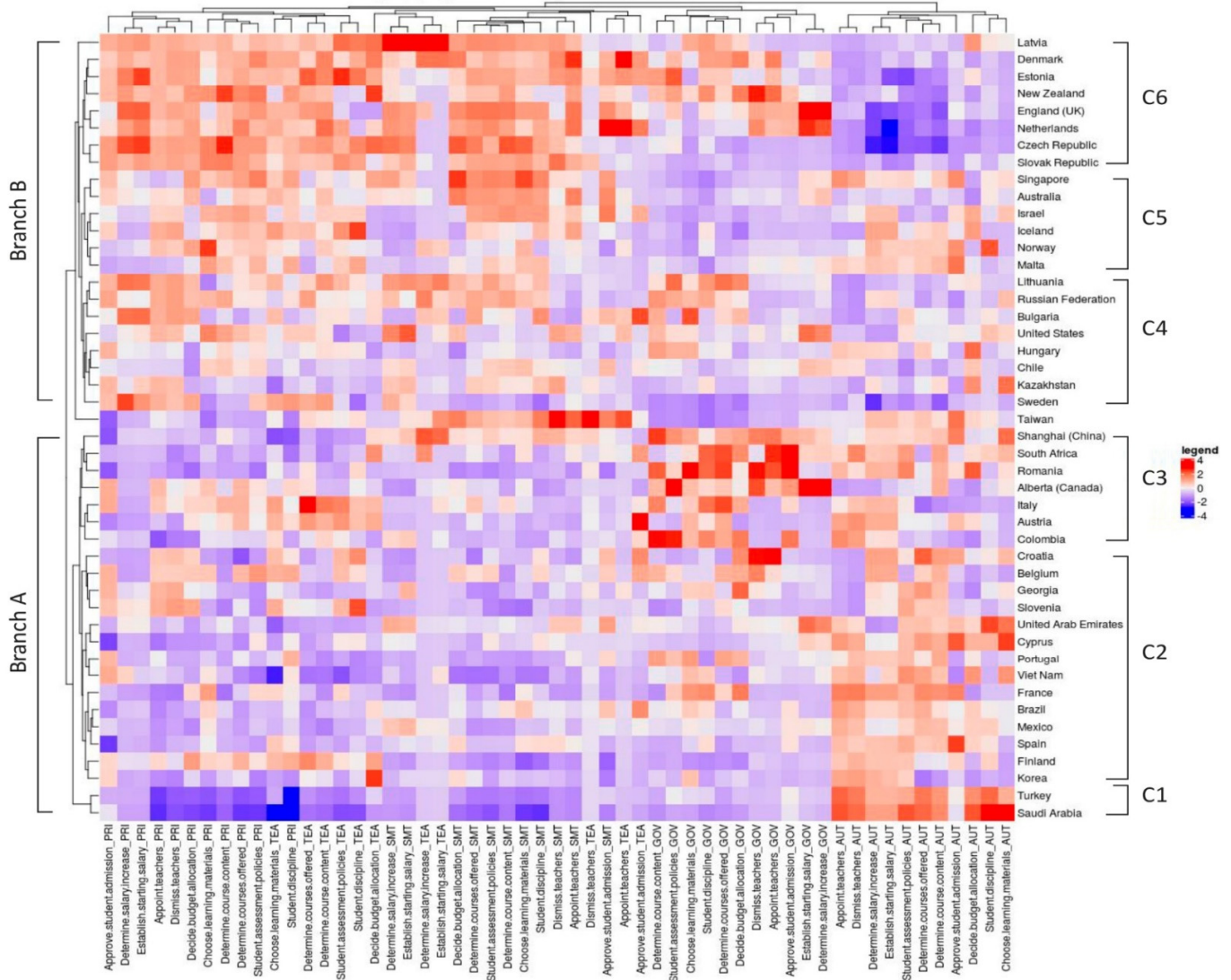


Figure 1. Heatmap showing clusters of TALIS countries on the basis of similarities of standardized responsibility attributions for tasks to five agents: PRI = the principals; SMT = the other members of the school management team (SMT); TEA = the teachers not on the SMT; GOV = the school governing board; AUT = the authorities. C1 to C6 = Clusters 1–6.

A comparison of the responsibility attributions in the two branches reveals that, in Branch A, the authorities (AUT) have considerable responsibility (see Clusters 1 and 2), and that, in Cluster 3, a relatively large portion of the responsibility is also in the hands of the school governing boards (GOV). Conversely, in Branch B, most of the responsibility is at the school level (i.e., it is held by the school practitioners themselves: the principal (PRI), the school management team (SMT), and the teachers (TEA) (Clusters 4–6)). In addition to these three agents, the countries in Cluster 6 attribute some limited responsibility to the school governing boards, but they exclude the authorities more than other clusters. In Cluster 5, the responsibility of the school governing boards is weak, but the authorities play

a role alongside the school-level agents. Cluster 4 is more mixed, but with a slant towards school-level responsibility.

Iceland is placed in Cluster 5, with its closest resemblances being Israel, Norway, and Malta. In these countries, the school governing boards have little responsibility overall. Salary issues are mostly the responsibility of the authorities. Pedagogical matters are mostly at the hands of the school-level agents (the TEA, the PRI, or the SMT). Overall, the responsibility patterns are not very pronounced.

A multidimensional scaling model (MDS) was developed to identify the dimensions that differentiate the countries' responsibility attributions (Figure 2).

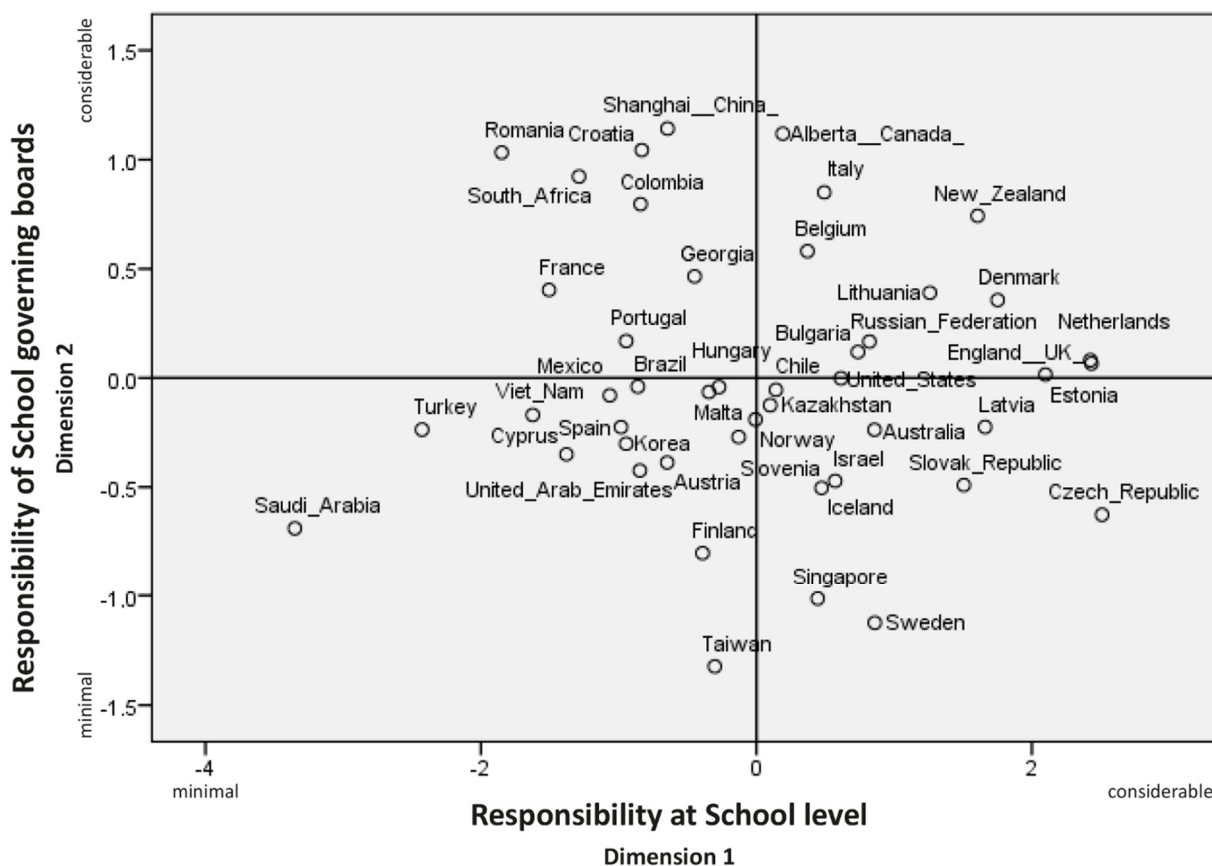


Figure 2. Multidimensional scaling model of TALIS 2018 countries, based on country means of items assessing responsibility for school tasks.

The MDS model locates Arabic/Muslim countries mostly in the lower left part of the figure, and it locates Latin (American and European) countries mostly in the upper left side. The Nordic, Anglophone, and Baltic states, and the former Czechoslovakia (the Slovak and Czech Republics), are mostly on the right hand side of Dimension 1, with higher scores for that dimension. Other Eastern European states are more spread out along this dimension. The second dimension (Dimension 2) has many Latin countries towards the upper part of the figure, and mostly Nordic, Arabic/Muslim, and Asian countries towards the lower half.

To help with the interpretation of the dimensions, a correlation analysis was conducted between the country scores on the MDS dimensions and the percentage scores of the countries for the responsibility attributions. The items that correlate strongly with a particular dimension provide meaning to the dimension in question. For example, the item, “appointing or hiring teachers” (in the PRI column), correlates strongly with Dimension 1 ($r = 0.80$). This indicates that countries that are high in Dimension 1 (e.g., The Netherlands) tend to attribute responsibility for such staffing tasks to principals.

The correlations in Table 3 reveal that Dimension 1 opposes the countries where, on the one hand, the principal and the other school-level agents have greater responsibility for most matters, with those countries where, on the other hand, the authorities have more power. The countries where the principals have more responsibility (e.g., Estonia) are towards the right of Figure 2, and the countries where the responsibility rests with the authorities are situated on the left (e.g., Saudi Arabia). Dimension 2 distinguishes between the countries depending on how much responsibility is vested in the school governing board. The countries in the upper half of the graph (e.g., China (Shanghai)) tend to allocate responsibility to the school governing board more than the countries in the lower half do (e.g., Taiwan).

Table 3. Correlations between the two MDS dimensions and responsibility attributions for tasks.

Task Areas	Dimension 1					Dimension 2				
	PRI	SMT	TEA	GOV	AUT	PRI	SMT	TEA	GOV	AUT
Appointing or hiring teachers.	0.80 **	0.65 **	0.47 **	0.04	−0.79 **	0.05	−0.17	−0.04	0.66 **	−0.15
Dismissing or suspending teachers from employment.	0.83 **	0.42 **	0.00	0.10	−0.76 **	−0.03	−0.32 *	−0.29	0.63 **	−0.12
Establishing teachers' starting salaries, including setting payscales.	0.79 **	0.52 **	0.24	0.23	−0.74 **	−0.14	−0.12	0.07	0.22	0.12
Determining teachers' salary increases.	0.76 **	0.60 **	0.29*	0.28	−0.69 **	−0.17	−0.16	0.16	0.22	0.13
Deciding on budget allocations within the school.	0.78 **	0.66 **	0.40 **	0.05	−0.46 **	−0.07	−0.12	0.04	0.79 **	−0.21
Establishing student disciplinary policies and procedures.	0.67 **	0.64 **	0.42 **	0.07	−0.50 **	−0.09	−0.12	−0.01	0.69 **	−0.24
Establishing student assessment policies.	0.80 **	0.79 **	0.61 **	0.19	−0.85 **	−0.09	−0.06	−0.04	0.62 **	0.03
Approving students for admission to the school.	0.52 **	0.48 **	0.18	−0.21	−0.33 *	−0.05	−0.05	0.14	0.61 **	−0.15
Choosing which learning materials are used.	0.44 **	0.65 **	0.60 **	−0.27	−0.55 **	0.07	−0.09	0.01	0.58 **	0.00
Determining course content, including nat./ regional curricula.	0.75 **	0.80 **	0.82 **	0.08	−0.78 **	−0.10	−0.19	−0.17	0.65 **	0.15
Deciding which courses are offered.	0.80 **	0.82 **	0.66 **	0.10	−0.74 **	−0.03	−0.12	−0.03	0.70 **	−0.04

* = $p < 0.05$, ** = $p < 0.01$ (2-tailed). Note: PRI = the principal; SMT = the other members of the school management team; TEA = the teachers not on the SMT; GOV = the school governing board; AUT = the authorities.

The MDS solution shows that, for Iceland, the responsibility basis of the agents is not extreme in terms of either dimension. This reflects the considerable responsibility of the principals, the members of the SMT, and the other teachers, as well as the relatively little responsibility of the school governing boards. This supports the findings of the heatmap and cluster analysis, as Iceland is located in Branch B, Cluster 5, where the responsibility is vested in the principals, in the members of the SMT, and in other teachers, and where the school governing boards have little responsibility.

4.3. Similarities and Differences between Iceland and Other Nordic Countries

As is indicated above, Iceland's responsibility attributions are average compared to the other countries for most agents and tasks. The principal has responsibilities in most domains, except for salary and budget issues. The authorities tend to have high responsibility for salary decisions and budget allocations, but not for staff appointments. Furthermore, the responsibilities of the SMT tend to be slightly above average, albeit not for salary or budget issues. The teachers are also involved more than the average in choosing

the learning materials and in deciding which courses to offer. They participate in the establishment of the assessment policies and the disciplinary procedures. However, they are not involved in salary or staff issues. The responsibility of the school governing boards is lower overall in Iceland, compared to the other participating countries.

Because of the traditional ties between the Nordic countries (Iceland, Denmark, Norway, Finland, and Sweden), and the history of their mutual influences in educational matters, it is interesting to explore the similarities and differences between them in this sphere of educational practice. Important differences emerge.

Iceland and Norway are in the same cluster (Cluster 5), and they are similar in many ways. The principal appoints the teachers and is also involved in the instructional issues. The authorities have the responsibility for the salary issues. The school governing board does not have much responsibility in either country. The principal has responsibilities for establishing the student disciplinary policies, with the involvement of the authorities (in Norway) and of the teachers and the SMT (in Iceland). The authorities in Iceland have a greater responsibility for operating the school budget than in Norway, where the principal has most of the responsibility. Similarly, the principal in Norway has greater responsibility for the choice of learning materials, compared to Iceland, where the teachers have most of the responsibility in this domain.

On a broader scale, in Finland, the school management teams, overall, have little responsibility, compared to those of Iceland and Norway. Conversely, the authorities in Finland have greater responsibility for hiring and dismissals than those in Iceland and Norway. In all three countries, the principals and teachers have important pedagogical responsibilities.

In Denmark, the responsibility for most tasks is shared quite extensively across numerous agents. The authorities are, however, below the international average. The responsibilities of the principals, of the others on the SMT, and of the teachers outside the SMT, are all above the international average on most of the tasks. The school governing board's responsibility is higher in Denmark than in any other Nordic country.

Sweden is characterized by the power that it invests in the principal with regard to the salaries and the hiring and dismissing of staff, and this is in addition to the responsibility that they bear for the budget allocations within the school, the student admissions, and the disciplinary procedures. The principal is, however, less involved in instructional matters (i.e., the course content, the learning materials, and the courses offered). These concerns are mostly in the hands of the teachers. Overall, the responsibility of the authorities and the school governing boards are very limited.

This indicates that there is considerable variability in the authority bases of the different agents in the Nordic countries. The responsibilities of the agents in Iceland and Norway are quite similar, and there is a similarity with Finland as well (but with little responsibility held by the SMT). In Sweden, there is extensive responsibility that is in the hands of the principal, and, in Denmark, the responsibility is, to a great degree, shared between all of the agents, except for the authorities.

4.4. The Relationship between Responsibility for Tasks and Fundamental Cultural Characteristics

The differentiation between the countries on the basis of the analysis of the responsibilities of the agents, as it is reflected in the heatmap and the MDS analysis, suggests that the underlying cultural characteristics play a role. To further explain the locations of the countries on the MDS graph, the positions of the individual countries on the two dimensions were correlated with the countries' scores for Hofstede's cultural dimensions (Table 4) [41].

Dimension 1 correlates substantially with the "individualism" dimension, and it correlates negatively with the "power distance" and "uncertainty avoidance" dimensions. The countries with high individualism and low power distances and uncertainty avoidances tend to be towards the right hand side of the graph. Dimension 2 does not correlate significantly with any of the Hofstede dimensions. The countries on the left of Dimension

1 are more respectful of power distances and are more collectivist. On the other hand, the countries on the right side are more individualist. The countries on the right of the dimension attribute relatively more responsibility and power to the principal and to other school agents, such as the SMT and other teachers.

Table 4. Correlations between MDS dimensions and Hofstede’s cultural dimensions.

Hofstede’s Dimensions	MDS Dimension 1	MDS Dimension 2
Power distance	−0.45 **	0.07
Individualism/Collectivism	0.54 **	0.13
Masculinity/Femininity	−0.17	0.18
Uncertainty Avoidance	−0.37 *	0.12
Long-term/Short-term Orientations	0.22	−0.12
Indulgence/Restraint	−0.03	−0.09

* = $p < 0.05$, ** = $p < 0.01$ (2-tailed).

This is consistent with the heatmap figure, which indicates that the countries of Branch A allocate more responsibility to authorities (i.e., to the more *distant* sources of power), and that the countries of Branch B allocate more power to the principal and to other school-level agents.

Iceland is relatively individualist according to Hofstede’s dimension [43], with a low power distance, and it consequently allocates more responsibility to the principal and to other school agents.

5. Discussion

The main purpose of this study was to explore the characteristics of the authority basis of the compulsory school principals in Iceland by a general comparison to the other TALIS countries, with a specific reference to the other Nordic countries, as well as by using Hofstede’s cultural dimensions theory to explore the different cultural premises that underpin the patterns of the responsibility for the school tasks. The assessment of the authority basis consists of the responsibility attributions to eleven key task areas, which range from managerial to curriculum tasks. As is acknowledged by Miller [1], educational policies are in constant development, which facilitates changes in the purposes of schooling, as well as changes in the roles and responsibilities of the principals and the other agents in the governance structures of schools. Many studies, including those of Ärlestig, Day, and Johansson [22], indicate, however, that the responsibilities of the principals are similar in nature, despite the variances between and within the countries.

5.1. Commonalities and Differences

The analysis identified groups of countries that broadly differentiate between proximal and distal systems of responsibility. The proximal group allocated responsibility mostly to the agents at the school level (i.e., to the principal, the management team, and, to some extent, the other teachers). This group included most of the Nordic and Baltic countries, including Iceland, the Anglophone countries, except for Canada (Alberta), as well as many Eastern European countries. The distal group included the countries that vested a bit more responsibility in the local/state authorities. This group included many Latin (American and Mediterranean), Muslim, and Eastern European countries. This positioning of Iceland in the typography is in compliance with the Compulsory School Act [2] in Iceland, which stipulates that schools shall be managed and led by principals. Their role as principals is to provide professional leadership and to be accountable to the municipal authorities.

The analyses do not identify a distinct Nordic cluster. However, the Nordic countries show a slant towards the school-level authority basis. Sweden leaves most of the responsibility in the hands of the principal, while, in Denmark, little responsibility is allocated to the authorities. Instead, responsibility for most matters is shared between the other agents (the principal, the SMT, the teachers, and the school governing board). These differences may be due to traditions, cultural elements, and policy imperatives that emphasize the

independence of schools, such as in Sweden. The compulsory education acts in all of the the Nordic countries are, however, based on similar educational underpinnings, such as public funding, equity, inclusion, and the equality of opportunity, and some authors suggest that there may be a distinct Nordic model of education [13,44,45]. The present findings indicate that the conception of a Nordic model is debatable (i.e., it is debatable as to whether a coherent Nordic model of school leadership and governance exists).

However, Denmark displays clear signs of the Nordic collaborative model [13,45], with many of the agents at the school level sharing the responsibility for most of the issues. In Sweden, however, there appears to be a clear division of labour between the teachers, who are responsible for instructional matters, and the principals, who are responsible for other tasks. Similar to Denmark, Sweden attributes little responsibility to the authorities, which is in line with the Anglophone countries. There is not a clear dichotomy between the Anglophone and Nordic authority bases in the data. Instead, these countries are mostly intermingled on one of the main branches.

In Finland, Norway, and Iceland, the authority bases are quite mixed (i.e., the authorities hold some responsibilities). In Iceland and Norway, the authorities retain the responsibility for financial matters, and they share the responsibility for the instructional aspects with the principals and teachers. In Finland, the teachers, with the principals, are almost exclusively responsible for instructional matters, while the authorities share responsibility with the principals for administrative issues, including the hiring and dismissing of teachers. The authorities in Finland also play a major role in salary issues. Overall, the Nordic countries do *not* form a specific cluster.

5.2. Hofstede's Cultural Dimensions and the Agents of Responsibility

The correlations of the responsibility attributions with Hofstede's cultural dimensions show that proximal responsibility (i.e., responsibility at the school level rather than at the municipal/state level) is associated with greater individualism, smaller power distances, and less uncertainty avoidance. The position of several countries on the MDS solution is corroborated by the existing descriptions of their educational systems [22]. Saudi Arabia's position, to the left on Dimension 1, indicates that much of the responsibility for the school affairs lies with the authorities, and their score for Hofstede's "individualism" dimension is low, but they have high scores for the "power distance" and "uncertainty avoidance" dimensions [43]. This is consistent with Khalil and Karim's [46] assertion that the principals in the country cannot take certain educational initiatives "without acquiring permission from several central office administrators" (p. 511). The situation is similar in South Africa, where there is a "[l]ack of ownership of assignments at the school level" [47] (p. 540). France is also situated to the left on Dimension 1, which marries well with Normand's [48] statement that its "education system is largely bureaucratic and centralized" (p. 357). Conversely, England's position, to the very right on Dimension 1, reflects the government's agenda of "increased autonomy (with accountability)" [49] (p. 245). The United Kingdom is high on Hofstede's "individualism" dimension, and low on the "power distance" and "uncertainty avoidance" dimensions [43]. Estonia's position, in the same area on the MDS map, is also consistent with Kukemelk and Ginter's [50] claim that "legislative acts have increased the decision-making power at the principal level and overall school autonomy" (p. 133). The identification, in the present study, of an international dimension that distinguishes between the world regions in terms of school autonomy can be helpful for policymakers when designing and implementing changes in school governance (e.g., to gauge how well the suggested changes comply with the deeper cultural characteristics).

Dimension 2 reflects the degree to which school governing boards bear responsibility for school tasks. Iceland is situated towards the lower end of the graph, which indicates that the school boards have little responsibility. China (Shanghai) and Taiwan are positioned at the opposite ends of Dimension 2, despite their deep common cultural roots. The main difference between these two countries is that the school governing boards play a big role in Shanghai, but a very small role in Taiwan, where the SMTs have larger roles.

Canada (Alberta) is also at the upper end of Dimension 2, where the school boards are well-established entities with considerable powers, despite the increased influence of central authorities [51]. Conversely, Sweden is at the lower end of Dimension 2. Johansson, Nihlfors, and Steen [52] point out that the school boards in Sweden are fairly recent organizational institutions, with variable roles and powers. Ärlestig, Johansson, and Nihlfors [53] remind us that the principals in Sweden “spend the most time on administration and [have] left the responsibility for teaching and learning to the teachers” (p. 111). The responsibility of the school governing boards does not have a significant relationship with Hofstede’s cultural model. This suggests that the allocation of responsibility to the school governing boards does not seem to be related to deeper cultural characteristics.

School autonomy has been on the increase internationally, and, arguably, school staffs are better positioned to gauge the needs of the students in their local communities [32,54]. The present study indicates that the autonomy at the school level is greater in individualist countries with low degrees of power distance and uncertainty avoidance. This suggests that the ideal balance between school-level responsibilities and the municipal or government-level authorities may be contingent upon wider cultural characteristics, such as those identified by Hofstede’s cultural theory. A country’s position on these cultural dimensions may affect, e.g., whether the decision making by the authorities is perceived of as imposing or not. Policymakers should keep these cultural dimensions in mind when introducing change.

The association between the responsibility attributions of school governance and Hofstede’s cultural dimensions reinforces the view that the authority basis of the principals in Iceland seems to be in accordance with values that foster collaboration and collective leadership at the school level. The responsibility attributions to principals of instructional tasks are relatively high, along with the sharing of responsibility with the other members of the SMT, and with the teachers that are not on the SMT, on instructional matters. Conditions of this nature can facilitate empowerment and participation in decision making, which are features that Louis et al. [18] describe as the significant features of high-performing schools. Further study could be undertaken to examine the task areas where many agents seem to share responsibility, in order to uncover whether such shared responsibility is efficient, or whether the roles should be clarified.

5.3. Limitations

The limitations with regard to the use of questionnaires are acknowledged, in spite of the meticulous approach that was used in its development, sampling, and administration procedures [9,31]. Furthermore, the information about the responsibility of the five agents was provided by only one of them (the principal), which may entail a bias in the reported authority basis. It should also be emphasized that the comparisons between the countries are made in relative terms (i.e., the responsibility is designated as “high” or “low” on the measured variables only in relation to the other countries, and not necessarily in absolute terms).

6. Conclusions

The responsibility attributions are *not* very high in Iceland for the school governing boards, but Louis et al. [18] emphasize the productive linkages with the district personnel. The municipal authorities in Iceland, in compliance with the school governing boards, are responsible for inservice and school support services, but they are quite variable in terms of their sizes and capacities. Some municipal authorities may only run one small compulsory school, while others may run a number schools with substantial specialized central office services. This implies that the responsibility that is allotted to school boards should be scrutinized, particularly since the principals in Iceland spend most of their time in the area of school management, but would prefer to spend more time on curriculum work [21]. School discipline issues, which are reportedly high in Iceland [55], might be an area where school governing boards could take on a greater proportion of the load.

In essence, the policy imperative in Iceland can be seen to be in considerable compliance with the research on effective schooling that emphasizes collaboration and leadership for learning at the school level, but not with the strong linkages to the school governing boards. Accordingly, the role of school boards in Iceland could be enhanced in order to provide for increased support for principals, and to address the need that is identified by Róbertsdóttir, Hansen, and Björnsdóttir [6], which is in accordance with a policy imperative that is emphasized by the OECD for improving school leadership [56].

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