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Title: On Equal Footing? : Comparing School Grades and National Evaluation Results in Finland

Year: 2017

Version:

Please cite the original version:

Hildén, R., & Rautopuro, J. (2017). On Equal Footing? : Comparing School Grades and National Evaluation Results in Finland. In N. Pyyry, L. Tainio, K. Juuti, R. Vasquez, & M. Paananen (Eds.), *Changing Subjects, Changing Pedagogies : Diversities in School and Education* (pp. 242-259). Suomen ainedidaktinen tutkimusseura ry. *Ainedidaktisia tutkimuksia*, 13. <http://hdl.handle.net/10138/231202>

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CHAPTER THIRTEEN
ON EQUAL FOOTING?
COMPARING SCHOOL GRADES AND NATIONAL
EVALUATION RESULTS IN FINLAND

Raili Hildén and Juhani Rautopuro

Introduction

The definition of Justice, currently agreed upon across the entire western world, dates back to the Declaration of Human rights and includes a good life and welfare for all humans by their intrinsic integrity and dignity (Temkin 2011; Avermaet, Branden, and Houtte 2011). However, there does exist a wealth of competing views about exactly how justice and welfare should be materialized and implemented. One common denominator for these endeavors is equality, a notion as complex and difficult to define as justice. Still, the dimensions of equality regarded as essential for all citizens today can be cited to include liberties, opportunities for political participation, social positions and opportunities, and economic rewards (Gosepath 2011).

The current presumption of equality largely centers on “equal opportunities” for welfare and resources (Coleman 1966; Kalalahti 2012). Equal opportunities for welfare, regardless of differences, targets the advantages that an individual needs in order to live up to his/her full potential as a member of society (Arneson 1990). Materialization of welfare may, for justifiable reasons, imply the unequal distribution of resources (Rawls 1972; Gosepath 2011).

Broad agreement seems to prevail on the role of education as a fundamental prerequisite for maintaining welfare, and on equality in various forms to gauge the process (Cookson, Levinson, and Sadovnik 2002). In Finnish scholarship, the notion of equality is attached to national and linguistic emphases in the sense of overall equal treatment of citizens in regard to resources. On the other hand, when referring to a fair share of resources between groups (e.g. men and women) the notion of equity is also used (Laiho 2013). In the policy documents of this millennium equity between genders has been brought to the forefront. In this chapter, we choose to use the notion of equality to refer to all kinds of fair and equal treatment.

Modern scholarship claims that equality of welfare and good life can only be attained and measured by acknowledging the diversity among students and

their differing needs (Duru-Bellat and Mingat 2011). The notion of diversity shares the substantial content of the elaborated notions of proportional equality in relation to, for instance, ethnic origin, age, nationality, language, religion, belief, opinion, health, disability, sexual orientation, or other personal characteristics (Non-discrimination act 2014). All aspects should be accounted for in pursuit of true equality in education, which in Finnish circumstances is enacted by a nine-year compulsory basic education offered to all children since 1970. During the first decades of implementation, encouraging results were witnessed in the Finnish compulsory education regarding most aspects of equality (Jakku-Sihvonen 1996). Yet in recent decades, some worrying signals of increased inequality have been discerned, e.g. early school-leaving without certification (which increased the need for support of various kind), insufficient learning outcomes, and unfavorable regional differentiation (Jakku-Sihvonen and Kuusela 2012).

In this study, we turn to diversity and equality issues by looking at the attainment of core competencies, as emphasised in the national core curriculum in certain subjects. The sufficient mastery of core competencies comprises basic literacies in linguistic, scientific, and mathematic domains to ascertain capacity for an active membership within a democratic society and a globalized world on a presumingly equal basis (NCC 2014). The target levels of desired mastery are defined for each subject as criteria for the attainment of grade 8 out of 10 on the Finnish scale for school grading. The rationale for paying specific attention to the school grades is motivated by the fact that the final report from basic education school is the primary document whereby young people apply to the second stage of education after having completed their compulsory education. Since school-leaving grades are the most important ground of selection to secondary education, their validity and fairness deserves careful consideration.

Our study builds on and completes previous research by looking at a range of studies on equality within Finnish general education, against which we mirror our findings. The scope of this chapter does not allow for a broad review of the relevant literature, but some of the most prominent titles will be outlined below. We will start by presenting the four most important background factors that influence a student's school performance.

Background factors

Gender

Equality issues between boys and girls have been scrutinized in-depth by Kuusela (2006) and Jakku-Sihvonen (2002). The major trend across school subjects and time trajectories is the excellence of girls in most subjects apart from mathematics and physics (Summanen 2014; Kuusi, Jakku-Sihvonen and Koramo 2009, 52; Hirvonen and Rautopuro 2012, 44–45; Kärnä, Hakonen, and Kuusela 2012; Mattila and Rautopuro 2013, 43–45). In mother tongue (Lappalainen 2011; Harjunen 2015; Silverström 2015) and foreign languages (Tuokko 2003, 2008; Väisänen 2003; Hilden and Rautopuro 2014a; 2014b; 2014c; 2014d) the absolute attainment of learning objectives on all linguistic sub-skills is significantly higher among girls with the exception of the English language (Härmälä, Huhtanen, and Puukko 2014).

Language of instruction

Finland is a bilingual country by law and basic education is given in the two official languages, Finnish and Swedish. Consequently, the language of instruction is an important background variable that is regularly scrutinized in the evaluations of learning outcomes. According to educational research on learning outcomes, the pupils of Finnish-language schools seem to outperform those of Swedish-speaking schools in most subjects. This finding has been replicated by the evaluations of learning outcomes in health education (Summanen 2014), biology, geography, and physics (Kärnä, Hakonen, and Kuusela, 2012), as well as in a longitudinal study of mathematics (Metsämuuronen 2013). The latest PISA results also indicate the lower achievement—although a higher sense of well-being was found in Swedish speaking schools compared with Finnish speaking schools (Harju-Luukkainen and Nissinen 2011).

In foreign languages, on the contrary, the pupils of Swedish language schools generally attain higher results than their Finnish speaking peers. This is prominently the case in English (Härmälä, Huhtanen, and Puukko 2014, 12), German (Hilden and Rautopuro 2014b, 14) and French (Härmälä and Huhtanen 2014, 217) and is most obviously explained by the linguistic affinity of L1 and target languages.

SES (parents' matriculation examination)

In many Finnish educational studies, the complicated concept of SES is operationalized by means of asking the respondents if they hold a certificate from the final examination from upper secondary education, the Matriculation Examination. Comparisons of learning outcomes in regard to parents' educational level indicate performance gap between children of higher educated parents and those pupils whose parents have not passed the exam. Recent studies confirming this tendency comprise for instance health education (Summanen 2014, 107–108), history and social studies (Quakrim-Soivio 2012, 113), and math (Hirvonen and Rautopuro 2012, 52–54). Moreover, in all foreign languages, children of higher educated parents outperform their peers (Härmälä, Huhtanen and Puukko 2014; Hilden and Rautopuro 2014a, 2014b).

Study plans

After a completed basic education, most pupils continue their studies in secondary education, either at a more theoretically oriented upper secondary school or at the institutes of vocational education and training. When comparing pupils aiming at general upper secondary education and pupils opting for vocational education and training, several studies evidence higher learning outcomes for those who prefer general upper secondary education. This applies to the case of history and social studies (Quakrim-Soivio and Kuusela 2012, 57–58), math (Hirvonen and Rautopuro 2012, 53), and mother tongue and literature studies (Harjunen and Rautopuro 2015, 83).

In Finland, pupils' admission to upper secondary education is based on their school-leaving grades from basic education, and it is justifiable to assume that the grade reflects knowledge of a subject across individuals and groups. Deviations from the legal assumption pose challenges for pedagogical implementation in treating diversities for achieving equality through fair assessment. Some of the previously mentioned research reports also discuss bonds between knowledge and skills evidenced in the evaluation and the school grade in the subject assessed. Generally speaking, better performance across all comparable groups is accompanied by higher school marks. At a closer look, though, the distinction force of grades often appears insufficient. The overall correspondence between the school grades and evidenced mastery of subject knowledge has proved to be low in math (Mattila and Rautopuro 2013, 60–62), social sciences (Quakrim-Soivio 2013, 157–204), and health science (Summanen 2014, 112). Quakrim-Soivio and Kuusela (2012) in particular, argue for a tendency among

teachers to adjust their grades to the level of school rather than to the guidelines provided by the National Core Curriculum.

Group comparisons of the correspondence between evidenced attainment of learning outcomes and school grades are rare in number, but a few findings allude to differences between genders. In mother tongue, boys tend to be assigned higher grades than girls for the same performance in national evaluations at both Finnish speaking and Swedish speaking schools (Silverström 2008, 11–12; Lappalainen 2008, 69–73). In mathematics, conversely, girls seem to be rewarded with higher grades for the same performance (Mattila 2003, 16). In mother tongue and literature there are indications of different content criteria applied to grading between girls and boys (Harjunen and Rautopuro 2015, 95).

To add insight into the capability of the Finnish school system to enact equality at the crucial point of admission to upper secondary education, the research presented in this chapter addresses the following research questions:

1. (RQ1) What is the overall correspondence between linguistic skills and the school grade assigned by teachers?
2. (RQ2) How does the correspondence between the school grade and linguistic skills vary in different languages across: 1) certain student background variables (gender, language of instruction, SES, study plans); and 2) their combinations?

Applying RQ1, we examine the correlations between the school grade and each linguistic sub-skill (listening, speaking, reading, and writing) across all pupils who participated in the evaluation in English, Swedish, and German. To address RQ2, the match between the school grade and evidenced language ability is studied against background variables, firstly one by one, and secondly, across the sets of multiple variables. The variables addressed are gender, parents' educational background, upper secondary orientation, and language of schooling. Here, the educational background of the parents takes the form of a simple indicator for SES encompassing three options related to the matriculation exam: none of the parents have taken the exam, one parent has taken the exam, or both parents have taken it.

Data and method incorporate a multi-stage stratified random sample of pupils of Finnish basic education schools at the end of compulsory education (at the age of 15). The data sets include English, advanced syllabus ($n = 3\,273$), Swedish, advanced syllabus ($n = 1\,643$), and German, short syllabus ($n = 1$

263). The data is a representative sample taking into account different provinces, different municipality types, and schools of a different kind and size in Finland.

The pupils carried out a selection of tasks in listening and reading comprehension, speaking, and writing. They also filled in a questionnaire mapping their study practices and attitudes towards the subject, but its results are not discussed here. The assessment tasks were derived from the national core curricula for basic education (2004) where the target levels of core competence are expressed along an illustrative level scale ranging from elementary mastery up to a highly proficient use of language. The scale is a Finnish adaptation of the Common European Framework of Reference (CEFR, 2003) six-point scale, elaborated to cover altogether ten sub-scales. The preferable standard level of good mastery (hereafter also labeled as the target level) was linked to grade 8 on 4–10 scale, which served as a baseline for comparison. In advanced syllabi, the grade 8 level of good mastery is adhered to a single proficiency level. In short syllabi, a range of two subsequent levels (e.g. A1.1–A1.2) defines a target level (also called such). In fact, the actual school grade is a combination of effort and achievement, whose mutual weight is not proposed in the curricula. In this study, we only address the achievement strand, operationalized by the four sub-skills of language ability.

The data was analysed using various statistical methods. Basic results have been presented using descriptive measures (e.g. percentage distributions and measures of central tendency and variation). The associations between categorical variables were examined using the traditional chi-square test. Associations between quantitative variables were examined by using the Pearson correlation coefficient. Coefficients of determination (r-square) measuring the effect size are also reported.

The group differences were tested using independent samples t-test. In addition to statistically significant differences (p-values), effect size measures (Cohen's *d*) are also reported. The interpretations of Cohen's *d*-value are quite relative. In this chapter, effect size approximately 0,2 means "small effect", effect size around 0,5 "medium effect", and effect size around 0,8 or more refers to a large effect (Cohen 1988, 10).

Pupil performances in speaking and writing were assessed on the level scale and 10 % of them were censored afterwards. The correspondence with initial teacher assessment were satisfactory ($r = 0,7-0,9$) to ensure sufficient level of reliability. The listening and reading comprehension items were set on the same level scale by applying a standard setting method (bookmark) based

on a two-stage procedure that combines rater perceptions of the difficulty level of an item with the empirical data derived from the pupil sample (Cizek 2011). It is common that the standard setting procedure of the particular type does not allow determining as many cut-off scores between levels as were applied for the productive skills.

Results

RQ1. Correspondence between linguistic skills and school grade assigned by teachers

In the national core curricula, the level of good mastery is adhered to grade 8 on a ten-step level scale. Table 13-1 depicts the range of the school grades covered by the evidenced receptive language ability at that level. The match between the intended level and grade 8 is acceptable in the advanced syllabi, but surprisingly weak in the short syllabi of the German language. A possible explanation is that in advanced syllabi, grade 8 was adhered to a single level, whereas in short syllabi, a range of two levels was used to define the respective mastery. The case of short syllabi is further complicated by the obvious bias that the formal level of good mastery was attained as early as at grade 5, which indicates problems in terms of either level requirements or school assessment, both alternatives in need of consideration and improving measures.

Table 13-1. Correspondence of school grades and attained target levels in receptive skills

Grade	Swedish (advanced)		English (advanced)		German (short)	
	Listening	Reading	Listening	Reading	Listening	Reading
4	Below target level	Below target level	Below target level	Below target level	Target level	Target level
5						
6						
7	Target level	Target level	Target level	Target level	Above target level	Above target level
8	Above target level	Above target level				
9	Above target level	Above target level				
10			Above target level	Above target level		

Table 13-2. Correspondence of school grades and attained target levels for productive skills

Grade	Swedish (advanced)		English (advanced)		German (short)	
	Speaking	Writing	Speaking	Writing	Speaking	Writing
4	Below target level	Below target level	Below target level	Below target level	Below target level	Target level
5					Target level	
6					Target level	
7	Target level	Target level	Target level			
8	Above target level	Target level	Above target level	Above target level	Above target level	Above target level
9		Above target level				
10		Above target level				

Table 13-3 shows, in percentages, how the school grades were distributed across the languages under study. In all languages, grade 8 (good mastery in advanced syllabi and the target level in short syllabi) was assigned to approximately one fourth of sample pupils. The reliability of grades cannot be deduced

Table 13-3. Division of school grades in percentage in different languages

	Swedish (advanced)	English (advanced)	German (short)
Grade	Total (1659)	Total (3421)	Total (1327)
4	0,6	0,3	0,3
5	4,3	4,2	4,1
6	13,6	13,2	10,4
7	24,6	21,4	19,8
8	23,9	25,0	24,9
9	24,1	27,0	27,0
10	9,0	8,9	13,6
Grade mean	7,8	7,8	8,0
Std.dev.	1,3	1,3	1,4

in a straightforward way, but in all languages the majority of pupils attained or exceeded the target levels in most linguistic sub-skills, as can be concluded from the table.

In Table 13-4, the correlations between the school grade and sub-skill score across languages becomes visible. In most cases, the association is high or very high. The best average match is in English (0,68), followed by Swedish (0,68). In the short syllabus (German), the correspondence is somewhat lower. Although the overall figures are reasonably high, the following chapters are dedicated to an in-depth analysis of the diversity behind the big picture.

Table 13-4. Correlations (and r-squares) between school grade and sub-skills in different languages

	Swedish	English	German
Listening	0,63 (40 %)	0,65 (42 %)	0,57 (32 %)
Reading	0,70 (49 %)	0,70 (49 %)	0,60 (36 %)
Speaking	0,65 (42 %)	0,63 (40 %)	0,59 (35 %)
Writing	0,68 (46 %)	0,75 (56 %)	0,66 (44 %)

$r < 0,20$ very weak ($r^2 < 4\%$)
 $0,20 \leq r < 0,35$ weak ($4\% \leq r^2 < 12\%$)
 $0,35 \leq r < 0,65$ moderate ($12\% \leq r^2 < 42\%$)
 $0,65 \leq r < 0,85$ high ($42\% \leq r^2 < 72\%$)
 $r \geq 0,85$ very high ($r^2 \geq 72\%$)

RQ2. The correspondence between school grade and the linguistic skills in different languages

Gender. When comparing the percentage distribution of school grades between boys and girls, we find an overall tendency of girls receiving higher grades than boys. This seems to apply to all languages and syllabi with indisputable statistical significance. The difference was the widest in Swedish ($d = 0,69$) and smallest in English ($d = 0,33$). When examining these two groups in different languages, we observed that there was significant difference between boys and girls in Swedish and German, but not in English (Table 13-5).

Table 13-5. School grade percentages assigned to boys and girls in the three investigated language syllabi

Grade	Swedish (advanced)			English (advanced)			German (short)		
	Boys 678	Girls 981	Total 1659	Boys 1738	Girls 1683	Total 3421	Boys 499	Girls 828	Total 1327
4	0,9	0,4	0,6	0,5	0,2	0,3	0,6	0,1	0,3
5	8,1	1,6	4,3	5,2	3,3	4,2	6,2	2,8	4,1
6	18,9	10,0	13,6	14,6	11,7	13,2	16,8	6,5	10,4
7	32,9	18,9	24,6	23,2	19,5	21,4	25,3	16,5	19,8
8	20,1	26,5	23,9	25,1	24,9	25,0	21,8	26,7	24,9
9	16,8	29,1	24,1	25,0	29,0	27,0	21,4	30,3	27,0
10	2,4	13,6	9,0	6,4	11,4	8,9	7,8	17,0	13,6
Grade mean Std.dev.	7,2 1,3	8,1 1,3	7,8 1,3	7,7 1,3	8,0 1,3	7,8 1,3	7,6 1,4	8,3 1,3	8,0 1,4
	p < 0,001; d = 0,69			p < 0,001; d = 0,33			p < 0,001; d = 0,54		

In regard to the validity of school grades, we could expect girls' grades to be higher than boys', because they did outperform boys in all other syllabi apart from advanced English. Our results are consonant with those of Jakkusihvonen (2002) discussing the superiority of girls in most school subjects, but also with the results by Härmälä et al. (2014) concerning boys' excellence

in English language. It bears mentioning, however, that such a difference in outcomes between genders is not advantageous from the point of view of societal consequences.

In regard to the correspondence between grade and productions skills displayed by boys and girls, the following findings were detected. In Swedish (advanced syllabus), there were no differences in the correspondence of grade and language ability between boys and girls (RQ1). The correspondence between school grade and target level was quite the same when examining the data according to pupils' future study plans and parents' education. In English (advanced syllabus), there were no differences between boys' and girls' school grades. The situation was the same when examining the data according to pupils' future study plans and parents' education.

Language of instruction. Both Finnish and Swedish speaking language groups were represented in the English and German data. The English data from Finnish-speaking schools suggest that pupils with grades 4–7 scored lower than the level of good mastery (CEFR level A2.2), those with grade 8 achieved the target level, and in both listening and reading those with grade 10 exceeded the target level. In Swedish speaking schools, the target level was attained by all pupils whose grade was between 4 and 9 in listening—the linguistic properties of related languages have a role to play here. However, in reading the correspondence between grades and attainment of target level is more similar to that of the Finnish speaking schools, with the exception that pupils with grade 7 placed at the target level, and those with grades 4–6 below it. Swedish speaking pupils with grades 8–10 scored higher than the good mastery level in reading. The excellence of Swedish speaking pupils was obvious, but the finding also suggests that in schools with Swedish as the language of instruction lower grades tended to be assigned for the same ability in the middle band of the assessment scale (grades 7–8).

In English speaking and writing skills, the target level was achieved with a lower school grade in Swedish speaking schools (grade 6) than in Finnish speaking schools (grade 7).

In short syllabus German, pupils from grade 7 on, attained the target level in listening and from grade 6 on in reading. In Swedish speaking schools the target level was attained by pupils with grade 6 or above in listening and pupils with grade 5 and above in reading. This, again, suggests a higher requirement level within Swedish speaking schools.

In German (short syllabus) there were no differences in correspondence between grade and linguistic skills between boys and girls. In speaking skills, some differences between Finnish speaking and Swedish speaking schools were detected. In Finnish speaking schools, the target level was reached when the school grade was 8, in Swedish speaking schools at grade 6. In Swedish speaking schools, none of the pupils were below the target level. The grading in Finnish schools might be somewhat more lenient than in Swedish schools. Yet, the number of students having school grade 4 was too small for drawing any strong conclusions regarding this group (Table 13-7).

SES (parents' matriculation examination). In line with previous research, this data shows that school grades are better the higher the parents' SES. The overall tendency in all languages and syllabi was a higher achievement among children of better-educated parents, but no systematic differences were discerned in the correspondence of evidences of knowledge and school grade.

Study plans. There was a noticeable difference in school grades in favor of pupils who aim at upper secondary school compared with those aiming at vocational studies. The finding conforms to the evidenced attainment of learning outcomes and corroborates a suite of previous research, reported above.

When it comes to the correspondence between target level and school grade in English, it seems that in receptive skills the target level was attained by upper secondary oriented pupils at grades 7–8, and by vocationally oriented pupils at grades 8–9. The vocationally oriented young people seem to have received a higher mark with less skill than the upper secondary oriented ones. In Swedish, no difference was detected in the correspondence between grade and ability between secondary and vocationally oriented pupils. In German, those aiming at upper secondary education all reached the target levels from grade 6 onwards, while among pupils targeting towards vocational studies, that level was attained at grade 7. All significant coefficients of determination between the scrutinized variables and combinations of them are summarized in Table 13-6.

Table 13-6. Significant coefficients of determination in percentage across school grade, linguistic sub-skill and certain background variables (high associations are bolded)

	English (advanced syllabus)				Swedish (advanced syllabus)				German (short syllabus)			
	Listening	Reading	Speaking	Writing	Listening	Reading	Speaking	Writing	Listening	Reading	Speaking	Writing
RQ1												
Gender	x	x	x	x	x	x	x	x	x	x	x	x
Boys	41,0	49,0	38,4	53,3	34,8	44,9	43,6	42,2	32,5	34,8	34,8	41,2
Girls	44,9	51,8	41,0	57,8	36,0	47,6	34,8	43,6	31,3	36,0	31,3	41,0
SES	x	x	x	x	x	x	x	x	x	x	x	x
Both ME	30,0	39,1	25,5	52,7	39,1	48,6	44,2	44,2	29,2	34,1	24,3	38,9
One ME	37,7	45,7	36,1	51,6	34,7	48,0	38,3	44,2	27,2	31,7	33,1	39,3
Non-ME	37,8	45,8	40,4	45,3	39,4	46,0	38,4	45,3	32,4	34,5	37,1	43,0
L of instruction	x	x	x	x					x	x	x	x
Finnish	43,6	51,8	43,5	57,8					36,0	41,0	37,0	44,9
Swedish	30,3	37,2	18,5	43,6					25,0	34,8	26,0	39,9
Study plans	x	x	x	x	x	x	x	x	x	x	x	x
Upper secondary	28,9	37,7	23,6	47,7	33,2	42,9	37,2	41,1	28,1	29,2	29,2	39,7
Vocational	36,1	42,0	37,0	44,2	33,4	33,4	31,6	32,7	25,0	34,8	33,6	37,2
RQ2												
Gender+SES												
Gender+L of instruction	x	x	x	x					x	x	x	x
Finnish+Boys	42,9	50,3	43,0	55,4					38,7	39,9	38,6	47,1
Finnish+Girls	46,5	54,2	44,4	61,6					32,6	39,4	32,6	41,9
Swedish+Boys	30,8	39,7	39,7	43,0					22,8	38,1	21,7	39,8
Swedish+Girls	31,7	34,3	21,5	42,1					22,0	28,5	28,3	35,8

r < 0,20 very weak (r² < 4%)
 0,20 ≤ r < 0,35 weak (4% ≤ r² < 12%) 0,35
 ≤ r < 0,65 moderate (12% ≤ r² < 42%) 0,65
 ≤ r < 0,85 high (42% ≤ r² < 72%)
 r ≥ 0,85 very high (r² ≥ 72%)

Summary

Returning to the theoretical framework of our study comprising the practical implementation of equality (Gosepath 2001, level 3), the results of our study indicate only moderate correlations between four linguistics skills and the school grade. While the overall attainment of target levels was good or even excellent, significant differences were detected in how precisely the school grade and the assumed level of its mastery really coincided. In the advanced syllabi of English, Swedish, and German, pupils who were assigned grade 8 on their school report exceeded the target level and displayed language ability corresponding to higher school marks. The type of linguistic skill also made a difference: writing proved to be the most demanding skill to master in terms of earning grade 8.

On the other hand, regarding pupils displaying the ability corresponding to the target level, we found that, on average, only a third of them really had grade 8 reflected in their school report. These deviations varied again by language and sub-skill. The correspondence between language ability and school grade was higher in advanced syllabi where one single level was specified as the target. Nevertheless, the results of short language syllabi based on a flexible two-level target setting were far less convincing when it comes to the validity and differentiation power of school grades. At the lowest target level, ability evidenced by assessment tasks was rewarded by four different school grades ranging from 5 to 8.

The group-wise investigation revealed the most significant differences between ability and school grade with respect to the language of instruction and parents' level of education. Pupils in Swedish-language schools showed significantly higher levels of language ability in regard to their school grade than did pupils in Finnish-language schools.

Referring to level 2, defined the beginning of the chapter, these findings point out certain challenges related to equality of opportunity in getting admission to upper secondary education. Individual pupils possessing the same level of language ability were treated differently depending on who taught them and assigned them the grade. When it came to groups of individuals, gender, parents' educational level, and language of instruction (Finnish/Swedish) had a significant impact on received grades. The findings clearly challenge the validity of school grades as indicators of attained proficiency and fair goalkeepers to upper secondary education, especially as the same tendency recurs for other school subjects over years (Ouakrim-Soivio 2013).

Level 1 of the more abstract ideals and principles is materialized through the circumstances at two concrete levels. One possible interpretation of the findings of this study is that social opportunities to enter secondary education in pursuit of a good life and welfare vary, occasionally even in a substantial manner, across individuals and groups. Such a result unavoidably poses challenges for pedagogical implementation in treating diversities in an equal manner through fair assessment.

To improve correspondence between knowledge and school grades, teachers might need a more specific set of criteria for assigning final grades in their subject. The mixed nature of composition of school grades should be clarified, for instance by defining separate proportions of the grade for subject knowledge and effort—an easily implemented measure that would enable teachers to systematically deploy multiple forms of assessment and to assign more valid and fair school grades to their diverse pupils.

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