

TALIS 2018 RESULTS: EQUITY

The OECD Teaching and Learning International Survey (TALIS) is an international, large-scale survey of teachers, school leaders and the learning environment in schools. This note presents findings about teacher allocation from the viewpoint of equality based on the reports of lower secondary teachers and their school leaders in mainstream public and private schools. This note draws on data collected in 2017/2018.

Iceland

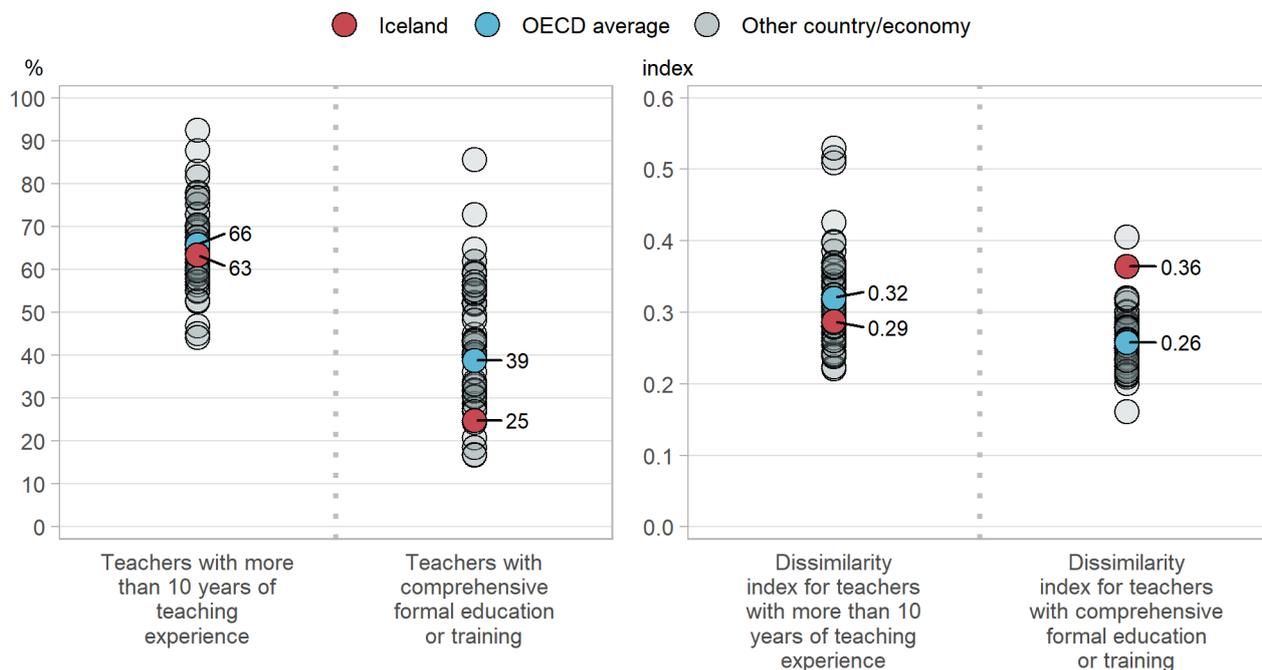
- For Iceland, available data do not allow to investigate teacher allocation from the viewpoint of equity. The type of schools in which teacher and school resources tend to concentrate cannot be examined, since estimates for differences across school types are missing due to too few or no observations to provide reliable estimates and/or to ensure the confidentiality of respondents.
- Based on the dissimilarity index, this note investigates the extent to which teachers with certain traits are equally allocated across schools. The dissimilarity index captures to what extent the distribution of teachers belonging to different groups depart from what would be observed if teachers were allocated across schools in a perfectly random way. This index (commonly used as a measure of segregation) is related to the proportions of teachers of either one of two groups that have to be displaced in order to achieve a perfectly even distribution, i.e. a situation where the shares of teachers of different types in each school equal the shares observed in the overall population. The dissimilarity index can identify the teacher characteristics and practices along which teachers tend to sort across schools and highlight overall imbalances in teacher allocation.
- An equal distribution of strong teachers results in students being evenly exposed to effective teaching. Moreover, it can also help teachers to learn from their peers and improve their own practices: provided there is sufficient collaboration among teachers working in the same schools, a more diverse teachers' body could enrich peer learning through the exchange of ideas and interactions. Random allocation of teachers would ensure that on average all students, irrespective of their initial conditions, would be taught by similar teachers; it would also maximise the diversity of the teachers' body in each school, as the population of teachers in a school would be similar to the overall population. Randomly assigning teachers to schools, however, may not help in addressing concerns related to equity.

I. Do students have equal access to effective teachers?

- TALIS covers a range of teacher characteristics and teaching practices that have been shown to be robustly associated with effective teaching and higher student performance. These include years of experience, content of initial education and self-efficacy, the frequency of use of cognitive activation and clarity of instruction practices as well as the time devoted to actual teaching during class. Students taught by different teachers often have very different educational outcomes.

Figure 1. Allocation of experienced and comprehensively trained teachers

Results based on responses of lower secondary teachers



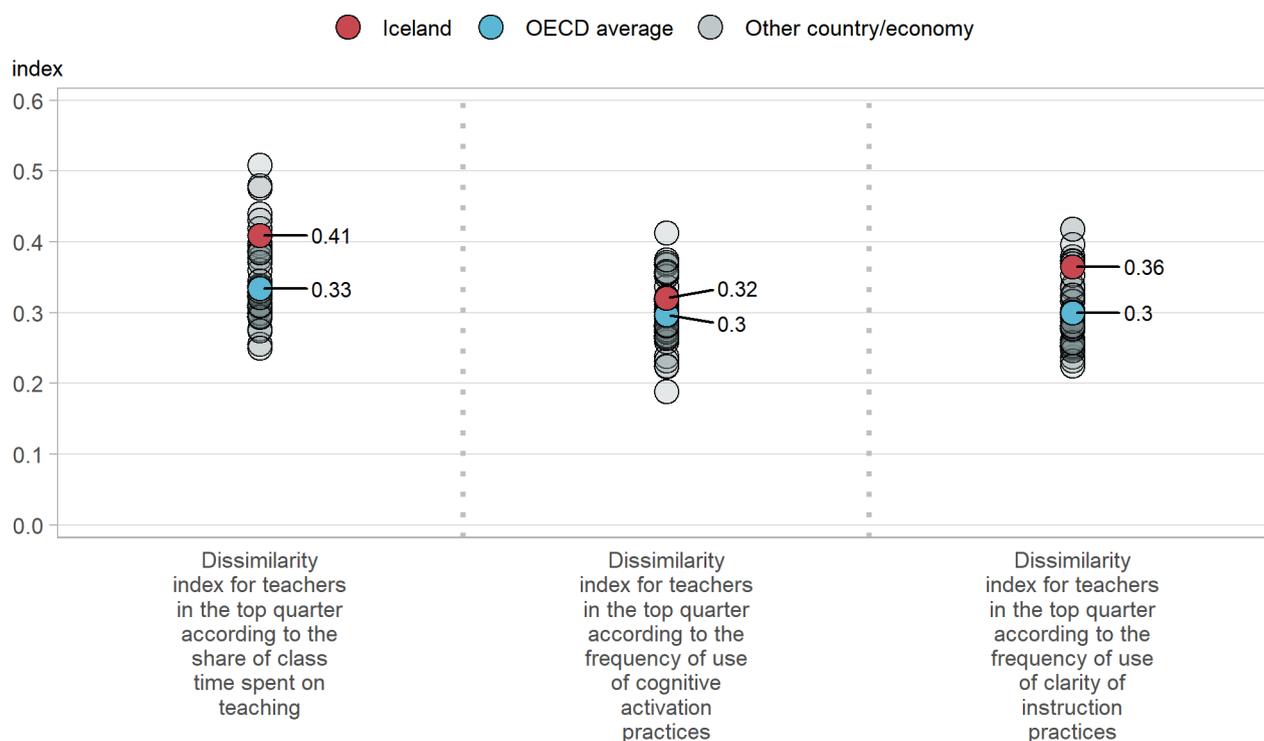
Notes: Only countries and territories with available data are shown. The dissimilarity index measures if the allocation of teachers with a given characteristic in a country's schools resembles the overall teacher population of the country and it ranges from 0 (i.e. the allocation of teachers in schools resembles perfectly the teacher population of the country) to 1 (i.e. teachers with a certain characteristic are concentrated in a single school). Source: OECD, TALIS 2018 Database, Tables 2.3 and 2.5.

- Past research has shown that experienced teachers are on average more effective than their less experienced colleagues in raising the performance of their students. In the TALIS 2018 cycle, 63% of teachers in Iceland had more than 10 years of teaching experience.
- According to system-level correlational analysis, countries and territories that are characterised by a more even distribution of experienced teachers across schools tend to have higher average scores in the PISA reading assessment (reading was the focus domain in PISA 2018). In Iceland, the dissimilarity index for experienced teachers is 0.29, which is not statistically different from the OECD average (0.32). This means that about three in ten experienced teachers would need to change schools (i.e. moving to schools with a lower share of experienced teachers) in order to ensure an equal presence of experienced teachers across schools. Importantly, an uneven allocation of teachers with certain characteristics does not necessarily mean that a school system is inequitable: allocating more experienced teachers to the schools that need them most can be a deliberate policy choice.
- TALIS asks teachers about the content of their initial education and training. In the TALIS 2018 cycle, 25% of teachers in Iceland reported to have received a comprehensive initial education, which includes subject content, pedagogy, classroom practices, cross-curricular skills, teaching in a mixed-ability setting and classroom management: this is lower than the OECD average (39%). On average across OECD countries/territories, initial training in cross-curricular skills, teaching in a mixed-ability setting and classroom management tend to be less prevalent than the other types of training.
- As shown by system-level correlational analysis, across countries and territories, the more even the distribution of teachers with comprehensive initial training across schools, the higher students' mean reading score in PISA. In Iceland, the dissimilarity index for comprehensively trained teachers is 0.36, which is not statistically different from the OECD average (0.26).
- Research highlights how self-efficacy is positively related to performance in a wide range of settings. Teachers and students are no exception. TALIS elicits teachers' self-efficacy beliefs by asking them to

assess their ability to perform well in a range of tasks related to classroom management, instruction, and students' engagement. In Iceland, the dissimilarity index for teachers with higher self-efficacy (defined as those in the top quarter of the national distribution of the self-efficacy scale) is 0.33, which is not statistically different from the OECD average (0.29).

Figure 2. Allocation of teachers who engage in effective teaching practices

Results based on responses of lower secondary teachers



Notes: Only countries and territories with available data are shown. The dissimilarity index measures if the allocation of teachers with a given characteristic in a country's schools resembles the overall teacher population of the country and it ranges from 0 (i.e. the allocation of teachers in schools resembles perfectly the teacher population of the country) to 1 (i.e. teachers with a certain characteristic are concentrated in a single school). Source: OECD, TALIS 2018 Database, Tables 2.8, 2.10 and 2.12.

- Past research has highlighted a positive association between the share of class time teachers devote to teaching and student achievement. The ability of teachers to maximise instruction time is closely related to their ability to maintain order in the classroom. But of course students' attitudes and behaviour also matter as a factor influencing the proportion of time spent on teaching and learning, and are partly outside of teachers' control. TALIS measures the instruction time to which students are exposed by asking teachers how their working time is allocated between different tasks such as administrative tasks, keeping order and actual teaching in a regular weekly class.
- According to system-level correlational analysis, students' average performance in reading is lower in education systems where teachers who spend a larger share of class time on actual teaching are unevenly distributed across schools. In Iceland, the dissimilarity index for teachers who spend a larger share of class time on actual teaching (defined as those in the top quarter of the national distribution of the share of class time allocated to actual teaching) is 0.41, which is not statistically different from the OECD average (0.33).
- Cognitive activation consists of instructional activities that require students to evaluate, integrate and apply knowledge within the context of problem solving (e.g. presenting tasks for which there is no

obvious solution or which require students to think critically, and asking students to decide on their own procedures for solving complex tasks). Past research has shown that the use of cognitive activation is associated with higher student achievement. In Iceland, the dissimilarity index for teachers who rely on cognitive activation practices most often (defined as those who are in the top quarter of the national distribution in terms of the frequency of use of cognitive activation practices) is 0.32, which is not statistically different from the OECD average (0.3).

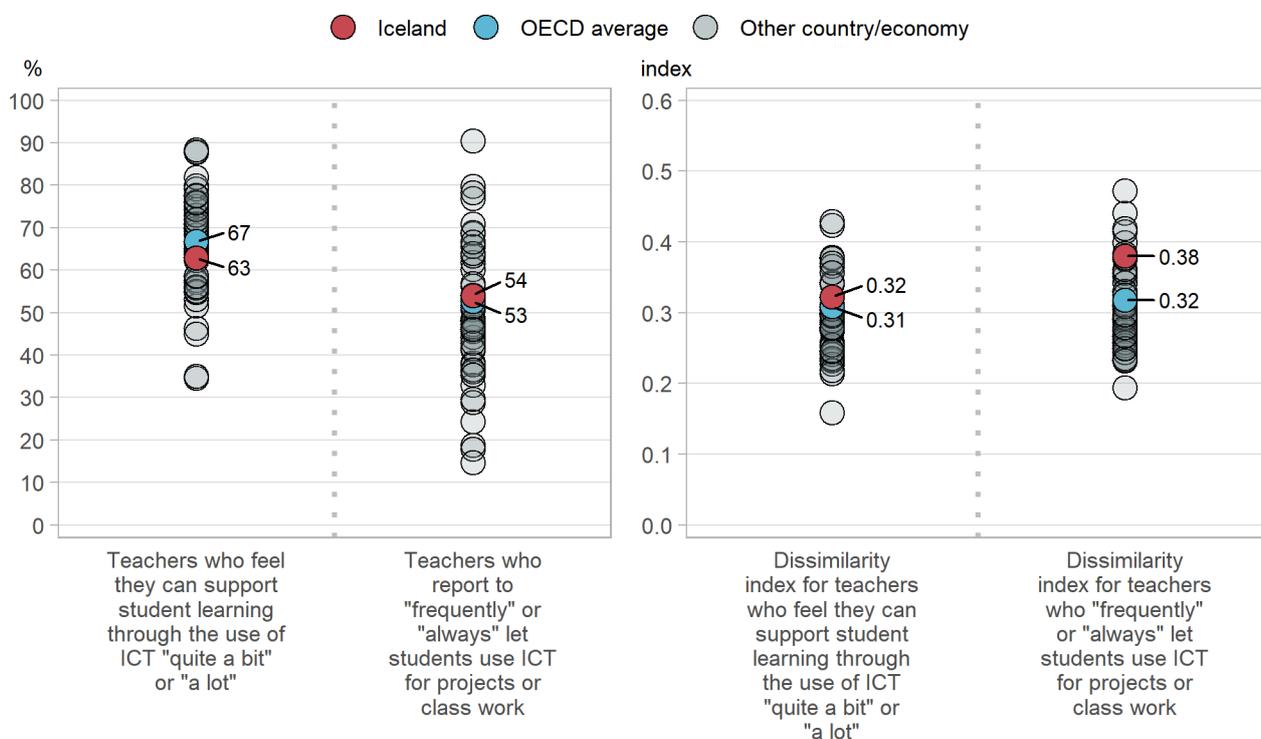
- Clarity of instruction is conceptualised in TALIS as the ability to set clear and comprehensive instruction and learning goals, to connect new and old topics, and to provide students with a summary at the end of the lesson. Past studies have shown how this practice is related to positive student outcomes, including learning motivation, achievement and satisfaction. In Iceland, the dissimilarity index for teachers who most often adopt clarity of instruction techniques (defined as those who are in the top quarter of the national distribution in terms of the frequency of use of clarity of instruction practices) is 0.36, which is not statistically different from the OECD average (0.3).

II. Do students have equal access to digital learning in school?

- The use of digital technology for teaching and learning can help students acquire digital skills, social-emotional skills and more standard cognitive skills such as numeracy and literacy. While teachers' reliance on ICT has increased considerably in the wake of the COVID-19 pandemic, school closures have also highlighted the continued presence of digital divides. Available evidence shows that learning losses have been the most severe among marginalised students, who tend to have more limited access to digital learning resources. It is important to note, however, that the data presented in this note were collected in 2017/2018; that is before the outbreak of the COVID-19 pandemic.

Figure 3. Allocation of teachers with high self-efficacy in ICT and teachers who frequently teach using ICT

Results based on responses of lower secondary teachers



Notes: Only countries and territories with available data are shown. The dissimilarity index measures if the allocation of teachers with a given characteristic in a country's schools resembles the overall teacher population of the country and it ranges from 0 (i.e. the allocation of teachers in schools resembles perfectly the teacher population of the country) to 1 (i.e. teachers with a certain characteristic are concentrated in a single school). Source: OECD, TALIS 2018 Database, Tables 3.12 and 3.15.

- Having access to technology does not improve student learning in itself. Effective integration of technology into teaching and learning requires teachers who are well trained and able to use digital tools for instruction. In the TALIS 2018 cycle, 63% of teachers in Iceland reported that they could support student learning through the use of digital technology "quite a bit" or "a lot", which is lower than the OECD average (67%).
- The dissimilarity index for these teachers is 0.32, which is not statistically different from the OECD average (0.31). This means that about one in three teachers with high self-efficacy in ICT use would need to change schools (i.e. moving to schools with a lower share of teachers with high self-efficacy in ICT) in order to ensure an equal presence of these teachers across schools. It is important to note, however, that self-efficacy is context-specific. Therefore, the same teacher may report a different level of self-efficacy in a different school environment.
- According to system-level correlational analysis, disadvantaged students tend to have just as much or more opportunity to learn digital literacy skills (such as detecting if the information read is subjective or biased) in education systems where teachers with high self-efficacy in ICT and teachers who regularly teach using ICT are more evenly distributed across schools.
- Past research has highlighted a positive relationship between teachers' perceived self-efficacy in ICT and their use of digital technology in the classroom. Although the literature also shows that ICT use at school does not automatically lead to better student outcomes – both too limited and overly excessive use of ICT can be associated with lower student achievement – teachers' and students' ability to make the most of ICT is reinforced by regular and judicious use of digital technology in the classroom. In the TALIS 2018 cycle, 54% of teachers in Iceland reported "frequently" or "always" letting students use ICT for projects or class work, which is not statistically different from the OECD average (53%). The dissimilarity index for these teachers is 0.38, which is not statistically different from the OECD average (0.32).

Key features of TALIS 2018

TALIS uses questionnaires administered to teachers and their school principals to gather data. Its main goal is to generate internationally comparable information relevant to developing and implementing policies focused on school leaders, teachers and teaching, with an emphasis on those aspects that affect student learning. It gives a voice to teachers and school leaders, allowing them to provide input into educational policy analysis and development in key areas.

- The international target population for TALIS is composed of lower secondary teachers and their school leaders in mainstream public and private schools. TALIS 2018 offered three additional options: 15 countries and territories also surveyed teachers and school leaders in their primary schools (ISCED level 1), 11 countries and territories did so in their upper secondary schools (ISCED level 3) and 9 countries and territories conducted the survey in schools that participated in the 2018 OECD Programme for International Student Assessment (PISA).
- In each country/economy, a representative sample of 4 000 teachers and their school principals from 200 schools was randomly selected for the study. Across all survey components, approximately 260 000 teachers responded to the survey, representing more than 8 million teachers in the 48 participating countries and territories. In Iceland, 1 292 lower secondary teachers and 101 principals completed the TALIS questionnaires.
- Building on literature identifying the characteristics and practices of teaching that boost student achievement, the report *Mending the Education Divide: Getting Strong Teachers to the Schools That*

Need Them Most, published on 14 March 2022, shows how teachers with different characteristics and practices tend to concentrate in different schools, and how much access students with different socio-economic backgrounds have to good teachers. It points out the aspects of different educational systems that influence how teachers are allocated to schools. The report also discusses the consequences that inequitable teacher allocation systems have on students' educational outcomes.

- All results presented in this country note can be found in the report *Mending the Education Divide: Getting Strong Teachers to the Schools That Need Them Most*. The sources of the data for Section I are: Tables 2.3, 2.5, 2.6, 2.8, 2.10, 2.12 and 4.1; for Section II are: Tables 3.3, 3.4, 3.12, 3.15 and 4.2.
- The production of the country notes has been automatised in R software following syntaxes developed by Markus Schwabe.

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References

OECD (2022), *Mending the Education Divide: Getting Strong Teachers to the Schools That Need Them Most*, TALIS, OECD Publishing, Paris, <https://doi.org/10.1787/92b75874-en>.

For more information on TALIS 2018 visit <http://www.oecd.org/education/talis/>

Data can be found also on line by following the *StatLinks*  under the tables and charts in the publication.

Explore, compare and visualise more data and analysis using: <http://gpseducation.oecd.org/>.

<p>Questions can be directed to: TALIS team Directorate for Education and Skills TALIS@oecd.org</p>	<p>Country note author: Gabor Fulop, H�el�ene Guillou, Asuka Ohagi and Marco Paccagnella Directorate for Education and Skills</p>
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