

Effective education

The University of Zurich addresses and questions the effectiveness of state-wide exit exams in schools

After the family, the school is the most important institute in which young people deal with themselves, the world and others, and where they learn. Schools lay the foundation for the acquisition of competences that are important for life, the development of attitudes and motivations, as well as for the development of a sustainable knowledge base.

The way educational systems and schools are organised is therefore of pivotal importance for the development of young people. If the school manages to be a place of common learning where children are supported in their development independently of their gender, their familial background, or their religion, then the school fulfils a central, integrative function, which is indispensable for our society, especially now.

Successful school

We know, however, that not all educational systems and not all schools are equally successful in supporting children in their development. We know that there are therefore more successful and less successful systems and schools. But why is that the case? What matters? In which schools do pupils learn more, in which do they learn less? And how is it possible to support schools to improve their quality?

In many countries, the implementation of state-wide exit examinations has been seen as one of the key strategies to improve educational quality. These examinations are considered to be a feature of effective education systems, as they are assumed to have a direct effect on schools, classes and on the individual teaching and learning of teachers and students.

But, are they really as effective as postulated? Do students learn more if the exit examinations are the same in the whole country and similar for all students? Do they develop an understanding of the world that is deeper and more sustainable than in systems where the teachers develop the exit examination tasks for their own classes? What about possible side effects, negative effects on the instructional quality, or on students' and teachers' motivations and emotions?

Effective exams?

The empirical studies in many countries revealed mixed results whereby it is difficult to draw a clear picture of all the results about the effectiveness of state-wide exit examinations. One important reason for this is that the exit examination systems differ widely among the countries. For example, in Germany, state-wide exit exams at the end of academic upper secondary schools (ISCED Level 3A) are mandatory for graduation and are very important for students as they are the basis for the

regulation of access to university places. While these points are similar to the exit examination systems in many countries, other points differ significantly.

For example, state-wide exit exams in Germany are end-of-course exams that focus on curriculum content. Further, the final exam grade includes not only the results of the single tests at the end of upper secondary schools, but also the students' grades during the last two years of upper secondary schools. Moreover, student results, even if the students did not reach the targeted goals, will not be a reason for lowering a teacher's salary or closing schools as is the case in other countries. Hence, the system in Germany shows a rather low level of standardisation compared to other countries.

Nevertheless, the new system is related to a higher control and regulation of teachers' work. The teachers' autonomy is restricted and they are just as unaware of the concrete exam questions/tasks as their students.

Hence questions of whether or not the implementation of state-wide exit examination in Germany leads to better learning, higher comparability of grading and a better school system arise. We were able to investigate the effects of the implementation of state-wide exit exams in Germany over five years on the basis of a multi-year study by taking into account the change from a class-based to a state-wide exit examination system. The main results can be summarised as follows:

The introduction of examinations had no general effects, but rather subject-specific effects on students' learning. Further, 'two sides of one coin' can be identified: a positive and a negative or at least ambivalent side with trans-intentional effects of the implementation on student learning, teacher motivation and instructional quality.

The analyses revealed clearer changes for English than for mathematics courses, including positive as well and negative effects. On the one hand, we found a negative effect on pupils in English courses in terms of lower confidence about passing the state-wide exit examinations. On the other hand, there was actually an improvement in pupils' attitudes to the idea of studying English and mathematics as a subject, accompanied by some productive changes in approach such as increasing self-efficacy and greater use of elaboration strategies. We also discovered that there was no general increase in students' achievement level. A positive effect was only seen on students with low mathematic competences.

For teachers, the implementation is related to a higher level of pressure, uncertainty, and motivational and emotional burden, even though some years after the implementation, these negative effects decreased. In line with the observed wash-back effects in many other studies, we also found a similar teaching-to-the-test effect in our study, although for teachers the exit examination system can be interpreted as 'low stakes'. That is: teachers teach only those subjects and contents that are expected to be tested in the exit exams; other curriculum relevant subjects and contents are rather neglected.

In contrast, it seems that in some but not in all subjects, teacher support for students increased and students experienced a higher level of teacher ability to motivate. On a school level, school capacity to deal with challenging tasks (particularly teacher co-operation or a high level of collective self-efficacy) can be seen as a protective factor that reduces unintended effects.

Many of our results are in line with previous studies. Most interestingly, negative effects (e.g. teaching-to-the-test effects, increased motivational and emotional burdens) were also revealed in our study, although, in Germany, a 'low stakes' exit examination system has been implemented. The reason why we also identified negative effects in Germany might be seen in the fact that the control over the work of the teachers has been tightened by the introduction of the state-wide exit exams, even if in comparison to other countries this control is only minor and without direct negative consequences for the teachers and schools. What is at issue in Germany is thus not so much the level at which the control is strengthened, but rather that it is strengthened at all.

Lessons learnt

What are the lessons learnt from this and other studies on the effects of state-wide exit examinations? Are they really the key for effective educational system and school improvement?

In our opinion, this is only partially the case. The following conditions seem to be crucial for an effective implementation of state-wide exit examinations that leads to deep and sustained student learning:

- Implementing a low stakes (and not high stakes) examination system without severe consequences for teachers and schools if students did not reach the learning goals is decisive for system and school improvement; or in line with Birenbaum and colleagues (2006): we have to implement exit examination systems in the sense of 'assessment for learning'; teachers must be able to improve teaching quality and student support strategies on the basis of students' results without the fear of failing or losing their job;
- State-wide examination systems have to become linked to school improvement strategies and teachers' professional learning; without considering this point, negative or no effects on the improvement of teacher quality might be expected;
- The exams must be cognitively challenging and cover the main contents of the curriculum;
- The exams should include (almost) all subjects in order to support students learning in subjects like music, art or history and not only in mathematics, science or first language;



- Test systems that allow evaluating student results correctly are crucial to make fair decisions about students' competence levels without biased judgement in terms of non-achievement-related aspects (e.g. gender, family background, migration); and
- Schools must have the opportunity to improve their capacity to deal with challenging tasks, to build up learning communities and initiate teacher co-operation in order to be able to discuss how good teaching practices could be implemented in the way that students can achieve the challenging learning goals, and that they will be best prepared for the exit exams.

Taken together, policy makers and educational administrations are responsible for providing supportive conditions for schools and teachers that help foster their pupils. High stakes conditions do not fit this requirement. Additionally, it is in their hands to develop an examination system with highly demanding tasks related to deep and sustainable learning. In turn, schools and teachers are responsible for translating the regulations into effective school and class practices that help students develop competences, attitudes and motivations, and a sustainable knowledge base.

In other words, the effectiveness of state-wide exit examinations depends on the interrelationship between policy structures, regulation, administration on the one side, and school and teacher capacity on the other side. If one aspect is of low quality, the negative effects of state-wide exit examinations will outweigh the possible positive aspects.



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