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Reform Options for the Transition to Upper Secondary Level Education

International comparison of structure and necessary reforms from a company perspective

Against the background of only average student performance at the end of compulsory schooling (keyword PISA) despite the high amount of spending on education, and the often insufficient entry qualifications in apprenticeships, the large number of students who change their course of study as well as the high dropout rates in upper secondary level schools, and the reform of the 9th grade planned for in the current government program all raise the question as to the necessity for reforms in the Austrian school system.

This is not only about the design of the compulsory education system (keyword internal differentiation, all-day school/afternoon care) and the school management (keywords school autonomy, streamlining of the administrative structures, open teacher labor market, new outcome-control), this concerns above all the transition from compulsory education into the sector of continued education. An important reform option relates to the „mid-level certificate“, a school leaving certificate that is acquired at the end of compulsory education.

International Comparison of Structure¹

In most countries **compulsory education** is organized as a “comprehensive school system”, Austria on the other hand, is one of the few countries with an early external differentiation into different school types. Aside from Austria, only in Germany, Slovakia and Hungary are students faced with a decision regarding their subsequent education already when they are 10 years old.

Because of the widespread comprehensive school setting, only a few countries require a school leaving certificate for primary education in order to enter lower secondary level education². In Austria admission into a lower secondary level school type in Austria depends on the one hand if the 4th grade elementary school was successfully completed. Grades also play a decisive role for admission to a lower level secondary academic school.

¹ For the structural comparison, approximately 40 countries were compared with each other. For reasons of readability, sources will not be supplied for the following designs. They can be found in the study.
² where this is required, it is mostly not based on external performance reviews, but is awarded by the primary schools. Admission examinations for lower secondary level schools are also only rarely used).

Regarding the **structure of the upper secondary level education** and the **interface between the lower and upper secondary level education**, a variety of different organizational forms can be observed in international comparison. On the one hand they concern how many different forms of education (“school types”) are offered. On the other hand they concern how strong a role initial vocational education plays. The forms in which initial vocational education is provided is also different for full-time in-school vocational education and apprenticeship systems. The variety of structures range from countries in which all or almost all young people receive upper secondary level education at a general education school (New Zealand, USA, Canada, etc.), to countries in which approximately half of the young people respectively attend a general education school or a form of vocational education (e.g., in Spain, France, Poland, Denmark, etc.) all the way to countries where a low percentage of students attend general education schools but a high percentage receive various forms of vocational education (such as Austria, Germany, Switzerland, the Czech Republic, the Slovak Republic, Belgium, Netherlands etc.). In this international comparison, Austria has the highest percentage of young people who attend a form of vocational education.

In most cases, **young people begin their upper secondary level education between the ages of 15 and 16** (in 18 countries they are 15 and in 12 countries they are 16 years old). In five countries, the young people begin their education when they are even older. In 6 states (including Austria), the upper secondary level education begins at the relatively early age of 14. In an international comparison, **Austria belongs to the group of**

countries with the youngest starting age for upper secondary level education.

How long does the **phase from entry into primary education until the beginning of upper secondary level education** now last? In principle this concerns namely the duration of that education period in which general basic skills are acquired. This period of time is **predominantly nine or ten years in the majority of the countries. In just five of the 41 comparison countries is this period shorter with only eight years, and Austria belongs to this group.** In six countries it is even longer than 10 years. Of interest is also that in all the countries (except Belgium), who did significantly better than Austria in PISA 2006, this education period devoted primarily to imparting general basic skills lasts one to two years longer than in Austria.

By international comparison, the **typical graduation age** in the Austrian upper secondary level schools (16 to 19 years) lies at the lower end of the scale.

By international comparison, the situation regarding **diplomas at the end of lower secondary level education** is complex. One aspect concerns the question of whether the school leaving certificate should be based on the school leaving examination, the student's performance throughout the year, or a combination of both. A second aspect concerns the question of what form the school leaving exam should take, if it should be an oral and/or written examination and who should evaluate them (the school or an external agency/authority). And a third aspect is the fact that there are differences as to who assigns the grades: the teachers of the individual schools and/or an external agency. It can be seen that in many European countries **school leaving examinations** are a very effective way to determine student performance. Interesting to note is that in these countries the school leaving certificate is usually awarded based on a combination of the school leaving examination and the students performance throughout the year (the school leaving certificate is based exclusively on the school leaving examination in only three countries). Such a rating system usually has an impact on the role of teachers: They are then usually no longer the sole grading authority, and instead the grades for the school leaving certificate are either determined based on centrally predetermined criteria or the grade for the school leaving examination is used as a weighting factor in the teacher evaluation.

A relatively new development in the area of evaluating student performance or competency is the **standardized national test**. Traditionally, the student evaluation is based on formative evaluations made by the teacher (i.e. continual testing/evaluation) and summative as-

essment of the student's performance throughout the year. Although some countries created standardized national tests very early on for the purpose of steering the student flows³, it was not until the increased interest in the outcome of the education systems, the schools and also the individual students that began in the 1990s that standardized national tests became established. Approximately 30 countries now use national tests. In about half of the European countries, such tests are also relevant for the further educational career of the students. This is usually only in conjunction with the „traditional“ assessment of the students by teachers however. Such tests bring an element of objectivity and comparability of student performances to the school leaving certificates.

In contrast to these developments, in Austria there are as of yet no centralized national performance tests at the end of compulsory schooling or the 8th grade. The school leaving certificate is based exclusively on the annual performance of the student. Beginning 2012 however, the educational standards will be systematically evaluated. However, they are primarily a tool for self-evaluation of the schools and as information for decision makers. Currently, standards are planned in the fourth and eighth grades. They will have no influence on the grades of the students. The grades and the type of school attended in lower secondary level education (lower secondary school, lower secondary academic school), therefore still play an important role now and in future, in particular for the transition into upper secondary level schools types that grant access to tertiary education (secondary academic school and VET college).

Challenges for the Austrian Initial Education System

An important issue in **compulsory education**, the **early external differentiation**: Although a longer period of common schooling does not guarantee better student performance per se, in all the countries that performed significantly better than Austria in PISA 2006, young people are taught together significantly longer. So apparently the achievement of good student performance depends on the concrete „design“ of the comprehensive school system (internal differentiation - individualized instruction, etc.).

Early external differentiation is associated with significantly higher differences in the performance between the students. This is apparently related to the fact that in these systems, the socio-economic background of the parents has a stronger effect/impact on the student's performance. Education systems with a longer period of common schooling in compulsory education on other

³ Iceland (1946), Northern Ireland and Portugal (1947), Scotland (1962), Luxemburg (1968), Netherlands (1970) as well as Malta and Denmark (1975).

hand, often seem to achieve a better compensatory effect in this regard. This heterogeneity of the student performance however, produces negative consequences not only from the perspective of the individual students. It also has a significant effect on the further educational pathways. Thus **weaker students can primarily be found in the prevocational schools, the apprenticeship training and the VET schools**. This creates particular difficulties for training companies who are faced with selecting a candidate from a sufficiently large pool of suitable applicants and thus has negative consequences on the readiness of the company to accept apprentices, which in turn raises doubts as to the ability to secure young skilled laborers for the future. This image corresponds with the results of diverse training company surveys in which 70% of the training companies reported that they frequently or sometimes have difficulty finding suitable apprentices.

As already pointed out the grades at the end of primary school or lower secondary level education are assigned an exceedingly important steering function in the Austrian system of early external differentiation. Several scientific findings show however that the **Austrian practice of school grading does not represent a reliable standard**. Although on the average students with varying grades in German as to be expected also achieve respectively different test results (for such tests as PIRLS), at the same time however, the large overlaps in the reading performance with varying grades are notable. The overlapping area for neighboring grades is 70% and more. And even between the grades *very good* and *unsatisfactory* overlapping areas can be identified: The 20% worst students with the German grade *very good* achieved the same test results as the best students with an *unsatisfactory*.

The question thus arises as to how a more objective criterion of student performance could be designed so that it can provide a more reliable measurement of the skills of the students at the end of lower secondary education. From the international comparison of the interface between the lower and upper secondary level education, it can certainly be concluded that in Austria, as in many other countries, standardized national tests could/should be used as an objectivity criterion for the school leaving certificate.

Austria also has a comparatively high proportion of **students at risk** in the PISA test dimensions *reading, mathematics and natural sciences* (students with a skill level 1 and below are seen as being at risk). According to this rating scale, almost one in three students in Austria is at risk. In other countries (in particular in PISA “top performers”), the number of students at risk is significantly smaller (especially in Finland, this applies to

less than 10% of the students). The **performance of students with an immigration background** also indicates manifest potential for improvement: Austria and Germany are the only countries in which second generation students perform as poorly as first generation students⁴. In addition, the interface problem is evident in the fact that apparently many young people interrupt or discontinue their educational career after the 9th grade. According to estimates by Statistik Austria, in the school year 2006/07 this applied in the 9th grade to 15% of the young people who spoke German as their dominant language and almost 30% of the young people who did not speak German as their dominant language and who did not successfully graduate from the 9th grade. And only about two-thirds of the 9th grade students attending a secondary education granting access to tertiary education actually successfully pass the school leaving examination.

This also raises the general question as to whether the prevocational school fulfills its systemically intended bridging function between the 8th grade and entry into apprenticeship training in the 10th grade. The distribution of educational qualifications of the apprentices namely shows that the “classic” supply function of the prevocational schools apply for “only” about 40% of those beginning an apprenticeship. The **“by-passing of prevocational school”**, in other words completing the final years of compulsory education in the first years of VET schools and colleges, is a reality for many who begin apprenticeship training at a later age.

The design of the interface itself is also problematic: Thus a vast majority of students complete their compulsory education in the first grades of upper secondary level education. This historically increasing anomaly has the effect that already during their compulsory education (specifically in the last year of compulsory education), most students must decide what form of further education they will pursue and this school choice is often made based on the type of apprenticeship training they will attend afterwards. It would be good here to strive for a clear “division” between compulsory education and further education. Concretely speaking, this means that the decision as to which type of upper secondary level education to pursue is made after completing compulsory education. A “mid-level certificate” could serve a supporting function in this regard.

Of particular interest for Austria is especially the **design of the interface in those countries that also have a well-developed apprenticeship system**. If one compares these countries, then an Austrian “particularity” becomes immediately apparent: The lower secondary

⁴ In Germany the second generation scores significantly poorer than the first generation.

level education ends in the 8th grade. In other countries however, it lasts until the 9th grade (Switzerland, Denmark) or up in the 10th grade (Germany), and thus the transfer to upper secondary level education takes place in these countries one or two years later than in Austria. Correspondingly, in the comparison countries the courses of study in upper secondary level education are often one year shorter than in Austria. A second characteristic unique to Austria is the Austrian prevocational school and the bridging function it serves. Since lower secondary level education ends with the 8th grade in Austria, and apprenticeship training first starts in the 10th grade, the young people must “spend” a year in a different school type. The prevocational school was “designed” ideal typical for this purpose and should also provide relevant pre-qualifications for the apprenticeship training to follow. In the comparison countries however, full-time education in upper secondary level schools and apprenticeship training begins directly after the lower secondary level education.

Reform Options from a Company Perspective

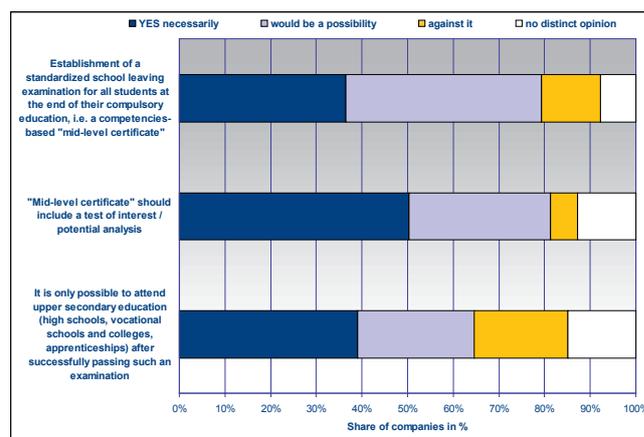
In a company survey of the *ibw*⁵ concerning **the interface between compulsory education and the further educational system of the upper secondary level education**, the following reform options were identified:

- **Expansion of compulsory education and vocational information and counseling** already during the compulsory education.
- The majority of the companies believe that **14 years of age is too early for deciding what type of further education to pursue**.
- Should the transition to upper secondary level education be redesigned in such a way that the transition takes place later, this will have an impact on the duration of the education and or apprenticeship. Either the students and apprentices would then be one year older than up till now, or training periods would have to be shortened by one year. Although many companies did not express a view regarding their preference, it can nevertheless be discerned that a majority of the companies are **against shortening the training periods**. Rather, they would accept that the graduates would then be one year older as compared to how it is currently.
- The majority of the companies tended to express approval regarding a possible **establishment** of a standardized school leaving examination to be taken by all students at the end of their compulsory education, i.e. a competencies-based “**mid-level certificate**”

“**certificate**” (see Figure 1). A majority of the companies also approve of the idea or believe it is worth consideration that it is only possible to attend further education systems (schools granting access to tertiary education, technical schools, apprenticeship training) after successfully passing such an examination.

- The transition into the further education system could also be designed such that the schools select the students themselves. A majority of the companies also find this idea acceptable. For those who support such a structure, the proposed external competencies-based mid-level certificate was the most important acceptance criterion. The companies are divided into two roughly equal „camps“ of proponents and opponents regarding the question of whether the school (in addition) can design their own admission criteria, or whether the criteria should be the same for each individual school type.

Figure 1: Distribution of company responses concerning the introduction of a central NEW school leaving examination at the end of compulsory education



Source: *ibw*-Company Survey 2010

This research brief only touches upon some of the key aspects of the interface between compulsory education and upper secondary level education. Possible reform models for a redesign of the interface to upper secondary level education as well as further analyses and reform options from a company perspective for the compulsory education sector and the Austrian school administrators can be found in the study.

The entire study is available in print (*ibw* Research Report No.161, ISBN 978-3-902742-34-6) or [online](#).

⁵ A total of more than 900 companies participated in the survey.