Educational Standards in EFL and their Attainability: An Austrian Case Study

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Abstract

In 2004, the Austrian Ministry of Education stipulated an English proficiency of B2 (Independent User/Vantage) according to the Common European Framework of Reference for Languages (Council of Europe, 2001) as the exit standard for upper secondary education. The present study examines whether this B2 target represents a reliable entrance standard for tertiary education. For this purpose, first-year students (n=3,186) from three Austrian tertiary institutions were subjected to an English placement test. The findings indicate that only about half the test-takers attained the required B2 level, with freshmen from exclusively English-taught study programmes reaching substantially higher scores. Nonetheless, the figures suggest that tertiary institutions cannot rely on the majority of freshmen meeting the expected standard. The study also finds that graduates of secondary academic schools score significantly higher results than those from secondary vocational schools. The results therefore indicate that the required B2 standard is not equitable for the different school types involved, nor is it attainable for a clear majority of school leavers. This implies that two of four criteria for appropriate target-setting laid down in Juran’s Quality Handbook (Juran & Godfrey, 1998) are not met, which in turn suggests that a revision of Austrian educational standards for English at the upper secondary level may be in order.

1 Introduction

1.1 Background

Since the turn of the century, educational monitoring has had profound influence on educational systems across Europe. Starting in 2000, the PISA-regime (Programme for International Student Assessment) has been assessing reading, mathematics and science skills among 15-year-olds in all OECD countries at three-year intervals. Similarly, since 1995, the TIMMS-surveys (Trends in International Mathematics and Science Study) have been testing grade 4 and grade 8 pupils in mathematics in 60 countries. This ubiquity of educational monitoring has prompted a number of national governments to embrace educational standards and standards testing also in regard to foreign languages, and in particular EFL.

In regard to EFL standards, the Austrian and German governments have taken a similar approach. In Austria, a set of educational standards (Bildungsstandards) based on the six competence levels A1–C2 of the Common European Framework of Reference for Languages (CEF) (Council of Europe, 2001) was developed and signed into law in July 2008 (Bundesinstitut bifie, n.d.). However, already in 2004, the CEF scale (A1–C2) had been introduced into the official curricula of the Austrian secondary school system as a benchmark for foreign languages, starting with grade 5 (i.e. the beginning of lower secondary education) and reaching up to grades 12/13 (i.e. the exit standard for upper secondary schools). It is these exit standards at the end of upper secondary
school that are the main topic of this article. At this point, Austrian school leavers will have had 8–9 years of English instruction at secondary level, which translates to approximately 800–960 contact hours, depending on the type of school attended (Bundesministerium für Unterricht, Kunst und Kultur, 2003a, 2003b, 2003c; see also Sect. 3.3). At this exit point, the Austrian Ministry of Education set the expected English competence at level B2 in all the five skills areas, i.e. listening, taking part in conversations, coherent speaking, writing, and reading. Indeed, a similar exit level of B2/C1 was introduced by the Kultusministerkonferenz for the German Abitur (see Kultusministerkonferenz, 1989/2002, p. 5; Senatsverwaltung für Bildung, Jugend und Sport Berlin, 2006, p. 13; for a brief historical outline on the development of educational standards in Germany, see Caspari et al., 2008; and for Switzerland, see Lenz, 2007; de Pietro, Müller, & Wirthner, 2007).

According to the global scale of the CEF, B2 competence describes a so-called Independent User at the Vantage stage, who has the following foreign language skills:

Can understand the main ideas of complex text on both concrete and abstract topics, including technical discussions in his/her field of specialisation. Can interact with a degree of fluency and spontaneity that makes regular interaction with native speakers quite possible without strain for either party. Can produce clear, detailed text on a wide range of subjects and explain a viewpoint on a topical issue giving the advantages and disadvantages of various options. (Council of Europe, 2001, p. 24)

With such exit standards of secondary education in place, it should therefore be theoretically possible for tertiary institutions to plan their EFL curricula accordingly. However, it may be too early to regard these standards as truly reliable. Tschirner (2008), for instance, raises serious doubts about “the rationality of some of the [German] proficiency expectations” (p. 187), and on a procedural level, Klieme et al. (2007) caution that a DEFINITIVE setting of standards is only possible after obtaining “empirical findings” (p. 30). Reservations of this kind are less of an issue where exit standards for lower secondary education are concerned. For this level, the empirical verification of standards as envisaged by Klieme et al. (2007) has been ensured in both Austria and Germany.

In the Austrian context, a language testing drive was launched in 2006 with the pilot phase of the E8 English Standards Testing Project. This involves the annual assessment of a representative cohort of pupils in their 8th grade, i.e. roughly age 14 (Sigott et al., 2007, pp. 7–8). A comparable testing regime was instituted in Germany by the German Institute for International Educational Research (DIPF), which conducted a representative study among 11,000 pupils at grade 9 (age 15) during the academic year 2003/04, testing their language competence in English and German (Klieme et al., 2006, p. 1; see also Klieme & Beck, 2007). Hence, empirical data on exit standards at the end of lower secondary education have already been obtained from representative samples of test-takers in Austria and Germany. It should therefore be possible to form well-founded judgements on the plausibility and attainability of English educational standards at ages 14/15.

However, no such testing has been instituted for exit standards at the end of upper secondary education (i.e. at age 18/19), either in Austria or Germany. We shall also see in the following section that there is, unfortunately, a general dearth of information on English proficiency at this level. Tertiary institutions are therefore reduced to relying on the following (doubtful) sources in assessing whether their clientele of first-year students is likely to have attained the educational standards laid down in the curricula.

1.2 Previous studies

In the absence of representative testing at this level, there are in principle three ways of assessing the plausibility of exit standards. First of all, a rough estimate of input hours for achieving B2 competence in English has been established by the Association of Language Testers of Europe, according to which B2 should be attainable in 500–600 “guided teaching hours” (Pearson Longman, n.d., p. 7). The U.S. Foreign Service Institute budgets somewhat more hours (720) for English speakers aiming to achieve B2 competence in Germanic languages like Danish and Dutch, or
Romance languages like French and Italian (Tschirner, 2005, p. 53; see also Thompson, 1996). Given that English speakers may quite plausibly take longer to acquire Romance or other Germanic languages than it takes German speakers to acquire English, the higher figures given by the Foreign Service Institute definitely fit the picture. In any case, from this perspective the approximately 800–960 contact hours in Austrian secondary schools look sufficient to achieve a level of B2 in English. Moreover, two Austrian public opinion polls seem to suggest as much.

A representative – and comparatively recent – survey (Schmid, 2006) asked 3,300 Austrian school leavers to self-rate their English competence. Among the battery of questions involved in this survey, we will focus on those gauging English language competence among school leavers of upper secondary schools, i.e. grades 12/13.

Figure 1 reports the proportion of school leavers who rate their English competence as “very” good” or “good” in the three skills areas of speaking, writing, and reading. (The descriptors “very good” and “good” correspond to the top two grades (out of five) in the Austrian school system.) In regard to speaking, the results fall around the 80% mark, i.e. four fifths of students assess their speaking skills as “good” or “very good.” Results for written skills are somewhat lower. Nonetheless, roughly three quarters of pupils are convinced they have “good” or “very good” written English skills. Finally in regard to reading, school leavers award themselves top grades: over 90% of students assume they are “good” or “very good” readers. (Schmid, 2006, p. 42) From this perspective, the language skills of school leavers look absolutely adequate.

Secondly, between November 2000 and January 2001, Fessel-GfK, an Austrian market research agency, surveyed a representative sample of 1,000 members of the general public gauging their English skills through self-reporting. The exit level associated with upper secondary education was defined as “good communication skills,” and according to the survey 70% of respondents with upper secondary qualification reported that they had reached this level (see Fig. 2). Among university graduates, 88% self-reported that they have good communication skills or better.
For the sake of completeness, at the other end of the scale, only 14% of respondents who had left school with only lower secondary qualification put themselves into the competence band of “good communication skills” or higher. Consequently, it looks as if more than 70% of respondents with upper secondary or tertiary qualifications may reach fairly satisfactory English standards.

Taking the survey data in Schmid (2006) and Fessel-GfK (2001) at face value, one might conclude that English skills tend to meet educational standards. However, in both cases, there is no way of knowing how the reported skills correlate with the CEF, and hence with the standards outlined in Austrian curricula. Moreover, while the surveys of Schmid (2006) and Fessel-GfK (2001) undoubtedly give an insight into general skills levels, they suffer from the drawback identified by the European Commission (2005a) in not being an "objective assessment of language skills" (p. 4).

Fortunately, some results of objective assessment are in fact available. However, the drawback is that these studies are all fairly small in scale and not based on representative, probability sampling. Platzer (2006, p. 213–214) conducted a survey among Austrian first-year business students (n=359), who were subjected to Oxford University Press's Electronic Quick Placement Test (for a description of the test, see Section 2.2 below). In brief, the study finds that (a) about 50% of freshmen do not attain the expected B2 level and (b) graduates of academic schools outperform those from secondary vocational schools. Nevertheless, even in this better performing segment, a substantial number (well over a third) do not reach B2 competence. Platzer (2006, p. 233–234) therefore concludes that the B2 level mentioned in the curricula is not consistently achieved, irrespective of the school type involved.

If this 50% attainment rate seems unduly dire, a Spanish survey may function as a possible sounding board for the Austrian results. With the foreign language input in Spanish secondary education being one third less than that in Austria (Eurydice, 2005), Escribano and McMahon (2006, p. 407) report that 22% of the 226 engineering and architecture students tested at the Universidad Politécnica de Madrid reach B2 proficiency (or better). Considering the differences in input, the 50%-share of Austrian freshmen reaching B2 does not seem too low in comparison.

As established by Tschirner (2004), whose findings are based on tests of vocabulary size, German students also fall short of curricular expectations. In the winter term of 2001/02, Tschirner (2004, p. 29) subjected 142 first-year students of English at the University of Leipzig to a battery of Nation’s Vocabulary Levels Tests (For a description of the Vocabulary Levels Tests, see e.g. Nation, 2001). They were used to test the Abitur goals in Saxony, which stipulate a receptive knowledge of 5,000 words, and a productive knowledge of 4,000 (Tschirner, 2004, p. 31). Tschirner (2004) observes that “only 30% of the students reach Abitur goals [of ] 5,000 words receptively” and “92% [...] do not even come close to reaching Abitur goals [of] 4,000 words productively” (p. 32). In other words, the actual exit standards of secondary schools bear little relation to the targets outlined in the curricula.

Turning back to first-year business students, Weiß (1997) surveyed the English competence of 94 freshmen at the Vienna University of Economics and Business Administration (Wirtschaftsuniversität Vienna, 2004). In their study, 52% of the students indicated they possess “good English communication skills” (by educational background) (Data from: Fessel-GfK, 2001; cited in Archan & Holzer, 2006, p. 16).
versitât Wien) on the basis of a self-assessment test compiled by the University's Institute for English Business Communication. Only four out of a total of 94 test takers managed to reach the required threshold (Weiß, 1997, p. 96). Despite this poor showing, Weiß (1997, p. 31) insists that graduates of upper secondary schools should have been better able to meet the requirements, and she backs this up by interviews with state school teachers, who confirm that the skills tested are part of the regular school curriculum and should therefore have been unproblematic (Weiß, 1997, p. 11).

Finally, an early study was conducted by Bierbaumer (1983/84) at the English Department of the University of Graz (Austria), in which 77 first-year students of English were subjected to a placement test, which put the average student right in the middle of the intermediate to upper intermediate range, that is, roughly B2 (Bierbaumer 1983/84, cited in Weiß, 1997, pp. 33–34). As Bierbaumer does not report a standard deviation for the mean test results, it is consequently impossible to estimate how many students score lower than average, and by how much. However, it is not implausible that a good proportion will only have achieved below average results, and thus fall in the B1 category. And this is probably less than satisfactory for students of English. Indeed, before conducting the test, Bierbaumer surveyed a group of secondary school teachers on their assumptions of how first-year students would fare in the test, and he observes that the actual test scores were well below teachers’ expectations (Bierbaumer 1983/84, cited in Weiß, 1997, p. 34).

1.3 Research questions

All in all, the studies just reviewed present a mixed picture. The correlations between input hours and learning output by the Association of Language Testers of Europe suggest that the exit standards in question are achievable, and in fact public opinion polls (Fessel-GfK, 2001; Schmid, 2006) point towards the fact that they are actually achieved by school leavers. On the other hand, the smaller, but test-based, surveys all imply that the levels mentioned in the curricula may not be attained. What is particularly striking in the case of Weiß (1997) and Bierbaumer (1983/84) is the discrepancy between the expectations of the interviewed teachers and the students’ actual results. In fact, surveys conducted in Germany in conjunction with TIMMS and PISA have repeatedly found that not only teachers but also educationalists and curriculum experts systematically over-rate students’ competence (Klieme et al., 2007, p. 30). Hence, we seem to be faced with the fact that even though educational standards may be considered perfectly plausible by educators, this does not guarantee that they are in fact attainable by a majority of students. Against this background of the doubtful attainability of curricula standards, I propose the following three research questions:

RQ1: To what extent do Austrian first-year students achieve the English standards set in the secondary school curricula (and can tertiary institutions regard them as reliable entry standards)?

RQ2: What is the correlation between the achievement of English standards and the type of study programme first-year students are enrolled in?

RQ3: What is the correlation between the achievement of English standards and the school type attended by first-year students?

2 Method

2.1 Design, setting and subjects

In Section 1.2, we identified two main problems the previous test-based studies were suffering from:

(a) Their sample size was comparatively restricted, ranging from under 100 participants to at most approximately 350. The current study attempts to improve on this problem by increasing the sample to over 3,000 participants, which represents a substantial increase (by about a factor of ten).
An issue which is less easily dealt with concerns the fact that the previous test-based studies were based on non-probability (convenience) samples. As representative sampling is in truth only feasible in large-scale testing, this is a drawback also inherent in the current study. The problem with non-probability samples is, of course, that they are in principle very much open to sampling error. However, Bernard (2000, p. 180) suggests one methodological option of obtaining comparatively safe results even from non-random samples, namely, repeated testing of non-probability samples with the explicit aim of replicating the test results. This repeated generation of comparable results can counter the charge that the findings are unsafe because of sampling error. For this reason, the discussion in Sections 3.1 and 3.2 is based on a cross-sectional design which compares different sub-samples. If comparable results are obtained in different sub-samples, there is a good chance that these results will also hold for the underlying population and will not be subject to sampling error. This should be particularly true if the subjects come from different backgrounds but nonetheless generate comparable test results. For this reason, sub-samples were obtained from varied backgrounds, which in our case means widely varying study programmes.

To be precise, the subjects tested are made up of first-year students from three Austrian tertiary institutions, involving five different study programmes (see Table 1). The results were tracked over a period of up to five years. In the following is a description of the subjects tested:

(a) The first sample comprises business students from the full-time Business Consultancy programme of the Fachhochschule Wiener Neustadt³ (Austria). This group accounts for a total of 777 test-takers from the academic years 2003/04 through to 2007/08.
(b) The Fachhochschule Wiener Neustadt also runs an exclusively English-taught Business Consultancy programme, which attracts foreign as well as Austrian students. As we are mainly interested in the attainability of the Austrian curriculum standards, only Austrian nationals were included, which amounts to 83 subjects covering the intake between 2003/04 and 2007/08. In contrast to the other samples, this subset unfortunately does not represent the whole intake of Austrian students, and data from one year are missing completely. Hence, the test results for this set will have to be interpreted with some care.
(c) The final sample originating from the Fachhochschule Wiener Neustadt is composed of two years (2006/07 and 2007/08) of full-time students of various health professions (viz. radio-technology, occupational therapy, speech therapy, and biomedical analysis). These make up another 161 respondents.
(d) Martin Buxbaum (2007, personal communication) of the Fachhochschule des bfi⁴ in Vienna kindly provided data from their Project Management & IT study programme, which accounts for another 103 test-takers from the academic year 2007/08.
(e) Finally, the largest sample is made up of 2,062 students of English from the English Department of the University of Vienna. These data are provided by courtesy of Susanne Sweeney-Novak (2006 & 2007, personal communication) and cover the five academic years from 2002/03 through to 2006/07. Just like in sub-sample (b), the students of English come from an exclusively English-taught programme.

<table>
<thead>
<tr>
<th>Study programme</th>
<th>Number of Subjects</th>
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<tbody>
<tr>
<td>(a) Business Consultancy</td>
<td>777</td>
</tr>
<tr>
<td>(b) English-taught Business Consultancy</td>
<td>83</td>
</tr>
<tr>
<td>(c) Health Professions</td>
<td>161</td>
</tr>
<tr>
<td>(d) Project Management &amp; IT</td>
<td>103</td>
</tr>
<tr>
<td>(e) English Studies</td>
<td>2062</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3186</strong></td>
</tr>
</tbody>
</table>

Table 1: Number of test takers by study programme
As we are mainly interested in English competence at the juncture between the upper secondary and tertiary levels in the Austrian education system, samples (a–d) are limited to first-year students with a school leaving certificate acquired in the Austrian school system. This brings the total sample to 3,186 test-takers.

2.2 Test

All except the sample of English students were subjected to the Electronic Quick Placement Test (QPT), distributed by Oxford University Press and UCLES (University of Cambridge Local Examinations Syndicate). The electronic QPT is a “test of English language proficiency” (UCLES, 2001, p. 1), which consists of multiple-choice questions and multiple-choice cloze elements, and involves the passive/receptive skills of listening and reading, also integrating vocabulary and grammar. The active/productive skills of oral and written text production remain untested. The results are classified in terms of the six-point CEF scale, i.e. A1–C2 (UCLES, 2001, p. 8). According to UCLES (2001), “prior to publication the QPT was validated in 20 countries by more than 5,000 students” (p. 43).

By contrast, the English Department of the University of Vienna subjects its first-year students to the paper-and-pen version of the QPT covering the same skills areas, except for listening. The test manual (UCLES, 2001, p. 15) reports the correlation of the electronic and paper-and-pen versions as 0.87, which is considered high by statistics manuals. Hence, it should be safe to compare the results of these two test versions.

Admittedly, placement tests which are solely based on discrete and receptive items have their limitations, and they clearly are no match for full-blown assessment involving open-ended and productive tasks. On the other hand, compared to the self-reporting used in large-scale surveys such as Schmid (2006) and Fessel-GfK (2001) (and European Commission, 2005b, 2006, for that matter), the results of placement tests are nonetheless an improvement as they are standardised and linked to the CEF. Hence, for a preliminary study such as the present one, the QPT should prove sufficiently useful.

3 Results and discussion

3.1 Research question 1: Reliability of curriculum standards

First of all, Figure 3 indicates that English competence among business students, health students and project management & IT-students is roughly similar. In each case, around 10% of graduates fall within the A1+A2 group, and another 35% to 40% are at the B1 level. That means, in all three study programmes about half the students (between 47.6% and 50.9%) fall below the level of B2 mentioned in the curricula, and hence fall short of the curriculum targets. A further point which becomes immediately obvious is that the single largest competence band is actually B1. So in this sense, B1 is the typical competence achieved by freshmen, and not B2.

By contrast, students of English do substantially better. Here the percentage of A1+A2 results is negligible (2.6%), and only an additional 17.7% fall within the B1 band (see Fig. 3). Still, taken together this means that about 20% (or one-fifth) of first-year students of English do not reach the expected B2 level. Overall though, this sample looks comparatively satisfactory: over one third (37.5%) falls within the B2 range, and well over 40% are in the C1+C2 category. In other words, approximately 80% of the students of English reach the required target. And finally, students from the English-taught Business Consultancy programme outperform all others: 91.5% of the subjects are at a level of B2 or above. However, it is important to bear in mind that we are dealing with an incomplete data set in this programme (see Sect. 2.1 b). Consequently, these results have to be taken with some care.
These observations already provide the answer to the first research question: Of the five study programmes involved, four (Business Consultancy, Health Professions, Project Management & IT, English) enrol 20–50% of first-year students who fail to reach the expected B2 level. Overall, we therefore have to conclude that tertiary institutions cannot count on their freshmen to reliably achieve the B2 level.

3.2 Research Question 2: Correlation of study programme and achievement of standards

3.2.1 Results

Regarding the various study programmes involved, the data indicate a skills gap between freshmen in programmes which are exclusively English-taught (viz. English Studies and the English-taught Business Consultancy programme) and “regular” study programmes such as Business, Health Professions, and Project Management & IT. In this latter group, English skills are in effect identical. This is borne out by a series of Mann-Whitney tests which generate probabilities well above the .05 level when comparing the test results of these three study programmes (see Table 2a). That is, we can be fairly certain that business, health, and project management students indeed have the same English competence.

<table>
<thead>
<tr>
<th>Study programme</th>
<th>Mann-Whitney-U</th>
<th>Z</th>
<th>p</th>
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<tbody>
<tr>
<td>(a)</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Business Consultancy*Health Professions</td>
<td>61453.000</td>
<td>-0.371</td>
<td>0.711</td>
</tr>
<tr>
<td>Business Consultancy*Project Management &amp; IT</td>
<td>38833.000</td>
<td>-0.516</td>
<td>0.606</td>
</tr>
<tr>
<td>Health Professions*Project Management &amp; IT</td>
<td>8181.500</td>
<td>-0.191</td>
<td>0.848</td>
</tr>
<tr>
<td>(b)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English Studies*Business Consultancy</td>
<td>488851.500</td>
<td>-16.949</td>
<td>0.000</td>
</tr>
<tr>
<td>English Studies*Health Professions</td>
<td>103632.500</td>
<td>-8.498</td>
<td>0.000</td>
</tr>
<tr>
<td>English Studies*Project Management &amp; IT</td>
<td>69527.500</td>
<td>-6.341</td>
<td>0.000</td>
</tr>
<tr>
<td>(c)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>English-taught Business Consultancy*Business Consultancy</td>
<td>14155.500</td>
<td>-8.862</td>
<td>0.000</td>
</tr>
<tr>
<td>English-taught Business Consultancy*Health Professions</td>
<td>3013.000</td>
<td>-7.377</td>
<td>0.000</td>
</tr>
<tr>
<td>English-taught Business Consultancy*Project Management &amp; IT</td>
<td>2085.000</td>
<td>-6.318</td>
<td>0.000</td>
</tr>
</tbody>
</table>

Table 2: Differences in test results based on study programme
By contrast, students of English and those in the English-taught Business Consultancy programme achieve higher scores. This is reflected in highly significant probabilities (Mann-Whitney $p=0.000$) when comparing their results with those of business, health and project management students (see Table 2b, c). What these figures suggest is that the type of study programme correlates with students’ language competence: English-taught programmes obviously attract a majority of students meeting the more demanding language requirements, and by extension, they come closer to the original curricular standards. By contrast, in “regular” study programmes, tertiary institutions have to reckon with roughly half their freshmen not reaching the expected standards (see Sect. 3.1, Fig. 3).

3.2.2 Discussion

In the current climate, it is almost de rigeur to shift the blame on schools if educational standards are not met. However on the strength of previous surveys, Klieme at al. (2007) hold that initial standards are very likely to be set at an “unrealistically high” (p. 30) level, which leads them to the caveat that standards should not be considered safe without prior empirical testing, and they explicitly call on politicians and administrators to “formulate realistic aims” (Klieme at al., 2007, p. 30). In this context, it may therefore be useful to review the procedures deemed necessary for realistic target setting from the point of view of quality assurance.

In their standard manual on quality assurance, Juran’s Quality Handbook, Juran and Godfrey (1998) concede that, apart from technical processes, “quality goals may also be established for departments or persons” (p. 4.6). However, they also underline that four specific criteria need to be met in this case:

1. Ideally such goals should be:
   - Legitimate: They should have undoubted official status.
   - Measurable: So that they can be communicated with precision.
   - Attainable: As evidenced by the fact that they have already been attained by others.
   - Equitable: Attainability should be reasonably alike for individuals with comparable responsibilities.

(Juran & Godfrey, 1998, p. 4.6)

First of all, the criterion of legitimacy is unproblematic in the case of Austrian curricula standards as they undoubtedly have official status having been set by the Ministry of Education. Secondly, the goals need to be measurable. Again this criterion has been met as the CEF levels were introduced to guarantee measurability of language competence in the first place through the use of explicit descriptors defining the levels. It is the third criterion, however, which may pose problems. Juran and Godfrey (1998) demand that goals should be “attainable, as evidenced by the fact that they have already been attained by others” (p. 4.6). This reflects Klieme et al.’s (2007) demand for prior empirical testing before ultimately fixing educational standards. However, according to Zydatiß (2007, p. 17) the German educational standards were set without empirical research on the performance of pupils and therefore should be considered only preliminary. Regarding Austrian standards, it is unclear whether authorities involved in target setting empirically ensured that those standards were likely to be achieved by pupils before introducing them into the curricula. The assumption is not implausible that they may have been set on an impressionistic, anecdotal basis (see Steinhuber, 2003), rather than an empirical one. However, if this was indeed the procedure for setting targets which are subsequently not reached by 20–50% of freshmen (cf. Section 3.1, Figure 3), then the targets themselves may plausibly come in for some revision in line with the empirical test results reported above and according to the precepts outlined in Klieme et al. (2007) and Juran and Godfrey (1997). In this context it is instructive to see that Swiss educational authorities are going about standard setting in a different way. In other to avoid setting standards by “rule of thumb” (de Pietro, Müller, Wirthner 2007, p. 44), representative surveys are conducted to establish pupils’ competences empirically, with standard setting occuring only AFTER these results
have been established. This procedure is meant to avoid both unrealistically high or unnecessarily low standards (de Pietro, Müller, Wirthner 2007, p. 44).

Tschirner (2005) hints at a possible reason for the difficulties inherent in setting language standards. One issue in this context is the linear input-output relationship at the heart of most curricula, which equate a given number of contact hours with certain learning outcomes. While empirical evidence has shown such very rough correlations to exist (see Rifkin, 2003; Swender, 2003; Thompson, 1996; Brecht, Davidson, & Ginsberg, 1993), additional factors play a major part and can override mere length of instruction (Tschirner, 2005, p. 53). Tschirner also observes that progress is significantly slower at higher competence levels, which implies that a linear model of language input and learning outcome is not appropriate. The threshold between B1 and B2 seems especially tough to cross, often despite extended periods of study abroad (Tschirner, 2005, p. 53), and language skills may well stagnate at the B1 level despite a large number of additional lessons (Tschirner, 2005, p. 54). Such a “ceiling effect in traditional classroom […] instruction” has also been reported for other languages (Rifkin, 2005, p. 3).

Given that the largest single competence band in our survey is B1 among students of Business Consultancy, Health Professions and Project Management & IT (see Sect. 3.1, Fig. 3) despite 8-9 years of English instruction, this is clearly consistent with the stagnation observed by Tschirner (2005). If such stagnation at B1 seems hard to accept after 8–9 years of language learning, then it should be remembered that Tschirner's (2004) independent study of vocabulary size reports that 79% of freshmen fail to reach the productive 2,000 word level after 8 years of English instruction at German Gymnasien (Academic Schools) (Tschirner, 2004, p. 37). Against this backdrop, it may be plausible to revisit the official curricula standards in the case of English as they make no allowances for slower progress at higher levels and even possible stagnation at B1.

In some quarters, any revision of this kind will invariably be regarded as a case of “dumbing down” standards. However if there are clear indications of unattainable targets and problematic standard setting procedures, then provisions for the review of these standards on an empirical basis should be regarded as a matter of course and in line with best practice (see Klieme et al., 2007; Juran & Godfrey, 1998), and not as a case of “dumbing down”.

3.3 Research question 3: Correlation of school type and English standards

3.3.1 Results

This final section addresses potential differences in the test results between various school types. School leaving certificates from four major types of upper secondary schools make pupils eligible for tertiary education:

<table>
<thead>
<tr>
<th>School type</th>
<th>School leavers 2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>(a) Academic Schools</td>
<td>39.8%</td>
</tr>
<tr>
<td>(b) Colleges for Engineering</td>
<td>25.7%</td>
</tr>
<tr>
<td>(d) Colleges for Business Administration</td>
<td>17.8%</td>
</tr>
<tr>
<td>(e) Colleges for Occupations in the Social and Services Sector</td>
<td>10.9%</td>
</tr>
<tr>
<td>(f) Misc.</td>
<td>5.8%</td>
</tr>
</tbody>
</table>

Table 3: Proportion of Austrian school leavers in 2003, based on type of school attended (Data from: Statistik Austria, 2007)

Graduates of these types of schools will have had 8–9 years of formal English instruction. Depending on the type of school, this amounts to ca. 860 contact hours for graduates of Academic Schools, approximately 800 contact hours for school leavers from Colleges for Engineering and ca. 960 hours of instruction for pupils from Colleges for Business Administration and Colleges for Occupations in the Social and Services Sector (Bundesministerium für Unterricht, Kunst und Kul-
After these 8-9 years of English instruction, the Austrian Ministry of Education set the expected English competence at a level of at least B2 (cf. Sect. 1.1).

**Academic Schools.** First-year students originating from Academic Schools score the highest results in the test (see Figure 4). Less than 5% are in the A1+A2 class, and another third (32.5%) reaches a level of B1. Overall this means that about a third (36.9%) do not achieve the expected B2 standard. Interestingly – and uniquely among the various school types – B2 represents the largest single group, with 38.1% of test takers falling in this range. Another quarter reaches the C1+C2 level. Hence, about two thirds (63.1%) of test takers cross the required B2 threshold. This is far from the whole sample, but it nonetheless exceeds the test results of the freshmen from the remaining school types.

**Colleges for Business Administration & Colleges for the Social and Services Sector.** Results are somewhat lower among graduates of Colleges for Business Administration and for the Social and Services Sector (see Fig. 4). The A1+A2 range accounts for ca. 10% to 15%, and with the B1 group at a level of ca. 40%, about half of the freshmen do not reach B2 (or higher). Among these two groups of students, B1 represents the largest single competence band (in contrast to the graduates of Academic Schools where the largest single subset was found one notch up at B2).

The differences between graduates of Academic Schools on the one hand, and those from Business Colleges and Colleges for the Social and Services Sector are in fact statistically significant (see Table 4a, b). A Mann-Whitney test shows highly significant probabilities (p=0.000) for Academic Schools vs. Business Colleges and Colleges for the Social and Services Sector. On the other hand the difference between Business Colleges and Colleges for the Social and Services Sector is well above statistical significance (p=0.385) (see Table 4e). This means that these two subsets of freshman have comparable English competence.

**Colleges for Engineering.** Finally, freshmen from Colleges for Engineering score lowest: Here a total of almost two thirds falls below the B2 threshold (63.5%). Slightly over a quarter (28.0%) feature a competence of B2, and less than ca. 10% are in the C1+C2 band. These results are significantly lower than those from Academic Schools (p=0.000) (see Table 4c) and Business Colleges (p=0.010) (see Table 4d), but are not significantly different from those of Colleges for the Social and Services Sector (p=0.130) (see Table 4f).
Table 4: Differences in test results based on school type attended

<table>
<thead>
<tr>
<th>(a) Academic Schools*Colleges for Business Administration</th>
<th>Mann-Whitney-U</th>
<th>Z</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>69345.500</td>
<td>-4.237</td>
<td>0.000</td>
</tr>
<tr>
<td>(b) Academic Schools*Colleges for the Social &amp; Services Sector</td>
<td>33029.000</td>
<td>-3.998</td>
<td>0.000</td>
</tr>
<tr>
<td>(c) Academic Schools*Colleges for Engineering</td>
<td>12904.000</td>
<td>-5.197</td>
<td>0.000</td>
</tr>
<tr>
<td>(d) Colleges for Business Administration*Colleges for Engineering</td>
<td>15685.000</td>
<td>-2.566</td>
<td>0.010</td>
</tr>
<tr>
<td>(e) Colleges for Business Administration*Colleges for the Social &amp; Services Sector</td>
<td>38149.500</td>
<td>-0.869</td>
<td>0.385</td>
</tr>
<tr>
<td>(f) Colleges for the Social &amp; Services Sector*Colleges for Engineering</td>
<td>8246.500</td>
<td>-1.513</td>
<td>0.130</td>
</tr>
</tbody>
</table>

3.3.2 Discussion

Two observations are worth reiterating at this point: (a) Academic Schools achieve significantly higher results than the other secondary (vocational) schools. (b) Despite this difference, none of the school types reliably achieves B2 standard. Without any contextual evidence, it would be easy to associate Academic Schools with an inherently higher (teaching) quality, and hence conclude that remedial action was required mainly in vocational schools. Such a snap judgement does not capture the situation, however. The above-average results in Academic Schools are rather a function of the high selectivity of the Austrian school system, where pupils are streamed into different school types at two points, viz. at ages 10 and 14 (see Fig. 5). Pointinger (2004, p. 101) observes that at age 10 a large share of stronger pupils leaving primary school will tend to find places in (lower) secondary Academic Schools as these are tied to specific performance levels.

Fig. 5: Austrian education system (Data from: Schmid, 2004, p. 37)\\(^{11}\)

On the other hand, pupils leaving primary school with lower grades will – other things being equal – rather continue lower secondary education at Middle Schools (Mittelschulen).\\(^{12}\) The same observation is made by Eder and Mayr (2001, p. 126), who report that the input-characteristics of pupils in Academic vs. Middle Schools at the lower secondary level differ widely, with pupils in
Academic Schools being characterised by higher performance potential, a more positive emotional state and more support from the family. Not surprisingly, on the basis of the PISA survey Pointinger (2004, pp. 101, 109) reports higher results among pupils from Academic Schools at lower secondary level. However, despite this performance gap, Eder and Mayr (2001, p. 131) nonetheless conclude that teaching quality hardly differs between Academic and Middle Schools, and the same point is made by Pointinger (2004, p. 101), who assumes that pupils' performance at lower secondary level is by and large not determined by the type of school attended, but rather by previous selection.

What is of interest at the moment is that the stronger performance among lower secondary Academic Schools invariably feeds into the upper secondary level as the migration of 14-year-olds from lower secondary to upper secondary schools involves a further instance of selection. More than three quarters (78%) of the – on average stronger – pupils in upper secondary Academic School have simply "stayed put" in these schools, while the 18% transferring to Middle Schools have to be top performers in their schools to be eligible for a switch to Academic Schools (Schmid, 2004, p. 37). Consequently, at age 14 the stronger pupils are again siphoned off to Academic Schools (just like at age 10). This means that Academic Schools are favoured at both stages of the selection process (at ages 10 and 14), so the higher test results we saw in the QPT (see Fig. 4 and Table 4) are in fact predictable, and anything else would have been counterintuitive.

But why make such heavy weather of the different input-characteristics in secondary academic vs. vocational schools? In regard to standard setting, Juran and Godfrey (1998) stipulate that targets should be "equitable", meaning that "attainability should be reasonably alike" (p. 4.6) for those involved. However, identical targets were apparently set for all school types despite widely different input-characteristics of the pupils. And this can only mean that the attainability of standards is clearly NOT "reasonably alike" for the various school types. Hence, Juran and Godfrey's fourth criterion of equitable targets is violated, which makes it the second out of four criteria of appropriate target setting which is not upheld.

4 Conclusions

At the tactical level, the test results of first-year students indicate to tertiary institutions that they cannot rely on the B2 standard being achieved by the majority of students. The typical achievement rate is about 50%. Only organisers of English-taught study programmes can take some comfort from the fact that their students will have above-average competence on entering the programmes. However, even in this segment up to 20% of entrants do not reach B2 competence. At a more strategic level, these figures have also led us to conclude that curricula standards are neither realistic nor demonstrably achievable, and therefore in violation of Klieme et al.'s (2007) and Juran and Godfrey's (1998) demands for appropriate targets.

Finally, our figures revealed significant differences in test results between various school types, in particular between academic schools and vocational schools. There is substantial evidence that this is mainly down to the selectivity of the Austrian school system. In respect of target setting this means that identical standards are stipulated for different types of schools despite the fact that their student input is highly disparate. In other words, the curriculum standards are not equitable, and hence a second of Juran and Godfrey's (1998) four criteria of appropriate standard setting has been violated. Against this background, it seems that revising curricula standards for upper secondary education may be a plausible response.

The previous discussion with its focus on Austrian – and to some extent German – educational standards may have seemed fairly parochial to some readers. However, it should be appreciated that the quality concept – and the related issues of educational monitoring and educational standards - is not only "here to stay" (Westerheijden, Stensaker, & Rosa, 2007, p. 1), it is also an eminently international movement driven e.g. by "supranational and international organisations such as the EU and OECD" (Stensaker, 2007, p. 99). In other words one would expect the implementation of educational standards to proliferate internationally, rather than to abate in the near future. But as the ground rules in implementing educational standards are the same everywhere, the cur-
rent paper on the reliability of such standards can plausibly be taken as case study with wider relevance beyond the Austrian (and German) school systems.

A final observation which may be useful at this point concerns the respective roles of educational authorities and teaching institutions in the light of the above results. Most discussions about standards focus on the role of schools and universities underlining that the onus is on them to reach the respective standards. I have shifted this focus somewhat away from teaching institutions in this paper and have rather endeavoured to show that certain factors involved in attaining standards are clearly beyond the sphere of influence of teaching institutions and the classroom work conducted there. In this respect, I am thinking first of the likelihood of unrealistic standards being set if the relevant procedures do not allow for their empirical verification (see Sect. 3.2.2), and secondly the selectivity of school systems, which also impacts on the probability of standards being achieved (see Sect. 3.3.2). Both of these factors, however, are clearly beyond the remit of teaching institutions and any classroom work done in them. This is why the present paper has focused more on the plausibility of standards rather than the situation in the classroom, as a meaningful evaluation of classroom work can only happen on the basis of meaningful and realistic standards.

Notes
2 Handelsakademien (Colleges for Business Administration): "Die Schülerinnen und Schüler sollen kommunikative Sprachkompetenz auf dem Niveau des Independent Users B2 […] erreichen, wobei in einzelnen Bereichen das Niveau des Proficient Users C1 erreicht werden soll […]." (Bundesministerium für Unterricht, Kunst und Kultur, 2004b, p. 14; orig. italics, emphasis added)
4 Fachhochschule Wiener Neustadt für Wirtschaft, Technik, Gesundheit, Sicherheit (University of Applied Sciences for Business, Engineering, Health Professions and Police Leadership)
5 This means that the following test takers did not fulfil the inclusion criteria and were therefore not included in the study: (a) freshmen with school leaving certificates earned outside Austria, and (b) Austrian students with various types of upper secondary equivalency examinations (i.e. "Berufsreifeprüfung" and "Studienberechtigungsprüfung"). For sample (e), i.e. students of English, this information was not available.
6 Academic Schools (Allgemein Bildende Schulen) provide a mainly academic curriculum with various specialisations including e.g. modern languages, classics, mathematics and the sciences, or economics.
7 Colleges for Engineering (Höhere technische Lehranstalten) "offer education and training in the most important technical fields represented in industry like civil engineering, interior design and timber technology, chemistry, chemical engineering, electrical engineering, electronics, electronic data processing and organisation, mechanical engineering, materials engineering, business engineering, arts and design". (Bundesministerium für Unterricht, Kunst und Kultur, 2001)
8 "Colleges for business administration [Handelsakademien] […] provide students with an integrated general and sound business (commercial) education which qualifies them for white-collar jobs on the executive level in commercial and administrative branches […]." (Bundesministerium für Unterricht, Kunst und Kultur, 2001)
9 Colleges for Occupations in the Social and Services Sector (Humanberufliche Schulen) "comprise courses in the following areas: service industries management, tourism, fashion and clothing, and social occupations". (Bundesministerium für Unterricht, Kunst und Kultur, 2001)
10 The remaining two types together accounted for ca. 5% of school leavers in 2003. Those are on the one hand Colleges for Agriculture and Forestry, and on the other hand various teacher training institutions. (Statistik Austria, 2007)
11 The percentages quoted for Academic Schools (78%+18%) and Vocational Schools (32%+57%) do not add up to 100%. This remainder consists of pupils originating from other, minor types of schools or those having to repeat the year.


References


