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The Impact of the Language of Instruction: how Economics Students in the Netherlands evaluate an English-taught Undergraduate Programme

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Abstract

In this article student ratings of undergraduate level Economics courses are analysed on the basis of the aggregated results of end-of-term questionnaires. Two groups of students were involved, one of which was taught in Dutch and the other in English. In the analysis the influence was investigated of students' assessments of both their own and their lecturers' language proficiency, and of the didactic skills of the lecturers. Various differences between the judgements of the two groups were found; moreover, in course of time, some of the judgements evolved. The multivariate analysis shows that as students' judgements of the didactic skills of their lecturers rose, so did the course ratings in general. Surprisingly, the judgements of neither the students' own linguistic proficiency, nor that of the lecturers proved to be significant.

Keywords: English-Medium Instruction, Economics education, internationalization, Student Ratings of Teaching (SET)

JEL classification: A22, I21, I23

Introduction

As in many other continental countries, higher education in the Netherlands has gone through a major change in the past two decades. Since the Bologna agreement of 1999, in which 29 European ministers of Education decided to start working jointly towards a 'European Higher Education Area', Dutch universities have rapidly started to open up their programmes to students from abroad. It was taken for granted that this meant a shift to the use of English as the language of instruction at the cost of the national language. There are now over 4,000 English-taught programmes in non-English-speaking countries in Europe (Brenn-White and Van Rest, 2009, 20), and it is in the Nordic countries, Germany, and especially the Netherlands, that they have become common over the past ten years or so. Exact and up-to-date figures are lacking, but in a comparative study of some years ago (Wächter & Maiworm 2007) it was estimated that between 17% and 34% of the programmes in the Netherlands were offered in English (Finland coming second with 14% to 15,5%). This percentage soars when only the master's level is taken into account: of the 1202 fulltime MA programmes on offer in the Netherlands in the academic year 2011-2012, 716, or 59%, were taught through English (www.universitairemasters.nl, accessed 21.12.11).

In addition to its many English-taught programmes at master's level, Utrecht University (UU) has three English-language undergraduate programmes. Two of these are liberal arts colleges after the American model; the only regular undergraduate programme in English at UU is offered by the Utrecht School of Economics (USE). Led by its mission of 'training new generations of international students as highly qualified economists who can look beyond the boundaries of their own discipline and tie in with insights from other disciplines' the strategy that was chosen included 'further internationalisation of students and lecturers' as well as 'further internationalisation of the academic programmes through exchange programmes and the development of joint

programmes with strategic partners'

(www.uu.nl/faculty/leg/EN/organisation/schools/schoolofeconomicuse). To achieve these aims, USE offers its programme in two parallel streams: one in Dutch and one in English. In practice, this means that in both programmes all the textbooks and other materials will be in English, the lectures will be in English, but the weekly tutorials will either be Dutch-taught or English-taught depending on the programme that the student has chosen.

When universities decide to start offering degree programmes in English, this will have inevitable consequences for the composition of their student population. English-taught programmes tend to be taken, obviously, by those who do not speak the country's native language, but they are also preferred by native students wishing to add something extra to their degree and cv. At USE, the English-taught programme is followed by an eclectic mix of ambitious home-grown students, Dutch children of expats who have been to international secondary schools abroad, Asians, Eastern Europeans, and an increasing contingent of German students. Since they follow exactly the same programme from a content point of view, this situation gives us a good opportunity to compare the educational experience of each group. Our central research question, therefore, has been:

Which factors determine the student ratings of the Economics programme at Utrecht University School of Economics, and are there any differences between the English-taught and the Dutch-taught group?

Our study is based on the student evaluation data of the compulsory courses in years 1 and 2 of the programme. In the end-of-term evaluation, students are asked to rate a large number of aspects of the courses they have followed. This study looks at the way in which

their assessment of various sub-topics has an impact on the overall rating of the course. Given that the main thing that sets the educational experience of the two groups apart is the language of instruction used by their tutor, we started by analysing students' assessments of linguistic ability and teaching skills.

In the next section an overview of the literature with respect to language in an educational setting will be presented, followed by the identification of didactics aspects related to language use. Next, the data and methods are described followed by a multivariate analysis. The article concludes with a discussion of the main results.

Overview of the literature

The effect of the use of English as educational language in non-native English speaking countries has been a topic of investigation since the turn of the century, mainly in Scandinavia and the Netherlands. Researchers have looked at the impact on both students and lecturers, at macro-level (educational policy) and micro-level (interaction in the classroom), and at the required and achieved competencies for teaching in this context. Regarding the students' point of view, which is the focus of the present article, there are a number of studies about the (positive) effects of being taught content-subjects in English on their English-language proficiency (Carroll-Boegh, 2005; Hellekjaer, 2004; Tella, Räsänen & Vähäpassi, 1999). The effects of the use of English on learning the content subject has also been studied (Airey & Linder 2006; Airey 2009). It was found that although students report no differences between learning Physics in Swedish or in English, there were in fact some important differences in their behaviour in class: although the students reported that they experienced little or no difference between their Swedish and English classes, in the latter they would ask as well as answer significantly fewer questions. They were less able to simultaneously take notes and follow what was said, which they made up for by spending more time reading materials in advance, and

asking the lecturer questions after class. Klaassen (2001) found that students in large-scale lectures at Delft University of Technology were highly critical of their teachers' English language skills. Also, it turned out that although exam results in English-taught groups were initially slightly lower than those in Dutch-taught groups, this effect disappeared after a number of courses.

People's feelings about the use of English were investigated prior to its introduction at Leuven University (Belgium) where one of the interesting findings in the context of this article was that no less than 77% of lecturers and students at the Economics Faculty was in favour, compared to, for instance, just 50% in Psychology/Pedagogy and Law (Sercu, 2005). At Maastricht University (Netherlands) the opinions of lecturers and students were sought on matters concerning the level of language proficiency and effects on content (Wilkinson 2005). Respondents generally considered their own and each other's English good enough and although they identified a slight negative effect caused by the use of English on learning subject content, they thought the effects on learning English were very positive. Remarkably, 75% of students in English-taught programmes said they would rather have taken a Dutch-taught course if they had had the choice.

These findings point at a complex interplay between language use and didactics, which seems to be at work in different ways for all parties involved. Restricting ourselves to the students' point of view, it seems that their reactions may be partly explained with reference to general principles in educational science. Partly, it is insights from linguistics and in particular 'language attitude research' that are reflected in the research findings, such as the often established fact that non-native speakers of a language will judge other non-native speakers who share the same accent more harshly than do native speakers of that language. Yet another role may be played by cultural factors determining students' expectations of what happens in university classrooms.

In brief, the factors determining how they will undergo and judge the experience of being taught through English may be summarised as in figure 1.

(figure 1 here)

Analyses based on Student Evaluation of Teaching (SET) scores are numerous. Pounder's overview (2007) shows a clear distinction between student related factors, course related factors and teacher related factors. A similar division has already been made by Wachtel (1998). Student related factors are gender (female students rate their teachers higher than male students, especially in undergraduate courses), students' academic level and maturity (the more experienced students are, the more lenient their ratings of teachers' performance) and students punishing their teacher via SET scores. Course related factors deal with the grading system (the timing of the evaluation), class size (the smaller the better), class timing (Monday morning or Friday afternoon) and course content (courses that are more difficult to teach than others have lower SET scores). Teacher related factors are gender, age, experience, rank, and the tactics teachers apply to influence grades and SET scores. Thus Pounder (2007) highlights a large number of factors that influence the evaluation of teachers. Whether these factors also influence student ratings of courses is not clear.

However, since major, mandatory undergraduate courses are mostly linked to a small group of teachers or to one coordinator, it can be hypothesized that there will be a huge overlap between their judgments of courses and their judgments of individual teachers.

The focus of this article will be on language skills of both teachers and students and didactic skills of teachers. In the following section the evaluation data will be presented and the ins and outs of using this type of data will be discussed.

Research design

All USE courses are evaluated each year, using a standard 24-questions evaluation form (see the Appendix for the exact wording of the questions). Filling it in is not mandatory, but most students do return the form. Most questions can be answered on a 5-point scale (1 totally disagree, 5 totally agree). In our research only the scores for the questions concerning the English language skills of the lecturer, the tutor and the student, the didactic skills of both the lecturer and the tutor, the commitment and motivation of the student, and course specific characteristics are taken into account. These scores were combined with the question about the rating of the course.

The academic year at USE is divided into 4 terms. Eight courses have been taken into account: mathematics (1st term, 1st year), introductory economics (1st term, 1st year), business economics (2nd term, 1st year), first year micro economics (2nd term 1st year), statistics (3rd term, 1st year), macro economics (4th term, 1st year), strategy and organisations (4th term, 1st year), institutional economics (1st term, 2nd year) and econometrics (2nd term, 2nd year). All of these are mandatory.

Since the academic year 2003-2004 the Economics programme has been offered both in a Dutch and an English version. From the academic year 2005-2006 on the numbers are significantly large enough to be analysed. The data set consists of 38 observations for the eight mandatory courses for four successive cohorts. In table 1 the descriptive statistics are presented.

On average the rating of the courses is 6.7 with a minimum equal to 5.4 and a maximum equal to 7.7. None of the mandatory courses has been given a rating higher than an 8. The English taught students rate the courses significantly higher than the Dutch taught students (*p-value* = 0.000).

Students rate their English language skills quite high with an average of 4.29 on a 5-point scale. Again the English taught students rate their English language skills significantly higher than the Dutch taught students ($p\text{-value}=0.000$). Apparently neither the Dutch nor the International students think that their command of the English language is insufficient. This is a striking result since for almost all students the English language is not their mother tongue. It should be noted that the score is a subjective judgment by the students themselves. It is not based on an objective test nor on a clear view on the level and skills needed for academic study.

The evaluation of the English language skills of the lecturer is sufficient, i.e. 3.66, and the evaluation is significantly higher evaluated by the English taught students compared to the Dutch taught students ($p\text{-value}=0.002$).

Students were not asked directly about 'didactic skills'. We interpret a number of questions as asking for an evaluation of these skills. The results show that the English and Dutch taught students differ in their evaluation. On average the score for the didactic skills of the lecturer are sufficient, i.e. above 3.0, where the English taught students evaluate the skills significantly higher than the Dutch taught students ($p\text{-value}<0.008$). The average score for the didactic skills of the tutors is more than sufficient, i.e. mostly higher than 4.0. However, there is no difference in the evaluation of the tutor between the English and Dutch taught students. It means that group characteristics do not make the difference. Dutch taught students are not systematically more positive or negative than the English taught students when both groups are taught in their preferred language.

When we combine both the evaluation of the language skills and the didactic skills we can notice that the English taught students are more positive than the Dutch taught students. It is hard to come up with a sound explanation. One aspect could be that the timing of the courses matters. Therefore, measured per term, the timing of the courses in the curriculum was added to the analysis. As the mandatory courses are taught within the

first two years of the programme, the timing will run from 1 to 8 at the maximum. For the Dutch taught students it seems that the positive evaluation of the language skills of the teachers increases over time (weighted regression analysis of language on timing): the correlation between timing and respectively their own English language skills (t-value = 5.53), and the language skills of the lecturer (t-value = 1,87) are positive. This result is not found for the English taught students (own: t-value = 2.39; lecturer: t-value = 1.43; tutor: t-value = 0.00). Looking at the correlation between timing and didactical skills of the lecturer for both the Dutch and English taught students the evaluation score increases. However, Dutch taught students seem to evaluate these skills of the tutor lower as their study continues.

(table 1 here)

Lastly, student motivation is measured by the number of hours spent per course per week. On average students spent 12.7 hours per week per course. English taught students show the same motivation as Dutch taught students (p-value = 0.49). For the course specific characteristic it shows that on average the students value the literature as difficult, i.e. 3.0 on a 5 points scale (1= not difficult at all, 5 very difficult). However, the exact wording of this question has to be interpreted with care. The English taught students value the mandatory literature significantly more difficult than the Dutch taught students (p-value = 0.020). Students expect to pass the course, i.e. the average score is equal to 3.62, and they value the course as neither difficult nor easy, i.e. the average score is equal to 2.95. There is no significant difference between the Dutch taught and English taught students with respect to the expectation to pass the course and the difficulty of the course.

Before we turn to the analyses three more questions need to be addressed. First, the evaluation data are subjective by nature. Therefore it is necessary to check for common variance bias. It is possible that both the rating of the course and the evaluation of the language skills and didactic skills stem from a same common factor. For each analysis Harman's single-factor test (Podsakoff *et al.*, 2003) was performed. It shows that for each analysis the test reveals two factor with an Eigen value larger than 1 and that none of the factors explains more than 60% of the variance. It can be concluded that common variance bias is not a serious problem. Second, we have checked for multicollinearity by calculating variance inflation scores (VIF-scores). None of the calculated VIF-scores is higher than 5. Lastly, the analyses do have some limitations. It was not possible to distinguish between the students by mother tongue. Therefore, the English taught students form a heterogeneous group both by language and by culture. What they do have in common is the fact that for most students, including the Dutch students in this group, the teaching language is not their mother tongue. Moreover, a close reading of the exact wording of the questionnaire, both in Dutch and English, shows that not all questions can be interpreted in a clear and concise manner. For some questions it is not clear what they measure and how. Students are capable of judging most aspects of teaching, but not all (Kulik, 2001; Theall & Franklin, 2001). However, taking into account the limitations mentioned, these judgements should be taken for what they are: judgments and not facts.

In the next section the effect of both language and didactic skills on the rating of the courses is analysed.

Results

In table 2 the results of a weighted regression analysis explaining students ratings of the programme are presented. In column 2 and 4 the didactical skills of the teachers are

proxied by students rating of the extent to which “the lecturer has made me more interested in the field of study” (Q6). In column 3 and 5 the didactic skills of the teachers are proxied by students rating of the extent to which “the lecturer-has contributed to my understanding of the course matter” (Q7).

(table 2 here)

For Dutch-taught students it shows that, all things equal, the rating of the programme increases with the judgement of their own language skills. For the English-taught students this effect does not show up. In spite of their already high ranking of their language skills, it seems as if a better understanding of the English language makes it easier to follow English-taught courses. The students rating of the courses is not influenced by their judgement of the language skills of the teachers. However, both the didactic skills of the lecturers and the tutors positively influence the rating of the courses. The more teachers are capable of increasing the interest of students in the field of study, the higher is the students rating for the courses. The same applies if teachers have contributed to the understanding of students of the course matter.

Comparing columns 4 and 5 for Dutch-taught students it shows that the effect of their own language skills becomes insignificant if teachers have contributed to the understanding of the course instead of increasing the interest in the course. So, it is possible that teachers do contribute to students understanding the material taught without making students like the course. Remember that the data stem from the evaluation of mandatory undergraduate courses, not all of which will necessarily interest the students. Based on the results it seems that students rating of the courses is primarily based on the didactic skills of teachers and not on the language skills of the teachers.

The timing of the courses does not influence their rating, all things being equal. The difficulty of a course, based on a rating of the course literature, does significantly lower the rating of that course. It is hard to come up with an explanation. On the one hand it could be the case that students do rate a course less if the mandatory literature is more difficult. On the other hand, it could be the case that in rating the difficulty of a course, other course specific characteristics have been taken into account, like the organisation of the course, or the timing.

Overall it seems the case that the evaluation of the USE programme in economics primarily depends on the didactic skills of the teachers, and the difficulty of the course. The language skills of teachers do not seem to play a major role.

Conclusion & discussion

As more and more universities in Europe introduce English as the language of instruction, they are confronted with a student population that is culturally and linguistically increasingly diverse. In this small-scale study we analysed how Dutch and non-Dutch economics students at Utrecht University rated their programmes. Two groups were compared: the first (here called ‘the Dutch-taught group’) consisting entirely of Dutch students who followed lectures in English but tutorials in Dutch, and the second (called ‘the English-taught group’) consisting of a mixture of Dutch and foreign students (mostly from Germany, various countries in Eastern Europe, and China). The content of both varieties of the programme was identical.

The study is based on the SET results of four subsequent years, i.e. on the subjective evaluation of students’ teaching experience. Both groups of students thought that their own English language skills were better than those of their teachers, however, the English-taught group was more positive about the English of the lecturers than was the Dutch-taught group. Students in the English-taught programme gave higher ratings for the

courses they had followed than did those in the Dutch-taught programme. In both groups, the students' judgement of the teaching skills of teachers was the main factor determining the rating of a course in general: the more highly they thought of their lecturer's and their tutor's teaching skills, the more they liked the course. Their ratings of language skills (either their own or their teachers') were not significant.

Several remarks must be made here to put our main findings into perspective. First of all, it has to be emphasised that there is no evidence that the students' very confident self-assessment reflects actual English language skills. Even though it is assumed that incoming Dutch students will have the required level of English because of Dutch secondary school exit standards, and international students need to take an IELTS or TOEFL test, in practice it is common to hear serious complaints about their *academic* language skills.

The difference between both groups regarding their judgements of their teachers' English language skills is in line with earlier findings in CLIL research which show that home students may give (very) harsh judgements about this aspect of their education experience. Layman's judgements of 'language proficiency' tend to be almost exclusively based on subjective impressions of *pronunciation*. A perceived 'foreign accent', on the other hand, is often considered as charming, as long as it is intelligible. In this way, it was to be expected that the Dutch-taught group, consisting of Dutch native speakers, would assess the English language skills of their teachers, most of whom were Dutch, more critically than did the English-taught group with a highly varied linguistic background. We do not think this means, however, that the home students' judgements should be dismissed as irrelevant, because based on a mistaken 'native speaker fallacy'. Not only are their (instinctive) reactions to accent a very real factor in their educational experience as a whole, also it is a reaction pattern which may have serious consequences for university teachers, since SETs often form the basis of management decisions about

career steps such as tenure. No matter how unfair they may be, students' reactions to accent are a force to be reckoned with in the daily lives of many university teachers involved in English-medium instruction.

Our findings regarding the importance that students attach to teaching skills may seem to suggest that, put simply, students find it more important that their teachers are able to explain the material well and that they are able to raise the students' interest for a particular field, than that they speak English well. However, the relationship between didactic proficiency and language is a tricky one. The correlation between the two in our study is significant, positive and high; even higher for the Dutch-taught students (0.9) than for the English-taught group. In other words, those teachers that got high scores for their English language skills were also considered to be good teachers – and the other way around. In spite of the many non-verbal aspects that make up the didactic repertoire, this suggests that for students there is a strong connection between their judgement of what a teacher does, and the words that he or she uses to do it. In fact, it may be difficult – and not only for students – to separate the two at all. Research concerning the teacher's experience in English-medium instruction has shown that many of them feel restricted as teachers by having to use a foreign language: for instance, they find that they are less flexible, go more slowly, get more tired (Vinke *et al*, 1998 and Meijer, forthcoming) . In other words, since lecturers often feel that their English language ability has an impact on their teaching skills, and thereby on the quality of their teaching, we should be cautious with drawing conclusions about the relative importance of one over the other.

The two groups that were compared in this study are not neatly comparable: the English-taught group in particular was complex because it was made up of young people from so many different cultural and linguistic backgrounds, with highly varied educational experiences and expectations, which in all likelihood play a crucial role in their assessment of the courses they followed. Anecdotal evidence suggests, for instance,

that international students who are used to more large-scale educational settings with less room for individual attention relish the experience of the relatively intimate tutorials at USE. Similarly, many are pleasantly surprised by the informal interaction with approachable lecturers and tutors that is common at Dutch universities. The Dutch contingent within the English-taught group, in turn, formed a cultural sub-group of its own in that they had made the deliberate choice of graduating in an English-language programme, thus setting themselves an extra challenge. And the wholly Dutch group, too, seemed to share certain characteristics: their judgements regarding their own language proficiency, that of their teachers, as well as the didactic skills of the teachers, improved as the year went on, which may suggest that that these students, mostly straight from secondary school, initially suffered from adaptation problems which lessened as they got used to the demands of an academic education. No matter how challenging this population is from a research point of view, however, our case study can be said to be representative of the situation in most universities in non-English-speaking countries, where English-taught programmes will often attract a mixture of ambitious home students and internationals from all around the globe. We feel that, considering the explosive growth of such programmes at universities in Europe, further research into the experiences of students and lecturers is crucial. It is the voices of those who are most directly touched by the management decision to 'internationalise' that will need be taken into account in the further development of curricula, didactic approaches, testing, and staff support for English-medium instruction.

Literature

- Airey, J. & Linder, C. 2006. Language and the experience of learning university physics in Sweden. *European Journal of Physics* 27, 553-560.
- Airey, J. 2008. Bilingual scientific literacy? The use of English in Swedish university science courses. *Nordic Journal of English Studies* 7, no.3, 145-161.
- Airey, J. 2009. Science, Language and Literacy. Case Studies of Learning in Swedish University Physics. *Uppsala Dissertations from the Faculty of Science and Technology* 81. Uppsala.
- Carroll-Boegh, A. 2005. Internationalisation and teaching through English: a Danish perspective. *Educate*, 5, no. 2, 19-30.
- Hellekjaer, G. 2004. Unprepared for English-medium instruction: a critical look at beginner students. In *Integrating content and language: meeting the challenge of a multilingual higher education*, ed. R. Wilkinson, 147-161. Maastricht: Maastricht University Press.
- Hellekjaer, G. 2007. The implementation of undergraduate level English medium programs in Norway: an explorative case study. In *Researching content and language integration in higher education*, eds. R. Wilkinson and V. Zegers, 68-81. Maastricht: Maastricht University Press.
- Hellekjaer, G. & Westergaard, M. 2003. An exploratory survey of content learning through English at Nordic universities. In *Multilingual Approaches in University Education: Challenges and Practices*, eds. Ch. van Leeuwen and R. Wilkinson, 65-80. Maastricht: Maastricht University Press.
- Klaassen, R. 2001. *The International University Curriculum. Challenges in English-Medium Engineering Education*. Delft: dissertation.
- Kulik, James A. 2001. Student ratings: validity, utility, and controversy. *New directions for institutional research* 109, 9-25.
- Meijer, Annemieke, Using English as educational language: a grounded theory study into the experiences of Dutch university lecturers in a Humanities faculty, forthcoming.
- Page-Bucci, H. 2003. The Value of Likert Scales in Measuring Attitudes of Online Learners, retrieved 21 December 2011, <http://www.hkadesigns.co.uk/websites/msc/remel/likert.htm>.
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.-Y., and Podsakoff, N.P. 2003. Common method biases in behavioral research: a critical review of the literature and recommended remedies. *Journal of Applied Psychology* 88, 879-903.
- Pounder, J. S. 2007. Is student evaluation of teaching worthwhile? An analytical framework for answering the question. *Quality Assurance in Education* 15, no. 2, 178-191

Sercu, L. and Put, K. 2003. Het Engels als onderwijstaal in het hoger onderwijs: een onderzoek naar taalvaardigheid en opvattingen van docenten en studenten. *Tijdschrift voor Hoger Onderwijs* 21, no. 2, 103-118.

Tella, S., Räsänen, A., and Vähäpassi, A. eds. 1999. *Teaching through a foreign language: from tool to empowering mediator*. Helsinki: Edita.

Theall M. and Franklin J. 2001. Looking for bias in all the wrong places. A search for truth or a which hunt in student ratings of instruction. *New directions for institutional research* 109, 45-56.

Vinke, A.A. 1995. *English Proficiency and Academic Success in Engineering Education*. Delft: Delft University Press.

Vinke, A. A., Snippe, J., and Jochems, W. M. G. 1998. English-medium content courses in non-English higher education: a study of lecturer experiences and teaching behaviours. *Teaching in Higher Education*, 3, no.3, 383-394.

Wachtel, H. K. 1998. Student evaluation of College Teaching Effectiveness: a brief overview. *Assessment & Evaluation in Higher Education*, 23, no.2, 191-212

Wächter, B. and Maiworm, F. 2008. *English-taught programmes in European higher education. The picture in 2007*. Bonn: Lemmens.

Wilkinson, R. 2005. The impact of language on teaching content: views from the content teacher. Retrieved 21 December 2011, <http://www.palmenia.helsinki.fi/congress/bilingual2005/presentations/wilkinson.pdf>

Zonneveld, M. 1991. *Studeren in Engelstalige, multiculturele situaties. Een exploratieve studie naar mogelijke effecten van integratie van MSc- en regulier onderwijs aan de Landbouwniversiteit*. Wageningen: Wageningen Universiteit (internal publication).

Appendix 1. Questions of the course evaluation

No.	Exact wording
3	I have a sufficient command of the English language to be able to follow the lectures (totally disagree – totally agree)
5	I have spend an average of ... hours of self-study on this course per week (excl. lectures, tutorials, other gatherings)
6	The lectures who gave most of the lectures has made me more interested in the field of study (totally disagree – totally agree)
7	The lecturer has contributed to my understanding of the course matter (totally disagree – totally agree)
8	The lecturer's command of the English language was sufficient for him/her to properly convey the course matter (totally disagree – totally agree)
9	The teaching style of the lecturer captured my attention (totally disagree – totally agree)
10	The tutor has made me more interested n the field of study (totally disagree – totally agree)
11	The tutor has contributed to my understanding of the course matter (totally disagree – totally agree)
12	The tutor's command of the English language was sufficient for him/her to properly convey the course matter (totally disagree – totally agree)
13	The tutor adequately answered my questions about the course matter (totally disagree – totally agree)
14	The tutor leaves room for the own contribution of students (totally disagree – totally agree)
15	The course co-ordinator of this course is easy to contact (totally disagree – totally agree)
21	The course literature is (too easy – too difficult)
22	I expect to pass this course (totally disagree – totally agree)
23	To me this course was (too easy – too difficult)
24	My rating for this course is (1 = poor, 10 = excellent)

Note: all questions, except the questions 5 and 24, presented a 5-point scale (1 totally disagree, 5 totally agree). The answer to question 5 could be any figure, the answer to question 24 a figure between 1 and 10.

Figure 1. Framework for analysing students' reactions to English Medium Instruction (EMI)

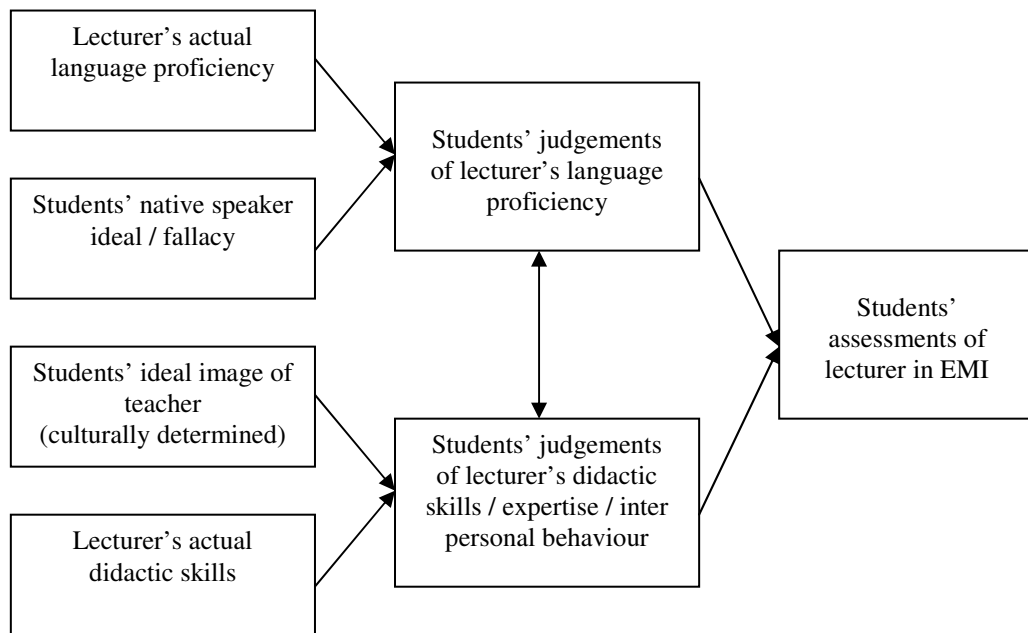


Table 1. Mean and standard deviation: by teaching language.

Question:	Mean			SD	Min	Max	
	Overall	Dutch taught	English taught				p-value **
24 Rating for course (1 to 10 score)	6.69	6.60	6.86	0.000	.41	5.36	7.68
Student							
3 Language sufficiency	4.29	4.22	4.42	0.000	.18	3.91	4.8
5 Effort and motivation (hours/week)	12.71	12.38	12.86	0.491	4.19	7.55	31.20
Lecturer							
8 Language sufficiency	3.66	3.57	3.83	0.002	.55	2.19	4.86
6 Increasing interest	3.24	3.18	3.36	0.008	.51	1.98	4.24
7 Contributed to understanding	3.45	3.40	3.57	0.003	.45	2.33	4.30
9 Capturing attention	3.17	3.11	3.32	0.002	.49	2.08	4.24
Tutor							
12 Language sufficiency	4.04	*	4.13		.48	1.64	4.86
10 Increasing interest	3.64	3.62	3.70	0.338	.33	2.63	4.23
11 Contributed to understanding	4.02	4.03	4.00	0.643	.23	3.34	4.41
13 Adequate answer to questions	4.01	3.97	4.04	0.264	.24	3.50	4.42
14 Room for own contribution	4.07	4.07	4.08	0.945	.19	3.63	4.60
Course specific							
21 Difficulty course literature	3.01	2.96	3.08	0.020	.43	2.01	3.74
22 Expect to pass	3.66	3.62	3.72	0.019	.31	2.01	3.74
23 Easy – difficult course	2.97	2.95	3.01	0.125	.47	2.03	3.87
Number of observations	38	38	38				

* Question 12 has no meaning for the Dutch-taught group of students.

** Based on a t-test

Source: Evaluatiegegevens USE, 2005-2009

Table 2. Weighted regression analysis to explain student's evaluation.

Verklarende variabelen	24 Rating for Course Coefficients ^{a)} (t-values)			
	English-taught programme		Dutch-taught programme	
Constant	3.301** (2.28)	3.051** (2.09)	2.556* (2.00)	2.656* (1.84)
Student				
3 Language sufficiency	0.188 (0.74)	0.065 (0.28)	0.529* (1.95)	0.385 (1.30)
5 Effort and motivation	0.013 (0.79)	0.019 (1.24)	-0.007 (1.05)	-0.002 (0.31)
Lecturer				
8 Language sufficiency	0.011 (0.07)	0.005 (0.03)	0.063 (0.54)	0.185 (1.58)
<i>Didactics:</i>				
6 Increasing interest	0.505*** (3.05)		0.383** (2.66)	
7 Contributed to understanding		0.744*** (4.34)		0.343** (2.10)
Tutor				
12 Language sufficiency	-0.020 (0.10)	0.189 (1.02)		
<i>Didactics:</i>				
10 Increasing interest	0.509** (2.16)		0.299*** (2.77)	
11 Contributed to understanding		0.242 (1.05)		0.336** (2.42)
Sequence				
Period	-0.019 (0.74)	-0.025 (1.01)	-0.039 (1.53)	-0.052* (1.80)
Course specific				
21 Difficulty	-0.300** (2.21)	-0.346** (2.65)	-0.158* (1.85)	-0.217** (2.36)
N	38	38	38	38
R-squared adjusted	0.587	0.608	0.682	0.613
Common variance bias:				
* Number of factors	2	2	2	2
* % explained by first factor	55	50	58	61
Multicollinearity:				
* Mean VIF	2.15	1.94	2.56	2.30
* Max VIF	3.54	2.86	4.68	4.13

* The weight factor is equal to the number of students per course by language.

Source: Evaluatiegegevens USE, 2005-2009.