European Journal of Higher Education

ISSN: (Print) (Online) Journal homepage: https://www.tandfonline.com/loi/rehe20

Internationalisation and study success: class attendance and the delicate balance between collaborative learning and being lost in translation

Patrick Bijsmans, Arjan H. Schakel, Asena Baykal & Sven Hegewald

To cite this article: Patrick Bijsmans, Arjan H. Schakel, Asena Baykal & Sven Hegewald (2021): Internationalisation and study success: class attendance and the delicate balance between collaborative learning and being lost in translation, European Journal of Higher Education, DOI: 10.1080/21568235.2021.1971099

To link to this article: https://doi.org/10.1080/21568235.2021.1971099

© 2021 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group

Published online: 26 Aug 2021.

Submit your article to this journal

Article views: 179

View related articles

View Crossmark data

Full Terms & Conditions of access and use can be found at
https://www.tandfonline.com/action/journalInformation?journalCode=rehe20

EUROPEAN JOURNAL OF HIGHER EDUCATION
https://doi.org/10.1080/21568235.2021.1971099

Routledge
Taylor & Francis Group

OPEN ACCESS Check for updates

Internationalisation and study success: class attendance and the delicate balance between collaborative learning and being lost in translation*

Patrick Bijsmans [a], Arjan H. Schakel [b], Asena Baykal[c] and Sven Hegewald [d]

[a]Department of Political Science, Maastricht University, Maastricht, The Netherlands; [b]Department of Comparative Politics, University of Bergen, Bergen, Norway; [c]Global Public Policy Institute, Berlin, Germany; [d]Center for Comparative and International Studies, ETH Zurich, Zurich, Switzerland

ABSTRACT

The internationalisation of Higher Education is broadly seen as a positive development. It is a process that is said to contribute to intercultural skills acquisition, which is deemed crucial in today's globalised society. Yet, research has shown that the benefits of being confronted with other ideas and viewpoints can get lost in translation due to different languages and academic cultures. We set out to explore the impact of the international classroom on study success and argue that there might be an optimum level of internationalisation. Based on a dataset that includes more than 2822 GPA scores for 836 students from four first-year cohorts of an international Bachelor in European Studies, we find strong empirical evidence that students' study success is lower when there are few (below 3) or many (above 6) different nationalities in the classroom. We find the strongest effects of internationalisation for students who regularly attend class (i.e. 80–90%). Hence, we present strong evidence that internationalisation has a both a negative and a positive impact on students' study success but students will only experience these beneficial and detrimental effects of learning in an international environment when they attend class.

ARTICLE HISTORY
Received 10 May 2021
Accepted 17 August 2021

KEYWORDS
Internationalisation; international classroom; study success; attendance; problem-based learning

Introduction

Entering academia is generally viewed as challenging, with many factors influencing students' transition (Coertjens et al. 2017; Jansen, Suhre, and André 2017). Among these factors is attendance, which, some studies have suggested, has an independent effect on students' achievements (Bijsmans and Schakel 2018; Credé, Roch, and Kieszczynka 2010). But the quality of attendance may matter too, as is, for instance, suggested by literature that discusses how students' performance may be affected by group composition (Sweeney, Weaven, and Herington 2008; Umans, Collin, and Tagesson 2008).

CONTACT Patrick Bijsmans patrick.bijsmans@maastrichtuniversity.nl, Department of Political Science, Maastricht University, P.O. Box 616, 6200 MD Maastricht, The Netherlands @PatrickBijsmans

*Bijsmans and Schakel are the principal authors. Baykal and Hegewald were the project's research assistants and substantially contributed through processing data, gathering literature and sharing ideas.

© 2021 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group
This is an Open Access article distributed under the terms of the Creative Commons Attribution-NonCommercial-NoDerivatives License (http://creativecommons.org/licenses/by-nc-nd/4.0/), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited, and is not altered, transformed, or built upon in any way.

In this context, it is worth looking at the internationalisation of Higher Education, as it comes with an increasingly diverse student body and accompanying challenges concerning the exchange of knowledge. The Bologna process and the European Higher Education Area have played an important role in stimulating cross-border academic cooperation and staff and student mobility in Europe (Cardwell 2020; Wihlborg and Robson 2018). Attracting students from across Europe and beyond has become crucial for a university's success (Courtois 2018; Jones 2017). It therefore also does not come as a surprise that developments related to Brexit have resulted in uncertainty as to elements of Higher Education internationalisation in Europe (Courtois and Veiga 2020).

The internationalisation of Higher Education is often seen as a positive development, but do students actually benefit from being confronted with different perspectives? Studies have shown that knowledge exchange in the international classroom may get 'lost in translation' (cf. Delanty 2014), with different languages and academic cultures complicating and even preventing interaction between students from different nationalities (De Vita 2000; Spencer-Oatey and Dauber 2019). These challenges have also resulted in public debates about the pros and cons of the arrival of international students and its consequences for domestic students (de Wit 2019).

Few studies have looked in detail at whether students actually perform better because of being confronted with peers with different nationalities (Cruickshank, Chen, and Warren 2012; Jochems et al. 1996). In this article, we address this topic by relating the diversity of nationalities among students to learning outcomes. Several studies have suggested that encouraging students' engagement and participation through group work in active learning environments is the best way to avoid international classroom exchanges from being lost in translation (Busse and Krause 2015; Loes, Culver, and Trolian 2018). Therefore, we expect a modifying impact of the international classroom on the relationship between attendance and study success. Particularly students who attend class experience the beneficial *or* detrimental effects of learning in an international environment.

We believe that groups can either be too uniform or too diverse to benefit from different perspectives. Hence, we ask whether there is an optimal composition of the international classroom and test three hypothesis. Following existing literature in the field, the 'internationalisation' hypothesis expects a positive effect of the international classroom on study success, whereas the 'lost in translation' hypothesis expects a negative effect. Alternatively, the 'balanced classroom' hypothesis is informed by management literature and expects the *interplay* of positive *and* negative effects to result in an optimum composition of the international classroom. Drawing on a large-scale dataset including 836 students from four first-year cohorts in an active learning environment we find strong empirical evidence that an international classroom can contain too few, but also too many different nationalities. Hence, both the quantity and quality of attendance matter and universities are well advised to pro-actively take the composition of the international classroom into account.

Internationalisation in Higher Education

The internationalisation of Higher Education is seen as contributing to the acquisition of essential intercultural skills for students who aim to work in multinational organisations

(Busse and Krause 2015; Volet and Ang 2012). Consequently, universities have been branding themselves as international institutions. Criticism of internationalisation mainly concerns the assumed marketisation of Higher Education, in which student numbers have supposedly become more important than experience (Courtois 2018; Jones 2017). But how does internationalisation affect students' learning?

An abundant management literature has long shown that international environments come with the challenge of having to reconcile different cultures, different languages, different styles of communication, and so on (Cohen and Kassis-Henderson 2017; Ely and Thomas 2001; Haas 2006). Similarly, literature on the international classroom has shown that, while internationalisation holds the promise of a broader understanding of societal issues, it is likely that such an understanding cannot be reached without struggles.

MacGregor and Folinazzo (2018) illustrate that even when a programme is taught in one language, the use and understanding of this language may be impeded by students' different cultural backgrounds. The authors explain that these different backgrounds may come with different expectations as to staff-student relations, different styles of communication, and different writing conventions, all of which may complicate interaction in learning environments. Likewise, De Vita (2000) refers to different learning cultures, whereas Jochems et al. (1996) highlight different study behaviours of international students and the importance of language proficiency in order to be able to grasp what is being discussed in the classroom. Other literature reports on the lack of interaction between domestic and international students. For instance, Kimmel and Volet (2012) report that students tend to want to work with cultural peers, with domestic students being particularly sceptical towards working with students from other cultures (cf. Hartwell and Ounoughi 2019). Spencer-Oatey and Dauber (2019) find that students do want to integrate, but their experience is not that positive.

Notably, the student body is more heterogeneous than the distinction between domestic and international students suggests. Commonalities exist across such lines of division. For instance, in the Netherlands many international students choose an undergraduate programme taught in English. A German student starting such a programme may benefit from the fact that she has previously completed an international baccalaureate in English, whereas a British student enrolled in the same programme may come from a background in which academic culture is alien. Similarly, like his international peers, a Dutch student enrolling for this programme might face challenges related to studying in another language (Jansen, Suhre, and André 2017; Jones 2017; Umans, Collin, and Tagesson 2008).

Other studies have shown that domestic and international students *can* successfully work together. For instance, Sweeney, Weaven, and Herington (2008) show that students can learn how to work together, but also that they can experience better learning. The authors note the importance of supportive staff for setting up the right circumstances for such group work. In terms of intercultural skills, research also shows that students can learn from being confronted by peers with different backgrounds. As intercultural competences enhance students' capacity to reflect, one might assume that this further helps students to complete academic assignments successfully (Rienties et al. 2012; Volet and Ang 2012).

Taking a different perspective, Montgomery and McDowell (2009) argue that a lack of interaction with domestic students, may not have to affect international students'

experience as the latter form their own 'community of practice'. International students may even do better than expected, also when compared to domestic students. This may be because international students are motivated individuals who make a more conscious choice for a certain study and are more eager to make a success of their studies abroad (Jochems et al. 1996; Umans, Collin, and Tagesson 2008).

In sum, while students are expected to benefit from being confronted by peers with different backgrounds, this interaction may get 'lost in translation' (cf. Delanty 2014) due to language barriers (e.g. different writing conventions) and cultural differences (e.g. regarding staff-student relations). At the same time, it is also possible for domestic and international students to work together successfully – and that the latter might even outperform the former. As such intercultural competences (e.g. being able to adapt to different communication styles) may further students' abilities to successfully complete academic work. Yet, the positive consequences of being confronted and having to work with students from different cultural backgrounds are merely implied and the link between internationalisation and study success has so far only been treated very broadly, for instance by comparing the performance of domestic and international students. Whether students actually perform better because of being confronted with peers from other nationalities, has rarely been studied.

Study success in the international classroom

The contrasting findings of the aforementioned studies might be explained by the actual composition of the international classroom, which might impede on the interaction between students with different backgrounds and, hence, students' results. Few studies have explored this particular perspective and their results are not unequivocal. Umans, Collin, and Tagesson (2008) look at how the composition of a group of business students in Sweden may affect study success and find that grades correlated negatively with group diversity. Moreover, students evaluated group performance to be worsened by their international peers. But Cruickshank, Chen, and Warren (2012) report on a case that suggests that additional structure can improve students' results, whereas De Vita's (2002) study looks at a large cohort of business students and also finds that the results of all students improve when working in multicultural groups.

Successful internationalisation of the classroom ultimately depends on whether individuals effectively engage in an exchange of ideas and an ensuing process of collaborative learning in the international classroom or whether the learning process is inhibited through exchanges in the international classroom getting lost in translation due to challenges deriving from different languages and cultures. In other words, any impact of internationalisation of the classroom on grades depends on students contributing diverse perspectives to group interactions.

Two things matter for creating an appropriate space for such beneficial interactions: (1) enough time for effective group dynamics to develop and (2) the absence of national domination. Watson et al. (1998; cf. Ely and Thomas 2001) observed that if individuals are given the time to learn and interact within diverse groups process, problems can be overcome. In addition, several management studies highlight that the absence of cultural (national) domination is important and, hence, proportional representation of different nationalities matters (Cohen and Kassis-Henderson 2017; Haas 2006). Only when a space

is established that provides every individual with the possibility to be heard and to contribute one's perspective, can diversity become a comparative advantage.

As such, student groups can either be too uniform or too diverse to benefit from different perspectives. Hence, it is likely that there is some kind of optimal composition of groups, as has also been suggested by work on international management teams. Balanced teams limit not just the chances of misunderstandings, but can also help prevent biases from occurring or issues from being overlooked.

In this context, we have already briefly touched upon the possible role that group work in active learning environments might play in avoiding international classroom exchanges from being lost in translation (De Vita 2000; Loes, Culver, and Trolian 2018; Sweeney, Weaven, and Herington 2008). Following this line of reasoning, if students are engaged in regular exchange, they will also build a shared understanding and mutual respect. This would then help overcome the international classroom challenges outlined earlier and create a learning environment that offers the possibility of utilising different insights and the means of translating ideas to a diverse setting. For instance, when a German student in a Dutch undergraduate programme taught in English declares that she is unsure how to put something in English, a fellow national might help her phrase her argument.

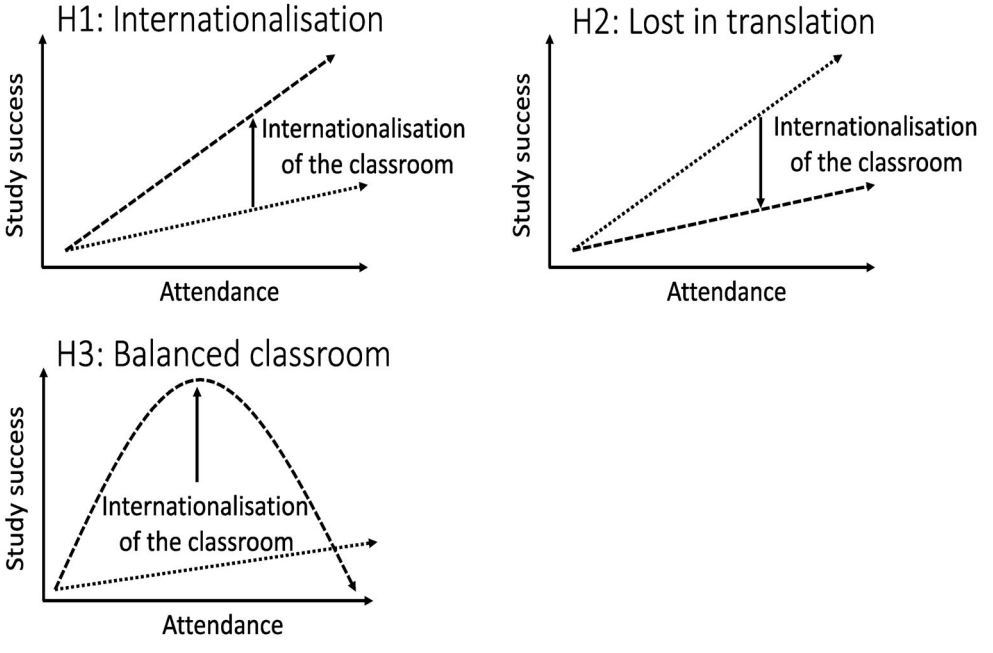

Figure 1. Three hypotheses on the modifying impact of internationalisation on the relationship between attendance and study success.

Notes: Shown are three hypotheses on the modifying impact of internationalisation on the relationship between attendance and study success. The internationalisation hypothesis assumes a *positive* impact whereas the 'lost in translation' hypothesis assumes a *negative* impact. The balanced classroom hypothesis presumes that internationalisation has both a positive and negative impact which implies that there is a maximum impact at a particular level of internationalisation of the classroom.

Based on these considerations and taking into account the literature discussed earlier, we therefore posit three hypotheses (Figure 1). Each of these factors in that effects of internationalisation are dependent on students attending classes, which is generally seen as an important determinant of study success (Credé, Roch, and Kieszczynka 2010). Hypotheses 1 and 2 test the assumptions put forward by existing literature:

H1. The 'internationalisation' hypothesis postulates that a more international classroom *increases* the impact of attendance on study success because sharing different perspectives helps to better grasp course content;

H2. The 'lost in translation' hypothesis states that a more international classroom *decreases* the impact of attendance on study success because students face greater difficulties understanding each other.

Yet, as explained, we belief that the impact of internationalisation cannot be that straightforward, but also depends on the composition of the international classroom. This leads to our third hypothesis.

H3. The 'balanced classroom' hypothesis says that the causal mechanisms stipulated in hypotheses 1 and 2 both apply. This implies that the composition of the international classroom transforms the linear relationship between attendance and study success into an *inverted U-curve relationship*, with lower study success connected to limited diversity as well as a highly diverse classroom, and higher study success occurring for intermediate values of internationalisation.

Research design

In this study, we look at the constellation of the international classroom – the number and sizes of different nationalities present in a group – and its impact on students' study success (GPA). Our case is Maastricht University's Bachelor of European Studies (BA ES) and its first year in particular. This international and interdisciplinary programme looks at Europe in its broadest sense, including developments such as the Cold War and EU enlargement. Students' understanding of such topics will benefit from perspectives offered by peers from across Europe. The programme is fully taught in English and revolves around Problem-Based Learning (PBL). Learning takes place in small groups of students in which knowledge is actively constructed in the context of specific problems. Students learn from and with each other and collectively develop questions to direct their learning. These groups are guided by a member of staff who facilitates rather than lectures (Busse and Krause 2015).

Interaction between students may be something that is difficult to assess in more traditional learning environments, but there are even fewer studies that have explored internationalisation in active learning contexts. Also, while some studies have looked at possible indicators for internationalisation, very few of them allow for peeking into the international classroom (Gao 2018; Hudzik and Stohl 2009). We believe that the BA ES represents a good case where different perspectives can be heard and valued. On the one hand, this is due to the use of PBL throughout this European Studies programme. As already mentioned, it is exactly this kind of context that provides an ideal environment for beneficial interaction within an increasingly diverse and international student body. As Loes, Culver, and Trolian (2018, 951) put it, active learning

environments 'assign equality to students as group members' and 'make explicit the necessity for cooperation in the pursuit of shared academic goals'. On the other hand, the composition of the cohorts makes this a good case. This is because most of the students in this undergraduate programme are from different European countries. Hence, cultural differences between these students should be less outspoken than we see in, for instance, Australian universities, where international students often originate from rather more diverse cultural backgrounds (Volet and Ang 2012).

Thus we may expect less impact of internationalisation on study success in this European Studies programme. Consequently, if we do find an effect here, we might also expect to find in other programmes. Our sample is comprised of students who were enrolled at the same time and are at a similar stage in their integration process, hence forming a rather coherent cohort (on the importance of cohorts, see: Kimmel and Volet 2012).[1] As students continue to find themselves in such group settings during their academic career, they become familiar with the challenges that diverse environments entail. The corresponding adjustment time can be expected to be shorter as the individual students' experience in intercultural learning advances.

The effects of PBL on effective group performance and eventual positive effects on the final grade can only be realised to their full extent if everyone is willing to contribute to group learning and engages in meaningful communication (Lindblom-Ylänne, Pihlajamäki, and Kotkas 2003). Given that attending classes in PBL is important for students' performance (Bijsmans and Schakel 2018), we expect that internationalisation conditions the impact of attendance on study success (Figure 1). In other words, if a student does not attend class regularly the impact of exchanges with peers from different nationalities on their grade is expected to be lower as study success depends largely on attendance.

Our study focuses on students from four first-year cohorts of the BA ES (2012–2013, 2013–2014, 2014–2015, and 2015–2016) for whom we tracked grade point average (GPA), attendance, and internationalisation scores of the groups they attended across five periods of the first year. Details on the curriculum are provided in Table A1 in the appendix. We exclude exchange students who do not follow all offered courses and students who had to retake a course (these students are included when calculating internationalisation scores). In total 1,400 'regular students' were enrolled in the BA ES in September in one of the four academic years. Our analysis focuses on 836 students who met the minimum required number of meetings (70% of the total number of meetings) at the end of a period and who attained a positive binding study advice at the end of their first year, allowing them to continue their studies. The rationale for selecting these

Table 1. Distribution of nationality and country of pre-education in the BA ES.

	Nationality (%)					Pre-education (%)				
	2012	2013	2014	2015	Total	2012	2013	2014	2015	Total
Netherlands	15	20	7	14	14	11	18	15	13	14
Belgium	7	9	10	13	12	7	12	13	12	11
German	59	37	46	41	40	55	33	44	38	42
United Kingdom	6	7	3	6	6	5	5	5	6	5
Italy	1	7	9	8	7	2	7	8	7	6
Other	12	19	13	18	21	20	25	17	23	21
N students	210	241	216	169	836	210	241	216	169	836

students is that we want to exclude students who dropped out during a period or who had to miss exams or group meetings for reasons such as family or health issues.

Table 1 presents the nationalities and countries of pre-education for the four cohorts of students.[2] The distribution of nationalities has changed a bit over time. German students were more abundant in 2012–2013 and the share of Belgian and Italian students has increased over time. Overall, German students comprise the largest nationality (40%) followed by Dutch (14%) and Belgian (12%) students. Italian and British students comprise the fourth and fifth largest group of students. The remaining (other) students consist of 31 different nationalities.

Around a third of the students received their pre-education in another country than their nationality, which is reflected in a Kendall's tau-b between nationality and country of pre-education of 0.69 ($p < 0.01$; $N = 836$). Therefore, we include the country of pre-education as a control variable in the models presented below.

The average age is 19.3 years; the youngest student was 16 and the oldest student 43 years old. Most students (more than 80%) are between 18 and 20 years old. The cohorts contain more women (58%) than men (42%) whereas at the start of an academic year the gender balance is much more equal (51% female versus 49% male students). Our experience indicates that female students are less likely to drop out and have a higher probability to pass their exams than male students.

Our dependent variable is GPA at the end of a period whereby course grades (varying between 1 and 10 according to the Dutch grading scale) are weighted by the number of ECTS (see Table A1 in the appendix). We track cumulative GPA at the end of a period which includes all courses from the previous periods. A student can have a maximum of five cumulative GPA scores because the BA ES consists of a curriculum of five periods.

Our hypotheses assume that internationalisation impacts the relationship of attendance on study success. The number of meetings varies between 13 and 20 per period except for period 3 which is shorter and has a maximum of 10 meetings. There are some slight variations in the total number of meetings across the cohorts depending on the timing of holidays and (minor) curriculum changes. The BA ES applied minimum attendance requirements that varied between 70% and 80% of the total number of meetings per course. By the end of the first year, students must have attended at least 55–59 meetings out of a total of 79–84 meetings. In the models below, we include attendance rates which are derived by dividing the number of attended meetings by the total number of meetings offered. Further detail on attendance is provided in Table A1 in the appendix.

Our main independent variable of interest is internationalisation of the classroom. To derive internationalisation scores for the groups that students attended we rely on a formula often used by political scientists to calculate the effective number of parties in parliaments (Laakso and Taagepera 1979):

$$\text{Internationalisation score} = \frac{1}{\sum_{i=1}^{n} p_i^2}$$

Whereby i is the nationality of a student, n is the total number of nationalities in a group, and p_i is the proportion of each nationality within the group. This formula takes into account the distribution of students across nationalities as well as the total number of nationalities present in a group.

Table 2. Examples of internationalisation scores in a group of 15 students.

	Examples										
Nationality	1	2	3	4	5	6	7	8	9	10	11
Dutch	15	7	5	4	3	3	3	5	2	3	2
Belgian	0	0	5	4	3	3	3	4	2	4	2
German	0	8	5	4	3	3	2	5	6	4	5
British	0	0	0	3	3	2	2	1	1	2	2
Italian	0	0	0	0	3	2	2	0	1	2	1
Other 1	0	0	0	0	0	1	1	0	3	0	1
Other 2	0	0	0	0	0	1	1	0	0	0	1
Other 3	0	0	0	0	0	0	1	0	0	0	1
Internationalisation score	1.0	2.0	3.0	3.9	5.0	6.1	6.8	3.4	4.1	4.6	5.5

Table 2 provides some examples of internationalisation scores based on various examples of different constellations of a group of 15 students. Examples 1 through 7 display the theoretical range of internationalisation scores if one assumes a possible maximum of eight nationalities across 15 students within a group. When all 15 students have one nationality the internationalisation score will be 1.0 (example 1) and the internationalisation scores will increase to 6.8 with a distribution of 15 students across eight nationalities (example 7). Examples 8 through 11 reflect nationality distributions which closely follow the overall observed distribution of nationalities displayed in Table 1. These examples reveal that internationalisation scores can substantially deviate from the total number of nationalities. The group of example 9 includes six nationalities but receives an internationalisation score of 4.1 and the group of example 11 includes eight nationalities but receives an internationalisation score of 5.5.

Examples 8 through 11 suggest that most observed internationalisation scores are to be found between 3.4 and 5.5. Indeed, the frequency distribution of observed internationalisation scores in Table 3 confirms that more than 85% of students attend group meetings whereby internationalisation scores vary between 3.0 and 6.0. A comparison between the frequency distributions of observed internationalisation scores for all periods and for period 5 shows that internationalisation scores do not vary much across the periods.

We analyse the impact of internationalisation on the relationship between attendance and GPA by employing a multilevel ordinary least regression whereby cumulative GPA, attendance rates, and internationalisation scores for five periods are nested by students. A cumulative score or average for a particular period includes GPA, attendance rates, and internationalisation scores of the previous periods. Course grades are weighted by the number of ECTS when calculating GPA, and internationalisation scores are weighted

Table 3. Frequency distribution of internationalisation scores.

	All periods		End period 5	
Internationalisation scores	%	*N*	%	*N*
< 2.0	0.3	8	0.2	1
2.0 <= and < 3.0	12.5	354	11.8	69
3.0 <= and < 4.0	24.6	695	22.9	134
4.0 <= and < 5.0	44.5	1,257	50.6	296
5.0 <= and < 6.0	16.5	466	13.5	79
6.0 <= and < 7.0	1.5	42	1.0	6
Total	100	2,822	100	585

by the number of meetings of a course before deriving a weighted average internationalisation score for a period. A major benefit of analysing cumulative scores is that one closely tracks student experiences across the five periods. We include gender, age, nationality, and country of pre-education as control variables in the models (see Table A2 in the appendix for descriptive statistics).

We include the GPA-cumulative score of the previous period in the models to control for any student-related factor that impacts on study success. A major benefit of including a lagged dependent variable is that students who, for various reasons, did not participate in exams in the previous period are excluded. A drawback of including a lagged dependent variable is that the first observation, i.e. GPA for period 1, is not included in the models because students have no pre-enrolment GPA-score. An autocorrelation coefficient controls for dependencies among the errors across time.

As explained above, the models are run for 'regular' students who were enrolled for the complete first year and who attended the minimum required number of meetings. This focus is based on the idea that when we find effects of internationalisation for this group then it is very likely that internationalisation also impacts other groups such as repeating or exchange students, or students who missed too many meetings for reasons such as family or health issues. We have run the models and calculated marginal effects for larger samples of students and the results appear to be very robust. The most important differences concern the size of the beta coefficients which become larger and some variables which gain statistical significance when the sample size of students increases. Hence, the model results shown in Table 4 and the marginal effects displayed in Figure 2 can be conceived to be conservative estimates.

Results

Table 4 displays the results of four models. Model 1 assesses whether internationalisation augments or decreases the impact of attendance on study success. A positive beta coefficient for the interaction between the variables 'cumulative attendance' and 'cumulative internationalisation' would provide evidence for the *internationalisation hypothesis* (H1) whereas a negative beta coefficient would provide evidence for the *'lost in translation' hypothesis* (H2). Model 2 assesses whether the impact of internationalisation on the relationship between attendance and study success can be described by an inverted U-curve. This model includes internationalisation scores (*Cumulative internationalisation*) and internationalisation scores to the second power (*Cumint*Cumint*) plus their interactions with cumulative attendance. A positive beta coefficient for interationalisation scores combined with a negative beta coefficient for internationalisation scores to the second power would provide evidence for the balanced classroom hypothesis (H3). Models 3 and 4 are similar as models 1 and 2 but include gender, age, nationality, country of pre-education, and cohort dummies as control variables.

Table 4 reveals that the impacts of the main variables of interest – i.e. cumulative attendance, cumulative internationality and their interactions – do not reach statistical significance except for model 4. However, a closer look at predicted cumulative GPAs suggests that internationalisation does have an impact. Figure 2 displays the impact of cumulative internationalisation on cumulative GPA. The predicted cumulative GPAs are shown for four levels of attendance, from 70% (minimal required attendance),

Table 4. The impact of internationalisation of the classroom on the relationship between attendance and grade point average.

	Linear model			Quadratic model			Linear plus controls			Quadratic plus controls		
	beta	s.e.	sig.	beta	s.e.	sig.	beta	s.e.	sig.	beta	s.e.	sig.
GPA of the previous period	0.26	0.01	***	0.26	0.01	***	0.23	0.01	***	0.23	0.01	***
Cumulative attendance	3.75	1.24	***	7.23	4.14	*	3.50	1.20	***	9.76	4.00	**
Cumulative internationalisation	−0.19	0.27		1.60	1.88		−0.03	0.26		3.29	1.82	*
Cumint*Cumint				−0.21	0.22					−0.39	0.22	*
Cumint*Cumatt	0.08	0.29		−1.67	2.03		0.02	0.28		−3.06	1.96	
Cumint*Cumint*Cumatt				0.21	0.24					0.36	0.23	
Gender							0.04	0.04		0.04	0.04	
Age							−0.03	0.01	***	−0.03	0.01	***
Nationality (Dutch = base)												
Belgium							0.12	0.12		0.11	0.12	
Germany							0.27	0.11	**	0.29	0.11	***
United Kingdom							0.33	0.12	***	0.34	0.12	***
Italian							0.13	0.15		0.13	0.15	
Other							−0.08	0.09		−0.07	0.09	
Country pre-education (the Netherlands = base)												
Belgium							0.05	0.12		0.07	0.12	
Germany							0.32	0.12	***	0.33	0.12	***
United Kingdom							−0.01	0.13		−0.02	0.13	
Italy							0.04	0.15		0.05	0.15	
Other							0.09	0.09		0.10	0.09	
Cohort (2012-2013 = base)												
2013–2014							−0.12	0.06	*	−0.20	0.07	***
2014–2015							−0.27	0.06	***	−0.36	0.07	***
2015–2016							0.06	0.07		−0.01	0.07	
Constant	2.10	1.15	*	−1.45	3.84		2.45	1.14		−4.25	3.72	
Autocorrelation coefficient	0.21			0.21			0.21			0.21		
Wald Chi^2	1379		***	1371		***	1664		***	1671		***
R^2 within	0.15			0.15			0.15			0.15		
R^2 between	0.66			0.66			0.60			0.60		
R^2 overall	0.54			0.54			0.54			0.54		

Notes: Shown are the results of an ordinary least regression model whereby 2,822 observations (GPA for four periods) are clustered by 836 students and which includes a lagged dependent variable and an autocorrelation coefficient to account for dependencies in observations over periods.

*$p < 0.1$.

**$p < 0.05$.

***$p < 0.01$.

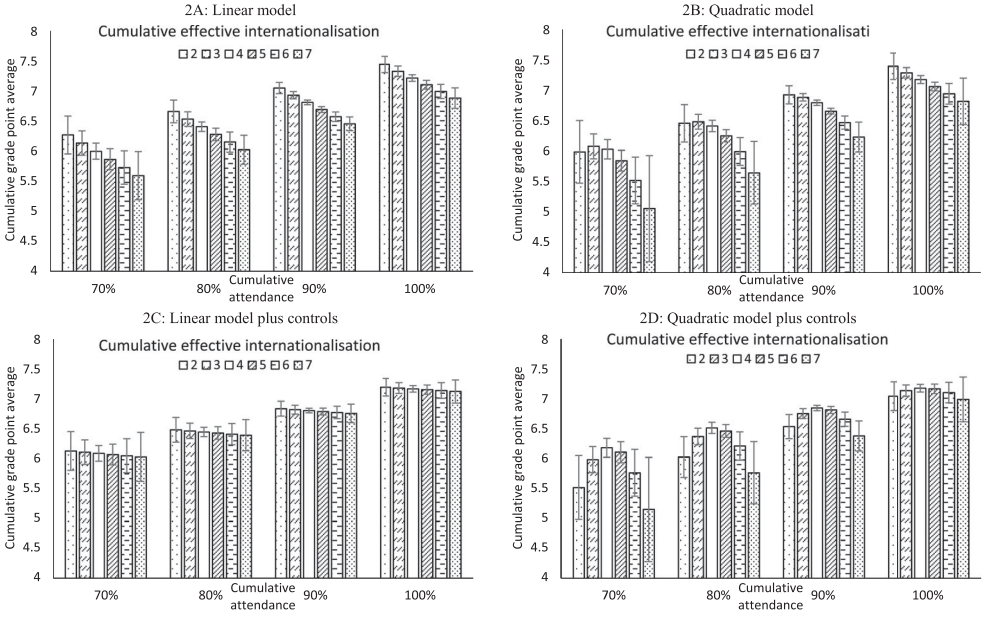

Figure 2. Marginal effects of cumulative effective internationalisation on the cumulative grade point average.

Notes: Shown are the marginal effects of cumulative effective internationalisation on the cumulative grade point average based on the model results presented in Table 4.

through 80% and 90%, to the maximum possible attendance rate of 100%. Estimates are statistically significant when the whiskers –which indicate 95% confidence intervals around the estimate – do not overlap.

Figure 2 clearly reveals that attendance matters. Cumulative GPA is around 6.0 at 70% attendance and increases to around 7.0 with 100% attendance. Figure 2(A) clearly reveals a negative impact of internationalisation whereby cumulative GPA at internationalisation score 7 is around 0.6 lower than for internationalisation score 2 for all levels of attendance. The differences in cumulative GPA are statistically significantly different except for 70% attendance. Figure 2(A) supports the 'lost in translation' hypothesis (H2), however, the negative impact of internationalisation loses statistical significance once the controls are included in the model (Figure 2(C)).

Figure 2(B,D) display the predicted cumulative GPAs of models 2 and 4 which assume that internationalisation produces an inverted U-curve relationship between attendance and study success. Model 2 seems to suggest a negative impact of internationalisation especially for attendance rates of 80% and 90% (Figure 2(B)). However, when the controls are added, we find statistically significant effects that strongly suggest that low and high internationalisation scores both decrease study success whereas the highest cumulative GPA scores can be found for internationalisation scores around 4. We find these effects for attendance rates at 80% and 90%. In other words, when students do not regularly attend classes, internationalisation will have no impact on their study success. Similarly, internationalisation will have a negligible impact on study success when students attend all or almost all meetings. Internationalisation does have an impact on

students who regularly attend group meetings (80–90%) and attend group meetings with an internationalisation score of around 4. These students will in general have around 0.5–0.8 higher cumulative GPA compared to students who participate in meetings of groups with internationalisation scores below 3 or above 6.

The confidence intervals for higher and lower internationalisation scores (below 3 and above 5) are larger than those for intermediate values (between 3 and 5) because our dataset does not include many observations which take up these values. For example, few observations (less than 0.5 per cent of the total number of observations) combine cumulative attendance levels of less than 80% with cumulative internationalisation scores below 3 or above 5. Because of the distribution of attendance and internationalisation scores in our dataset, we cannot rule out that internationalisation also has an impact when students attend less than 80% or all or close to 100% of the meetings. In addition, our dataset does not include groups which were dominated by one nationality (internationalisation scores below 2) which would constitute a useful benchmark group to compare to groups that have internationalisation scores of 2 and higher.

Discussion

Research has shown that the potential benefits of being confronted with different ideas and narratives cannot be taken as a given. Here, we have looked at internationalisation in an active learning environment, which, some studies have suggested, is more conducive for meaningful exchanges (Loes, Culver, and Trolian 2018). In addition, we focused on an undergraduate programme that may welcome first-year students from over 30 nationalities each year, but most of them originate from different European countries. Hence, cultural differences between these students would normally be less outspoken. But even in this learning environment, we find an effect of internationalisation on the opportunities for meaningful exchanges in the classroom.

We present strong evidence that the *quality* of attendance matters and internationalisation has the largest impact when a classroom does not contain too few (less than 3) or too many (more than 6) nationalities. We found the strongest effects for students who attend around 80% to 90% of the classes. Given that most students attend around 90% of classes, internationalisation significantly affects most students. Average cumulative attendance is 93% (see Table A2 in the appendix) and almost 65% of the observations included in our dataset concern cumulative attendance rates that lie in between 88% and 98%. In other words, we find the strongest effects of internationalisation for attendance rates that are most common among the students.

National and international developments may result in increased criticism on and doubts about internationalisation (Courtois and Veiga 2020; de Wit 2019). Therefore, it is important that policymakers and universities that commit to internationalisation construct policies that ensure that students can optimally benefit from a diverse student body. Our results show that positive outcomes of internationalisation cannot be taken for granted. We therefore recommend that universities actively manage the composition of international classrooms. This confirms what research on international management teams has already highlighted: groups can either be too uniform or too diverse to benefit from different perspectives (Cohen and Kassis-Henderson 2017; Haas 2006). A balanced group prevents certain perspectives from prevailing over

others, while also decreasing the chances of feeling 'lost in translation' due to different languages and cultural backgrounds. When students experience the benefits of the international classroom, this is likely to encourage further interaction between them (Kimmel and Volet 2012; Spencer-Oatey and Dauber 2019).

A first interesting avenue for future research concerns expanding the current study with additional data. We looked at a PBL environment, which should enhance the quality of the international classroom. We also looked at a programme in which exchanging perspectives should matter. It can be expected that effects may differ depending on the learning environment and the importance of different cultural insights for understanding the topic of studies. Furthermore, it is likely that problems within diverse groups can be overcome when students' experience increases during their second and third year. Including data from these years could further enhance our study.

We focused on how the composition of the classroom may benefit all students in a group. This fits well with the focus on collaborative learning in PBL. It also takes into account that the distinction between domestic and international students ignores commonalities and differences that exist across such lines of division. Even so, as a second potential avenue for future research, it is worth exploring whether internationalisation has a different impact across nationalities or impacts domestic and international students differently. Our findings are based on a sample that included students from 36 nationalities but there may be good reasons to expect that internationalisation affects particular groups of students in different ways. We ran some additional (and explorative) models that included interactions between internationalisation scores and nationality[3] and the results seem to suggest that the 'balanced classroom' hypothesis (H3) applies to Belgian, German, and Italian students as well as all to other students, but not to students from the Netherlands and the United Kingdom. One tentative explanation could be that British and Dutch students (who, additionally, are 'at home') experience fewer hurdles adjusting to studying in English because they received more extensive English language classes in their pre-education. However, the number of students for each nationality in our dataset is too low to produce statistically significant differences.

A third potential avenue for future research moves away from (administrative) data and instead specifically taps into students' and staff's experience. The influence of teachers on students' experience in the international classroom is likely to matter (Sweeney, Weaven, and Herington 2008). Direct observation of exchanges in the international classroom, focus groups and interviews would allow us to get an insight into how students and staff navigate through the challenges that this setting creates.

Notes

1. Here, we avoid the classification between domestic and international students. While the programme is based in the Netherlands and Dutch students are our domestic students by nationality, in our sample, the largest national group actually consists of German students (approximately 40%). Both groups need to adapt to a new international, active learning environment.
2. The total number of students for cohort 2015–2016 is lower than for the other cohorts because attendance data for some of the courses is missing.
3. Detailed results are available upon request.

Acknowledgements

We would like to thank colleagues from UACES and Maastricht University's research colloquium 'Politics and Culture in Europe' for comments on earlier versions of this article and the anonymous reviewers for their detailed and thoughtful feedback.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Notes on contributors

Patrick Bijsmans is Associate Professor in Teaching and Learning European Studies at Maastricht University's Faculty of Arts and Social Sciences. His main areas of research are problem-based learning in European Studies, curriculum design in European Studies, International Relations and Politics, and democracy, media and Euroscepticism.

Arjan H. Schakel is Research Professor at the University of Bergen's Department of Comparative Politics and principal investigator of the project 'Strengthening Regional Democracy: Contributing to Good Democratic Governance'. His main areas of research concern federalism and regional government and politics, as well as classroom attendance.

Asena Baykal is Research Associate at the Global Public Policy Institute in Berlin, where she contributes to the institute's work on peace and security in Europe's neighbourhood. Her interests include conflict analysis in the EU neighbourhood, EU-Turkey relations, cooperation with authoritarian states, and the role of national identity and memory in foreign affairs.

Sven Hegewald is PhD Candidate in ETH Zürich's European Politics Group at the Centre for Comparative and International Studies. His research focuses on political trust in multilevel governance systems, political geography, and the consequences of regional inequality for political behaviour more broadly.

ORCID

Patrick Bijsmans http://orcid.org/0000-0003-2708-2491
Arjan H. Schakel http://orcid.org/0000-0002-1173-9316
Sven Hegewald http://orcid.org/0000-0002-2953-0369

References

Bijsmans, P., and A. H. Schakel. 2018. "The Impact of Attendance on First-Year Study Success in Problem-Based Learning." *Higher Education* 76 (5): 865–881. doi:10.1007/s10734-018-0243-4.

Busse, V., and U.-M. Krause. 2015. "Addressing Cultural Diversity: Effects of a Problem-Based Intercultural Learning Unit." *Learning Environments Research* 18 (3): 425–452. doi:10.1007/s10984-015-9193-2.

Cardwell, P. J. 2020. "Does Studying Abroad Help Academic Achievement?" *European Journal of Higher Education* 10 (2): 147–163. doi:10.1080/21568235.2019.1573695.

Coertjens, L., T. Brahm, C. Trautwein, and S. Lindblom-Ylänne. 2017. "Students' Transition Into Higher Education from an International Perspective." *Higher Education* 73 (3): 357–369. doi:10.1007/s10734-016-0092-y.

Cohen, L., and J. Kassis-Henderson. 2017. "Revisiting Culture and Language in Global Management Teams: Toward a Multilingual Turn." *International Journal of Cross Cultural Management* 17 (1): 7–22. doi:10.1177/1470595816684882.

Courtois, A. 2018. "'It Doesn't Really Matter Which University You Attend or Which Subject You Study While Abroad.' The Massification of Student Mobility Programmes and Its Implications for Equality in Higher Education." *European Journal of Higher Education* 8 (1): 99–114. doi:10.1080/21568235.2017.1373027.

Courtois, A., and A. Veiga. 2020. "Brexit and Higher Education in Europe: The Role of Ideas in Shaping Internationalisation Strategies in Times of Uncertainty." *Higher Education* 79 (5): 811–827. doi:10.1007/s10734-019-00439-8.

Credé, M., S. G. Roch, and U. M. Kieszczynka. 2010. "Class Attendance in College: A Meta-Analytic Review of the Relationship of Class Attendance with Grades and Student Characteristics." *Review of Educational Research* 80 (2): 272–295. doi:10.3102/0034654310362998.

Cruickshank, K., H. Chen, and S. Warren. 2012. "Increasing International and Domestic Student Interaction Through Group Work: A Case Study from the Humanities." *Higher Education Research & Development* 31 (6): 797–810. doi:10.1080/07294360.2012.669748.

Delanty, G. 2014. "Not All is Lost in Translation: World Varieties of Cosmopolitanism." *Cultural Sociology* 8 (4): 374–391. doi:10.1177/2F1749975514532261.

De Vita, G. 2000. "Inclusive Approaches to Effective Communication and Active Participation in the Multicultural Classroom." *Active Learning in Higher Education* 1 (2): 168–180. doi:10.1177/1469787400001002006.

De Vita, G. 2002. "Does Assessed Multicultural Group Work Really Pull UK Students' Average Down?" *Assessment & Evaluation in Higher Education* 27 (2): 153–161. doi:10.1080/02602930220128724.

de Wit, H. 2019. "Dutch Cuts to Internationalization Send the Wrong Message." *Inside Higher Ed*, July 22. https://www.insidehighered.com/blogs/world-view/dutch-cuts-internationalization-send-wrong-message.

Ely, R. J., and D. A. Thomas. 2001. "Cultural Diversity at Work: The Effects of Diversity Perspectives on Work Group Processes and Outcomes." *Administrative Science Quarterly* 46 (2): 229–273. doi:10.2307/2667087.

Gao, Y. 2018. "A Set of Indicators for Measuring and Comparing University Internationalisation Performance Across National Boundaries." *Higher Education* 76 (2): 317–336. doi:10.1007/s10734-017-0210-5.

Haas, M. R. 2006. "Acquiring and Applying Knowledge in Transnational Team: The Roles of Cosmopolitans and Locals." *Organization Science* 17 (3): 367–384. doi:10.1287/orsc.1060.0187.

Hartwell, L. M., and S. Ounoughi. 2019. "Expanding the Comfort Zones: Divergent Practices of Host and International University Students." *European Journal of Higher Education* 9 (4): 377–392. doi:10.1080/21568235.2019.1643755.

Hudzik, J. K., and M. Stohl. 2009. "Modelling Assessment of the Outcomes and Impacts of Internationalisation." In *Measuring Success in the Internationalisation of Higher Education. EAIE Occasional Paper 22*, edited by H. de Wit, 9–21. Amsterdam: European Association for International Education.

Jansen, E., C. Suhre, and S. André. 2017. "Transition to An International Degree Programme. Preparedness, First-Year Experiences and Success of Students of Different Nationalities." In *Higher Education Transitions. Theory and Research*, edited by E. Kyndt, V. Donche, K. Trigwell, and S. Lindblom-Ylänne, 47–65. London: Routledge.

Jochems, W., J. Snippe, H. J. Smid, and A. Verweij. 1996. "The Academic Progress of Foreign Students: Study Achievement and Study Behaviour." *Higher Education* 31 (3): 325–340. doi:10.1007/BF00128435.

Jones, E. 2017. "Problematising and Reimagining the Notion of 'International Student Experience'." *Studies in Higher Education* 42 (5): 933–943. doi:10.1080/03075079.2017.1293880.

Kimmel, K., and S. Volet. 2012. "University Students' Perceptions of and Attitudes Towards Culturally Diverse Group Work: Does Context Matter?" *Journal of Studies in International Education* 16 (2): 157–181. doi:10.1177/1028315310373833.

Laakso, M., and R. Taagepera. 1979. ""Effective" Number of Parties: A Measure with Application to West Europe." *Comparative Political Studies* 12 (1): 3–27. doi:10.1177/001041407901200101.

Lindblom-Ylänne, S., H. Pihlajamäki, and T. Kotkas. 2003. "What Makes a Student Group Successful? Student-Student and Student-Teacher Interaction in a Problem-Based Learning Environment." *Learning Environments Research* 6 (1): 59–76. doi:10.1023/A:1022963826128.

Loes, C. N., K. C. Culver, and T. L. Trolian. 2018. "How Collaborative Learning Enhances Students' Openness to Diversity." *The Journal of Higher Education* 89 (6): 935–960. doi:10.1080/00221546.2018.1442638.

MacGregor, A., and G. Folinazzo. 2018. "Best Practices in Teaching International Students in Higher Education: Issues and Strategies." *TESOL Journal* 9 (2): 299–329. doi:10.1002/tesj.324.

Montgomery, C., and L. McDowell. 2009. "Social Networks and the International Student Experience. An International Community of Practice?" *Journal of Studies in International Education* 13 (4): 455–466. doi:10.1177/1028315308321994.

Rienties, B., S. Beausaert, T. Grohnert, S. Niemantsverdriet, and P. Kommers. 2012. "Understanding Academic Performance of International Students: The Role of Ethnicity, Academic and Social Integration." *Higher Education* 63 (6): 685–700. doi:10.1007/s10734-011-9468-1.

Spencer-Oatey, H., and D. Dauber. 2019. "Internationalisation and Student Diversity: How Far are the Opportunity Benefits Being Perceived and Exploited?" *Higher Education* 78 (6): 1035–1058. doi:10.1007/s10734-019-00386-4.

Sweeney, A., A. Weaven, and C. Herington. 2008. "Multicultural Influences on Group Learning: A Qualitative Higher Education Study." *Assessment & Evaluation in Higher Education* 33 (2): 119–132. doi:10.1080/02602930601125665.

Umans, T., S.-O. Collin, and T. Tagesson. 2008. "Ethnic and Gender Diversity, Process and Performance in Groups of Business Students in Sweden." *Intercultural Education* 19 (3): 243–254. doi:10.1080/14675980802078608.

Volet, S. E., and G. Ang. 2012. "Culturally Mixed Groups on International Campuses. An Opportunity for Inter-Cultural Learning." *Higher Education Research and Development* 31 (1): 21–37. doi:10.1080/07294360.2012.642838.

Watson, W. E., L. Johnson, K. Kumar, and J. Critelli. 1998. "Process Gain and Process Loss: Comparing Interpersonal Processes and Performance of Culturally Diverse and Non-Diverse Teams Across Time." *International Journal of Intercultural Relations* 22 (4): 409–430. doi:10.1016/S0147-1767(98)00016-9.

Wihlborg, M., and S. Robson. 2018. "Internationalisation of Higher Education: Drivers, Rationales, Priorities, Values and Impacts." *European Journal of Higher Education* 8 (1): 8–18. doi:10.1080/21568235.2017.1376696.

Appendix

Table A1. Course descriptions of the first-year courses of the Bachelor European Studies at Maastricht University.

					Number of group meetings			
Course title	Content	Period	Grade	ECTS	2012	2013	2014	2015
The Idea of Europe	Substance	1	1–10	5	7	7	7	8
Introduction to Academic Writing	Skills	1	1–10	5	6	6	6	7
Academic English Writing Skills	Skills	1	F/P/E	1.5	–	–	–	–
English language diagnostic test	Skills	1	P	0.5	–	–	–	–
Bloody Diversity	Substance	2	1–10	9	12	12	12	12
Academic English Writing and Presentation Skills	Skills	2	1–10	2	7	7	7	7
Europe and Global Politics Since World War II	Substance	3	1–10	4.5	7	7	7	7
What is Good Science?	Skills	3	F/P/E	2	3	3	3	3
Fault Lines	Substance	3–4	1–10	5	6	6	6	6
An Economist Point of View	Substance	4	1–10	6	8	7	7	7
Micro/Macro Economics	Substance	4	1–10	6	8	7	7	7
EU Politics: Theories, Institutions and Challenges	Substance	5	1–10	9	15	13	13	13
Analysing Research Designs	Skills	5	F/P/E	4.5	4	4	4	7
Mentor Programme	Skills	1–5	–	0	–	–	–	–
			Total	60	83	79	79	84

Notes: F = Fail, P = Pass, E = Excellent. EUS1500, EUS1507 and EUS1508 are not included because these courses have no small-scale tutorials. EUS1504 and EUS1505 are not included for GPA because they are graded with a F, P or E but these two courses are included when calculating attendance rates for students and internationalisation scores for groups. EUS1001 is not included for GPA for the academic year 2015–2016 because the course changed its grading system from 1–10 to F/P/E. Attendance and internationalisation scores for EUS1007 for academic year 2012–2013 and EUS1003 for academic year 2015–2016 is missing.

Table A2. Descriptive statistics.

Variable	Mean	SD	Min	Max
Cumulative grade point average (GPA)	6.92	1.03	2.1	9.3
Lagged GPA	6.93	1.31	0.5	10.0
Effective cumulative internationalisation	4.19	0.89	1.7	6.9
Cumulative percentage attendance	0.93	0.06	0.7	1
Gender	0.59	0.49	0	1
Age	19.31	1.85	16	43
Nationality				
Netherlands	0.17	0.38	0	1
Belgium	0.09	0.29	0	1
Germany	0.47	0.50	0	1
United Kingdom	0.05	0.22	0	1
Italian	0.06	0.24	0	1
Other	0.15	0.36	0	1
Country pre-education				
Netherlands	0.14	0.35	0	1
Belgium	0.11	0.31	0	1
Germany	0.43	0.50	0	1
United Kingdom	0.05	0.22	0	1
Italian	0.06	0.24	0	1
Other	0.21	0.40	0	1
Cohort				
2012–2013	0.26	0.44	0	1
2013–2014	0.28	0.45	0	1
2014–2015	0.27	0.45	0	1
2015–2016	0.19	0.40	0	1

Notes: Shown are descriptive statistics for the dependent and independent variables for 2,822 observations which are clustered by 836 students (i.e. one score for each period and a maximum of four cumulative scores for a student).