



<https://bulletin.vals-asla.ch> · e-ISSN: 2813-7973 · p-ISSN: 1023-2044

Gautschi, C. & Studer, P. (2017). The impact of internationalisation on tertiary-level educational social spheres. *Bulletin suisse de linguistique appliquée* (Numéro spécial 1), 51-62.

<https://doi.org/10.26034/ne.vals-asla.2017.1125>

Dieser Artikel ist unter der *Creative Commons Attribution 4.0 International* Lizenz veröffentlicht (CC BY):

<https://creativecommons.org/licenses/by/4.0>



© Curtis Gautschi, Patrick Studer, 2017

The impact of internationalisation on tertiary-level educational social spheres

Curtis GAUTSCHI & Patrick STUDER

ZHAW Zürich University of Applied Sciences

LCC Language Competence Centre, School of Applied Linguistics

Theaterstrasse 17, 8401 Winterthur, Switzerland

curtis.gautschi@zhaw.ch, patrick.studer@zhaw.ch

L'introduzione di programmi di English-medium instruction (EMI) svolge un ruolo chiave nella strategia di internazionalizzazione a livello di istruzione terziaria in Svizzera, dato l'impatto positivo della EMI sul prestigio istituzionale e il suo valore aggiunto sul mercato educativo. Il contesto EMI, che crea uno spazio socio-educativo complesso, si differenzia rispetto ad altri contesti educativi in cui la lingua locale è la lingua di insegnamento. Questo articolo discute i risultati di un'indagine che si concentra sui confini di tale differenziazione in riferimento all'iscrizione degli studenti ad un programma di promozione del profilo internazionale offerto dall'Università delle Scienze Applicate di Zurigo (ZHAW). Lo studio esamina gli atteggiamenti degli studenti nei confronti della lingua inglese e della EMI, la loro fiducia in sé stessi a livello sia linguistico che scolastico e l'impatto di tali fattori sulle decisioni riguardanti l'iscrizione al programma. Uno studio di questo tipo permette di meglio comprendere la delimitazione dei confini degli spazi socio-educativi rispetto all'introduzione di programmi che promuovono politiche di internazionalizzazione istituzionali in cui la EMI è direttamente coinvolta. Questo articolo sarà di interesse tanto per le istituzioni a livello universitario già coinvolte in tali programmi volti ad implementare obiettivi di internazionalizzazione quanto per quelle che ne stiano prendendo in considerazione l'introduzione.

Parole chiave:

internazionalizzazione a livello di istruzione terziaria, sicurezza linguistica, EMI, profilo internazionale

1. Introduction

1.1 Internationalisation in higher education

The introduction of English-medium instruction (EMI) study programs plays a key role in the internationalisation strategy of Swiss tertiary-level educational institutions. Consequently, the number of English-taught programmes offered both at the Master's and Bachelor's level in Switzerland has increased significantly in recent years (Wächter & Maiworm 2014). This trend is rooted in the belief that offering English-taught courses improves an institution's international profile by positively impacting institutional prestige and value in the educational marketplace, improves teachers' and students' intercultural competences (Knight 2004: 23) and is in line with Bologna Declaration objectives of promoting "citizens' mobility and employability and the Continent's overall development" (Council of Europe 2001: 47).

Within Switzerland, internationalisation endeavours at the higher education level are spearheaded by Swissuniversities, an organisational body consisting of rectors of Swiss universities that defines institutional objectives and the federal funding needed to reach those objectives. One of this organisation's

projects, entitled *The Internationalisation of Swiss Universities of Applied Sciences* (2013-2016), by way of four sub-projects, seeks to concretely promote measures that enhance UAS internationalisation, through the strengthening of UASs' international position, the expansion of networks, the improvement of their position within the international education community and the improvement of the qualifications of students, faculty and researchers via international cooperation.

1.2 UAS internationalisation strategies in Switzerland

While not all institutions have to date taken explicit steps to promote internationalisation through certificate programmes or other incentives whereby students are rewarded for improving their international profiles, some Swiss UASs have developed programmes that directly promote internationalisation strategies. For example, the Bern University of Applied Sciences (BFH) has introduced the *Certificate of Global Competence* as an add-on certificate to promote intercultural and transcultural competences. The programme does not entail the direct taking of English-taught courses at the institution, but rather involves the accumulation of points combined individually through taking modules to develop knowledge and skills in international competence, study semesters abroad, the acquisition of foreign languages (not necessarily English), participation in transcultural activities and the writing of a personal reflection report integrating theoretical knowledge acquired.

A more English-centric example of institutional promotion of student internationalisation is the *International Profile Programme* (hereafter IPP) at the Zürich University of Applied Sciences (ZHAW), which is currently only offered within the Engineering faculty. In the IPP, gaining a minimum of ECTS points (20) through English at the institution itself is a requirement. Other requirements include work or study abroad, the completion of a module on Intercultural Communication and Management, engaging in transcultural activities and obtaining a recognised certificate in English at the C1 level.

While these certificate programmes differ slightly in that the latter integrates the enrolment of students in English-taught programmes at the institution, and the former does not, both are devised as a means to promote internationalisation objectives. Such programmes, if chosen, give students the opportunity to create their own educational landscape, and consequently determine boundaries of educational social spaces. In other words, when students choose modules taught in English rather than in the local language, or enrol in programmes that encourage the selection of English-taught modules, different communities of practice (Lave & Wenger 1991) emerge. Thus, a student's goal of improving language and international competences can have a direct impact on the resulting educational communities, wherein knowledge creation results from shared practices and discussion through the medium of English (e.g., Smit 2010).

The main research question for the present study is:

What attitudinal, confidence-related and programme characteristic factors impact enrolment decisions in the International Profile Programme (IPP)?

This will be answered through the collection and analysis of questionnaire data, to determine the degree to which factors such as attitudes to EMI and the English language in general, students' EMI-specific language confidence, scholastic self-confidence, and specific features of the IPP itself (such as the range of courses, perceptions of teaching quality, expected language and content competence development) influence IPP enrolment decisions, and consequently shape educational social space boundaries.

2. Theoretical background

Research examining motivational and attitudinal factors involved in language learning with respect to EMI settings where English is a foreign language is quite new (Studer & Konstantinidou 2015: 16). In contrast, an extensive body of research has explored the complex relationships between various learner-internal factors (as opposed to external: i.e., environment or input) – such as motivation and confidence/anxiety – and their impact on Second Language (L2) learning in general. Here, we review a selection of L2 and EMI-specific studies relevant to the present investigation that form the basis for the selection of items for the questionnaire.

2.1 Factors in L2 learning: general research

Following early work on the role of motivation in L2 learning (Gardner & Lambert 1972), Gardner and associates developed attitude measurement instruments and attitude/motivation models that explain L2 learning (e.g., the Attitude/Motivation Test Battery (AMTB) in Gardner & Smythe 1981) covering 1) Integrativeness (subtests: Attitudes toward the English-Speaking World, Integrative Orientation, Interest in Foreign Languages) 2) Attitudes Toward the Learning Situation, and 3) Motivation (subtests: Motivational Intensity, Desire to Learn English, Attitudes toward Learning English). Gardner et al. (1997) also developed an empirically-based causal model of L2 learning achievement in which five main causal factors are identified: linguistic self-confidence, language learning strategies, language aptitude, motivation and attitudes towards learning the language (Gardner et al. 1997: 354).

The role of linguistic self-confidence has been of particular interest for its role in L2 learning. The concept was incorporated as a factor in Clément's (1980) early model of mediational processes in L2 learning in light of Gardner's (1979) findings that language anxiety was a better predictor of L2 competence than attitudes or motivation, and Clément et al.'s (1977) findings that self-confidence had a greater impact on L2 proficiency development than integrative attitudes

toward the target L2 group (in Clément 1980: 151). Language anxiety was also considered in Gardner & MacIntyre's (1993) socio-educational model of L2 learning as a factor in L2 outcomes, and its antithesis, language confidence, was integrated into MacIntyre et al.'s (1998) model of willingness to communicate. In a study of Hungarian middle-school students (N=301), Clément et al. (1994) found strong links between anxiety/self-evaluation and attitude and L2 learning achievement, but not between anxiety and perceptions of the teacher or the course (except for difficulty). Clément, Gardner & Smythe (1980) found that linguistic self-confidence may arise from contact with the L2 community. Clément et al. (1994: 423-425), while noting the importance of classroom dynamics – which is in turn based on group dynamics and related issues such as group formation development, structure and processes – also found evidence of integrative motivation, linguistic self-confidence and the appraisal of classroom environment as the main factors influencing foreign language behaviour and competence development.

Other approaches and models considered in the present study include Ford's (1992) Taxonomy of multiple goals, and Noels et al.'s (2009) application of intrinsic motivation for knowledge, accomplishment and stimulation to foreign language learning.

2.2 EMI-specific research

Studer & Konstantinidou (2015), in a study of students' (N=65) attitudes towards EMI and reactions to newly introduced modules taught through English, found a strong relationship between students' attitudes towards EMI and general linguistic self-confidence.

Gorges et al. (2012), in a large-scale study involving German university students (N=1,265), found that both the motivational goal of mastery and the self-concept of ability (as the expression of expected success) positively affect attitudes towards new learning opportunities. This is in line with Studer & Konstantinidou's (2015) later findings that students' confidence in their general English competence is associated with their attitudes towards EMI.

Basibek et al. (2014), in an exploratory study, examined lecturers' attitudes towards teaching through the medium of English at the university level in Turkey. They found participants favourable towards introducing EMI because of perceived future benefits for students in terms of business and academic opportunities, while expressing concerns about students' language proficiency.

Jensen & Thøgersen (2011), in a study of lecturers at the University of Copenhagen, found that younger lecturers had more positive attitudes to increasing EMI, and that the greater their teaching load through the medium of English, the more positive their attitude. The study focused on four EMI-attitude themes: 1. EMI impedes dissemination of knowledge to the public, 2. EMI

decreases learning for students, 3. increased EMI threatens the local language, and 4. EMI positively impacts international objectives.

3. Methodology

3.1 Instrument

To investigate our research question, an online questionnaire was developed. Based on the literature described above and an analysis of the context under study, focus areas – representing potential factors that influence students' IPP enrolment decisions – were identified and developed into scales. These are listed below (table 1), with supporting references and sources for scale items. Individual items were appropriately modified or newly developed, where necessary, to fit the setting in question.

Scale 1 – IPP characteristics: Studer & Konstantinidou 2015, Noels, Pelletier, Clément & Vallerand 2000, Clément et al. 1994	The number of modules offered in the International Profile is good.	*
	The courses in English offered in the International Profile are well selected.	*
	The courses offered in the International Profile are useful for the future.	
	I like the idea of going abroad as part of the International Profile.	*
	The experience of going abroad as part of the International Profile will improve my chances of getting a job.	**
	I like the idea of getting a language certificate (e.g., CAE) as part of the International Profile.	
	Having a language certificate (e.g., CAE) is useful for the future.	
Scale 2 – Lecturing quality: Basibek et al. 2014, Gorges et al. 2012, Jensen & Thogerson 2011, Lasagabaster 2002, Ford 1992	I am concerned about lecturers teaching in English.	p=0.06
	ZHAW teachers are competent at lecturing in English.	
	ZHAW teachers are less confident and less dynamic if they teach in English.	
	We don't learn enough about the subject (e.g., Maths) when the lecture is in English.	
	I am worried about not learning enough when the lecture is in English.	
	Lectures in English go too slowly.	
	Subject lectures (e.g., Maths) in English are of good quality at ZHAW.	**
Scale 3 – IPP value: Basibek et al. 2014, Clément et al. 1994	The International Profile helps students reach the level of English they want.	
	The International Profile Programme enriches our knowledge in our field.	
	Having the International Profile on a diploma is attractive.	**
	The International Profile on a diploma looks good on applications for jobs or further study programmes.	**
Scale 4 – Attitudes towards EMI: Basibek et al. 2014, Jensen & Thogerson 2011	Lecturing in German allows a teacher to go deeper into the content of the lesson than in English.	
	Students learn more about their fields when the lectures are in English.	*
	Lecturing in German produce a better classroom atmosphere than lecturing in English.	
	English lectures are LESS efficient and effective.	
	Students learn best when they are taught in their native language.	
	We should have more courses taught in English at the School of Engineering.	*

	More courses in English will improve the quality of the School of Engineering.	**
Scale 5 – Attitudes towards English: Studer & Konstantinidou 2015, Lasagabaster 2002, Clément et al. 1994	I like hearing English spoken.	*
	I like speaking English.	**
	I like to be taught in English.	
	Learning English enriches my cultural knowledge.	**
	Knowing German and English helps to get a job.	
	People can earn more money if they speak German and English.	
	I am motivated to improve my English level.	*
	I want to be very fluent in English.	*
Scale 6 – Scholastic confidence: Studer & Konstantinidou 2015	I am worried about failing a module if the course is in English.	
	I am worried about failing a module if the end-of-module examination is in English.	
	I am worried about failing the present school year.	
Scale 7 – Ambition: Basibek et al. 2014, Clément et al. 1994	I am highly motivated in my studies.	
	I plan to continue studies after the Bachelor level.	
	I consider myself very ambitious for my career.	
Scale 8 - EMI language confidence: Gorges et al. 2012	It is no problem for me to follow a lecture in English.	
	It is no problem for me to read and understand academic texts in English.	
	It is no problem for me to write papers in English.	*
	It is no problem for me to give an oral presentation in English.	*
	It is no problem for me to participate in a seminar discussion in English.	p=0.06

Table 1: Scales with sources and individual questionnaire items (4-point Likert scale – agree, somewhat agree, somewhat disagree, disagree). Kruskal-Wallis tests (column on right) on IPP enrolment decision (Yes/No) of individual items (2-tail, *sig. at p=0.05, **sig. at p=0.01, p values given for items significant at 0.1 level).

The rationale for developing scales was to analyse data based on the method used in Lasagabaster's (2002) study on the impact of students' L1s on their attitudes towards Basque, Spanish, and English – namely, comparison of means across L1 groups. For the present study, this method was adapted to examine influence in the formation of groups based on enrolment decisions. The two groups are a) those that enrolled in the IPP and b) those that did not enrol in the IPP.

Following the initial draft, evidence of content validity (how well items conceptually reflect the research focus) and face validity (feasibility, readability and clarity of language) were examined. An internal trial followed, and items were revised, reworded and reduced in number. The questionnaire prior to data collection comprised 53 4-point Likert-scale variables in 8 scales and one dependent outcome variable (enrolment decision). After data collection (see section 3.4), scale items were reduced to 45 to improve scale properties.

3.2 Statistical research hypotheses

Given the method of analysis chosen and the scales used, our statistical research hypotheses are:

Null hypotheses (no impact): For each scale, no significant difference in the value of centrality (median) indicates that the focus area represented by the scale in question did not influence enrolment decisions.

Alternative hypotheses (impact): For each scale, a significant difference in the value of centrality (median) indicates that the focus area represented by the scale in question influenced enrolment decisions.

For example, if the median score on the EMI language confidence scale in the group that enrolled in the IPP differed significantly from that in the group that did not enrol in the IPP, this would imply that EMI language confidence had an influence on the enrolment decision.

3.3 Data collection, analysis and findings

Students that select the IPP begin the programme in the second year of study. In the first year, students are required to take English for Engineering courses (ESP) and do not have Engineering modules offered through English. Thus, participants' responses reflect their expectations regarding EMI that was just beginning. All students starting their second year at the School of Engineering were invited to participate in the online survey (September, 2015). Out of a total population of 360 students in the second year, 49 responded (14%), of which 40 had enrolled in the IPP and 9 had not. All statistical analyses were performed using R (version 3.2.5) and GNU PSPP (version 0.8.5).

The dataset was found to be unsuitable for factor analysis, given the low participants to variables ratio. Scale and scale item analyses consisted of checks of item covariance and correlations, together with analyses of scale reliability (Cronbach's Alpha). These analyses together with final checks of content and face validity, led to further elimination of items within scales, leaving 45 scale items in total. Finalised scales, relevant sources for items, and the complete list of items for each scale are found in table 1.

Final scale reliability tests (table 2) revealed acceptable to very good values (alpha ranging from 0.68 to 0.9). However, some scales were not found to be normally distributed. Negative skewness was, in fact, expected (mean lower than the mode) in the EMI linguistic confidence scale since EMI-ready skills have been, at least to some degree, developed through previous educational experience. The Kruskal-Wallis test was therefore chosen to compare values of centrality – based on the median rather than the mean. Although the Student's t-test used by Lasagabaster (2002) is relatively insensitive to

departures from sample normality (Everitt 2002: 366), its violation results in decreased power in smaller samples. The Kruskal-Wallis test of variance was selected because it does not assume normality and is suitable for samples as small as 7 (see Sawilowsky & Fahoome 2014).

Kruskal-Wallis tests (table 2) on all 8 scales revealed the following significant factors in IPP enrolment:

- IPP characteristics (especially range/selection of English-medium courses and the idea of going abroad);
- IPP value (especially the attractiveness of having IPP certification on diplomas – both in general and specifically for job applications – but not expected learning);
- Students' EMI-specific language self-confidence (especially language production – writing and speaking skills – also found in Studer & Konstantinidou 2015);
- Students' attitudes towards English.

The remaining areas, namely, students' perceptions of lecturing quality, their attitudes towards EMI, scholastic confidence and ambition did not exert an influence on enrolment decisions.

	alpha	KW - p
Scale 1 – IPP characteristics	0.77	0.011*
Scale 2 – Lecturing quality (individual items*)	0.71	0.054
Scale 3 – IPP value	0.78	0.008**
Scale 4 – Attitudes towards EMI (individual items*)	0.68	0.089
Scale 5 – Attitudes towards English	0.90	0.003**
Scale 6 – Scholastic confidence	0.75	0.847
Scale 7 – Ambition	0.68	0.711
Scale 8 – EMI language confidence	0.87	0.041*

Table 2: Scale reliability (Cronbach's alpha N=49) and Kruskal-Wallis test on IPP enrolment decision Yes/No at scale level (2-tail, *sig. at p=0.05, **sig. at p=0.01).

	Scale 1	Scale 2	Scale 3	Scale 4	Scale 5	Scale 6	Scale 7	Scale 8
Scale 1	1	0.37*	0.7**	0.35*	0.59**	-0.18	0.27	0.56*
Scale 2		1	0.2	0.49**	0.24	0.43**	0.08	0.35*
Scale 3			1	0.4**	0.66**	-0.12	0.47**	0.6**
Scale 4				1	0.25	0.22	0.24	0.43**
Scale 5					1	0.05	0.46**	0.56**
Scale 6						1	0.14	0.24
Scale 7							1	0.43**
Scale 8								1

Table 3: Pearson Correlations (2-tail, *sig. at p=0.05, **sig. at p=0.01)

4. Discussion

As expected, students' perceptions of IPP characteristics and value had an impact on IPP enrolment. While attitudes towards English had a clear influence (lowest KW-test p-value indicating the lowest risk of falsely rejecting the null hypothesis), language self-confidence also appears to play a significant role – in a way consistent with previous research (e.g., Clément 1980, Gardner et al. 1997, MacIntyre et al. 1998, Studer & Konstantinidou 2015). This is also supported by correlation data (table 3) showing that language confidence correlated significantly with the highest number of scales (all except scholastic confidence), including attitudes towards English and EMI. This confirms the strong correlation between language confidence and attitudes towards EMI found by Studer & Konstantinidou's (2015), who also concluded that training early on, especially in terms of language production skills, may have a positive influence on attitudes towards EMI. The present study goes a step further, showing that language confidence also influences decisions and students' willingness to act as expressed in choosing the IPP.

Figure 1 shows a tentative causal model that maps the plausible direction of impact, as suggested from the quantitative data. Here, both Attitudes towards English and Language confidence are shown to associate with perceptions of the IPP's characteristics and value. While a much larger dataset would be required to obtain a more thorough analysis, this model provides a simple framework that can be used to promote the internationalisation programme in question. To illustrate, let us consider the view that employability is enhanced by going abroad. According to our data, the stronger this view is held, the more likely one would enrol in the IPP. In contrast, the view that having a language certificate is useful for the future is held similarly by those that enrolled and those that did not, and consequently was found to have no impact on IPP enrolment. We suggest that in order to maximise leverage and promote the programme within the institution most efficiently, effort is best spent on areas that will impact enrolment outcomes – as outlined in figure 1 – rather than on those that do not.

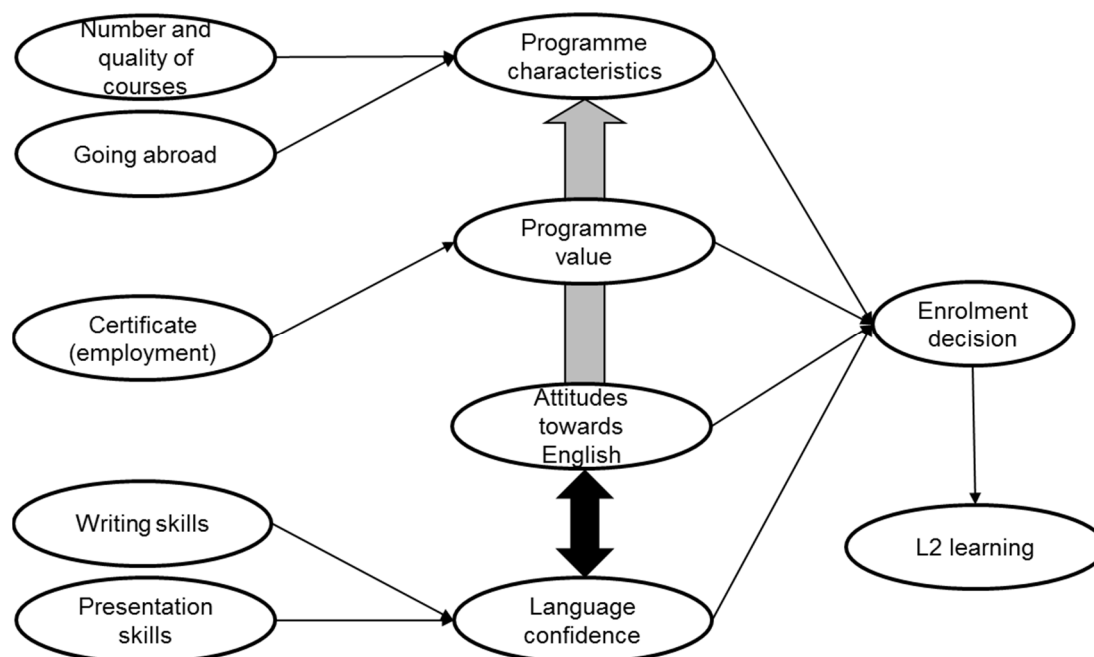


Figure 1: Mapping of IPP enrolment factors, with arrows indicating the plausible direction of influence. The thick black arrow indicates the interrelationship between Language confidence and Attitudes towards English. The thick grey arrow indicates their impact on perceptions of the IPP's characteristics and value.

5. Conclusion

The present study has limitations because of its small sample size, and as such, must be considered exploratory. Nevertheless, the study has provided some valuable information and impetus for further research. Insight has been gained into factors that influence enrolment decisions in internationalisation programmes, which, in turn, determine the boundaries and participants of the context in which internationalised student learning takes place. This may prove useful to universities and UASs that wish to optimise their international policy efforts through internationalisation incentive programmes. Data collected not only shows how institutional policies, incentive programmes and the characteristics of such programmes are part of the complex matrix of factors that can influence FL learning outcomes, but also underscores the significance of language self-confidence in support of previous research. Continued study is, however, needed to confirm that the configurations identified here hold true in other contexts.

BIBLIOGRAPHY

- Basibek, N., Dolmaci, M., Cengiz, B. C., Bür, B., Dilek, Y. & Kara, B. (2014). Lecturers' Perceptions of English Medium Instruction at Engineering Departments of Higher Education: A Study on Partial English Medium Instruction at Some State Universities in Turkey. *Procedia-Social and Behavioral Sciences*, 116, 1819-1825.
- Bern University of Applied Sciences (BFH). (2016). *Certificate of Global Competence*. Bern. Retrieved from http://www.wirtschaft.bfh.ch/uploads/media/Certificate_Global_Competence_web.pdf
- Clément, R., Dörnyei, Z. & Noels, K. A. (1994). Motivation, self-confidence, and group cohesion in the foreign language classroom. *Language Learning*, 44, 417.
- Clément, R., Gardner, R. C. & Smythe, P. C. (1977). Inter-ethnic contact: Attitudinal consequences. *Canadian Journal of Behavioural Science/Revue Canadienne Des Sciences Du Comportement*, 9(3), 205.
- Clément, R. (1980). Ethnicity, Contact and Communicative Competence in a Second Language. In H. Giles, P. Robinson, & P. Smith (eds.), *Social Psychology and Language* (pp. 147-159). Pergamon Press.
- Clément, R., Gardner, R. C. & Smythe, P. C. (1980). Social and individual factors in second language acquisition. *Canadian Journal of Behavioural Science/Revue Canadienne Des Sciences Du Comportement*, 12(4), 293.
- Council of Europe. (2001). *Parliamentary Assembly Documents and Working Papers* (vol. 8). Council of Europe.
- Everitt, B. (2002). *The Cambridge dictionary of statistics/BS Everitt*. Cambridge University Press, Cambridge, UK New York:
- Ford, M. E. (1992). *Motivating humans: Goals, emotions, and personal agency beliefs*. Sage Publications.
- Gardner, R. C. & Lambert, W. E. (1972). *Attitudes and motivation in second-language learning*. Newbury House Publishers.
- Gardner, R. C. (1979). Social psychological aspects of second language acquisition. *Language and Social Psychology*, 287-301.
- Gardner, R. C. & MacIntyre, P. D. (1993). A student's contributions to second-language learning. Part II: Affective variables. *Language Teaching*, 26(1), 1-11.
- Gardner, R. C., & Smythe, P. C. (1981). On the Development of the Attitude/Motivation Test Battery. *Canadian Modern Language Review*, 37(3), 510-525.
- Gardner, R. C., Tremblay, P. F. & Masgoret, A. (1997). Towards a full model of second language learning: An empirical investigation. *The Modern Language Journal*, 81(3), 344-362.
- Gorges, J., Kandler, C. & Böhner, G. (2012). Internationalization at home: Using learning motivation to predict students' attitudes toward teaching in a foreign language. *International Journal of Educational Research*, 53, 107-116.
- Jensen, C., & Thøgersen, J. (2011). Danish university lecturers' attitudes towards English as the medium of instruction. *Ibérica*, 22(22), 13-33.
- Knight, J. (2004). Internationalization remodeled: Definition, approaches, and rationales. *Journal of Studies in International Education*, 8(1), 5-31.
- Lasagabaster, D. (2002). The role of instrumental and integrative attitudes in a multilingual context. In *II Simposio Internacional del Bilingüismo*.
- Lave, J., & Wenger, E. (1991). *Situated Learning: Legitimate Peripheral Participation*. Cambridge: Cambridge University Press.

- MacIntyre, P. D., Dörnyei, Z., Clément, R. & Noels, K. A. (1998). Conceptualizing willingness to communicate in a L2: A situational model of L2 confidence and affiliation. *The Modern Language Journal*, 82(4), 545-562.
- Noels, K. A., Pelletier, L. G., Clément, R. & Vallerand, R. J. (2000). Why are you learning a second language? Motivational orientations and self-determination theory. *Language Learning*, 50(1), 57-85.
- Sawilowsky, S. & Fahoome, G. (2014). Kruskal-Wallis Test: Basic. In *Wiley StatsRef: Statistics Reference Online*.
- Studer, P. & Konstantinidou, L. (2015). Language attitudes and language proficiency of undergraduate students in English-medium instruction. *Bulletin Suisse de Linguistique Appliquée, No spécial 2015*(3), 215-231.
- Smit, U. (2010). *English as a Lingua Franca in Higher Education: A Longitudinal Study of Classroom Discourse*. Berlin & New York: De Gruyter Mouton.
- Swissuniversities. (2014). *Internationalisation of Swiss Universities of Applied Sciences and Arts*. Bern. Retrieved from https://www.swissuniversities.ch/fileadmin/swissuniversities/Dokumente/EN/FH/Publikationen/2015_Factsheet_Internationalisierung_FH_EN.pdf
- Wächter, B. & Maiworm, F. (2014). *English-taught programmes in European higher education: The state of play in 2014*. Lemmens Medien GmbH.
- Zürich University of Applied Sciences (ZHAW). (2016). *International profile*. Retrieved from <https://www.zhaw.ch/en/engineering/study/bachelors-degree-programmes/international-profile/>