

Summary report of the methodology of learning and teaching in the content of IM



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May 2022

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1. INTRODUCTION

1.1. Rationale

Activity 1.4 was embedded into Output 1. The purpose of Output 1 was to achieve a general picture on teaching and learning during the international mobility (IM) across Europe. The expected final result and impact of Output 1 was to guide the users in integrating the digital and IM competencies into the educational activities of the International Week and similar events following defined Guidelines to achieve the educational goals regarding learning and teaching in the content of IM and in providing evidence-based support for change, further supporting the integration of the recommendations into the field of IM in higher education across Europe.

Activity 1.4. aimed to develop a systematic review of the methodology for teaching and learning in this content, focusing on digital methods and teaching strategies to serve as a helpful guide to faculty in teaching and preparing students for a better acquisition of knowledge in an international content.

1.2. Aim and objectives of the review

The aim of Output 1.4. is to gather, evaluate and synthesize current evidence and practical experiences on educative strategies and interventions for integrating competences in higher education for teachers and learners.

In addition the review aimed to provide an overview of the theoretical backgrounds of the innovations and interventions; goals, participants, contents, learning and teaching methods, as well as tools and other materials of the innovations and interventions; connections of the innovations to curricula; learning assessment procedures and measurements; outcomes of the innovations and interventions; evidence based recommendations for the use and development of innovations and interventions.

For this purpose a systematic review of methodology of learning and teaching in the content of IM was organized and steps followed were as below:

- Designing the systematic review procedure on research: formulating the research questions and selection of the databases, search terms, inclusion and exclusion criteria.
- Selecting the panel of review and guideline authors from the participating countries.

- Conducting the reviews according to accepted procedures and evaluating the quality and evidence of the innovations and interventions.
- Summarizing the evidence of research and practical experiences, reporting the results and describing the recommendations.
- Assessing the recommendations in the steering group and establishing recommendations.

2. METHODS

2.1. Review protocol

For Output 1.4. a protocol was developed to collect data on the existing educative strategies and innovative interventions on the methodologies used by previous research regarding integrating and developing IM competences in higher education both for teachers and students.

The systematic literature review sought to obtain relevant information on the existing educative strategies and interventions and was driven by the specific review question: “What are the existing educative strategies and innovative interventions used for integrating/ developing IM competences in higher education for teachers and learners?”

The search strategy was signed off by WITEA-ID working group and was also advised by an expert librarian regarding the suitability and relevance of the search strategy. The search was concluded on 30th April 2022. Review included research papers published in peer- reviewed journals over the last 5 years that focused on educational interventions- innovations for integrating digital and IM competences in teachers’ and learners’ education in higher education.

2.2. Eligibility criteria

The WITEA-ID working group agreed the eligibility criteria based as below:

<i>Inclusion criteria</i>	<ol style="list-style-type: none"> 1. Research papers published in peer- reviewed journals. 2. Papers published in English language and partner’s native languages.
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	<ol style="list-style-type: none"> 3. Papers published during the last 5 years as up-to-date knowledge is considered necessary. 4. Studies that focused on educational interventions- innovations for integrating digital and IM competences in teachers' and learners' education in higher education. 5. Studies that evaluated the interventions/ innovations outcomes pre- and post- the educational intervention irrespective of the presence of comparator groups. 6. Studies that performed quantitative estimates of the effectiveness of the educational strategies- interventions used.
Exclusion criteria	Studies not meeting the above inclusion criteria.

2.3. Information sources

Information for the interventions - educational strategies review composed of extensive searches made from online international scientific databases and national databases from each partner's country. The WITEA-ID working group agreed that CINAHL, Cochrane Library, ScienceDirect, SCOPUS, EBSCO, Pubmed, Web of Science, EMBASE, and PsycINFO were comprehensive enough for the electronic literature search. Distribution of literature searches among partners were agreed as below:

	MENDELU	UOC	IUC	HMU
Main databases				
ScienceDirect			X	
Web of Knowledge				X
SCOPUS		X		
EBSCO	X			
PubMed	X			
Web of Science				X
Google Scholar			X	
PsycINFO		X		

2.4. Search strategy

The WITEA-ID Working Group agreed on the search strategy (MeSH terms, search algorithm), data extraction and quality assessment process.

Details of search terms:

Mesh terms	
<i>Higher Education International Mobility</i>	("Higher Education Mobility" OR "International Mobility" OR "Global Mobility" OR "International Students" OR "Staff Mobility" OR "Erasmus mobility")
<i>Educative strategies- interventions</i>	("Models, Educational" OR "Education" OR "Education, Distance" OR "Distance Learning" OR "Online Learning" OR "Online Education" OR "Teaching strategies" OR "Teaching interventions" OR "Teaching" OR "Curriculum" OR "Training" OR "Educative Innovations" OR "Educative strategies")

Agreed Search algorithm: (("Higher Education" AND ("International Mobility" OR "Global Mobility" OR "International Students" OR "Staff Mobility" OR "Erasmus mobility") AND ("Models, Educational" OR "Education" OR "Education, Distance" OR "Distance Learning" OR "Online Learning" OR "Online Education" OR "Teaching strategies" OR "Teaching interventions" OR "Teaching" OR "Curriculum" OR "Training" OR "Educative Innovations" OR "Educative strategies"))

Data extraction and applied filters: For data extraction PRISMA Flow Diagram was used and applied filters included English and partner native languages, last 5 years of publication and research study design including review articles.

Quality assessment: The quality and risk of bias of observational studies was assessed using the Critical Appraisal Skills Programme (CASP) checklist independently by the review team and discussed if discrepancies occur (www.casp-uk.net). A quality assessment total score was calculated for each of the study finally included in the review.

2.5. Data collection process

The agreed search and MeSH terms were entered into databases and pre-filtered article numbers were recorded below. Filters as indicated above were applied and total article numbers were recorded.

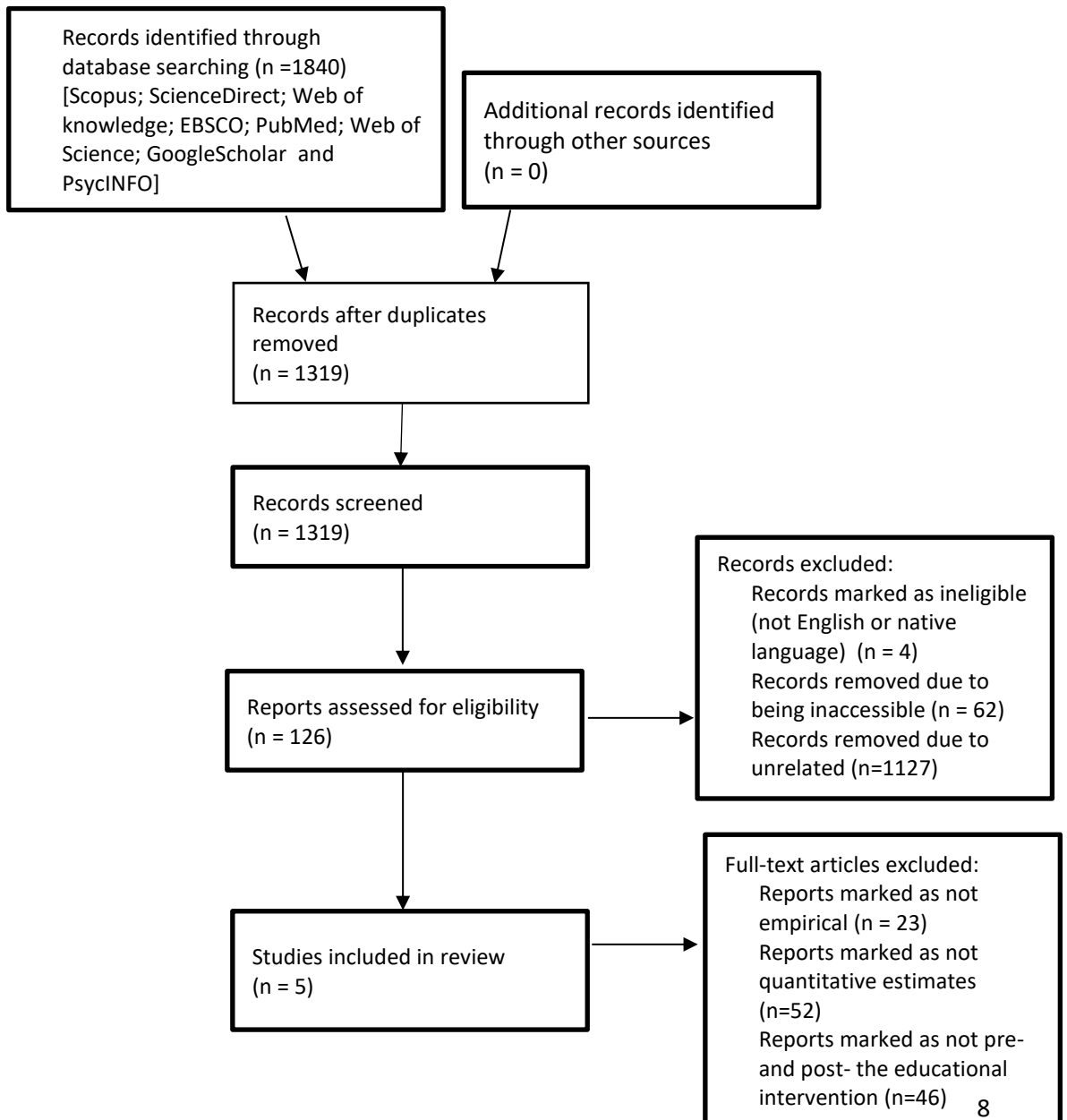
All articles were exported into EndNote and/or Excel. Excel spreadsheets were used to apply the inclusion and exclusion marking criteria and used as a record of agreement rates. Hard copies were scanned and recorded and these papers were also included in the data extraction and listed in the flow diagram which is presented below.

3. REPORT THE RESULTS

3.1 An overview of the total studies included in the review

A total of 1,840 records were retrieved through our searches in Scopus; ScienceDirect; Web of knowledge; EBSCO; PubMed; Web of Science; GoogleScholar and PsycINFO databases. Following reading the titles and abstracts of the retrieved records 212 remained for further evaluation. Another 194 articles were excluded after reading the full article. **Figure 1** shows the exact sequence and process of study identification, selection and exclusion in each step of the search. Finally, 5 studies were considered to be appropriate for answering our primary research question.

Diagram 1. Scientific databases search



*From: Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement. PLoS Med 6(7): e1000097.

For more information, visit www.prisma-statement.org.

3.2 Overview of the included studies

Diverse study settings, data collection methods, intervention strategies, outcome measures were presented in the studies. Among 5 included studies, 1 was conducted in the US, 1 in China, 1 in Ireland, 1 in Australia, and 1 in Germany.

All except one study adopted a mixed methods study design combining quantitative and qualitative methodologies to answer their questions. Participants were only students of different disciplines (nursing, business schools, etc) of both undergraduate (3 studies) and postgraduate (2 studies) levels. None of the studies focussed on teachers. Surveys, interviews (structured and unstructured) consisted the main mean of data collection. Educational means and strategies varied significantly and included specific activities, flipped learning and international mobility opportunity itself. Cultural intelligence, academic skills, sense of belonging, ability of understanding and connecting themselves in the globalised world, feeling of independence and maturity, multicultural self- efficacy, metacognitive intercultural competence, intergroup anxiety were the main outcomes of interest.

The variety of the study design and outcome measures among the limited number of included studies did not allow the performance of a synthesis of the retrieved findings although still provided us with some conclusions.

3.3 Key findings of the included studies

Table I presents the main characteristics (*main author, year of publication, study characteristics, the aim of the study, measures, teaching- learning strategy and main results*) for each study included in the review.

Briefly, Kurpis et al. (2017) conducted a mixed methods study in US. Study sample consisted among 69 undergraduate students of bussines schools. The teaching strategy was based on a cost-efficient, easy-to-implement experiential learning activity developed based on the cultural intelligence (CQ) model,

experiential learning theory, and contact theory which was integrated into the traditional curricula. The intervention was delivered via traditional, cognitive-centered means (lecture, assigned readings, case discussions). As part of this activity marketing students and advanced English as a Second Language students interview each other about consumer behavior differences. The activity led to a perceived increase in cultural knowledge, motivation, and confidence in the students' ability to communicate with people from other cultures. Overall, students deemed the activity a valuable part of their education. Students' CQ was positively correlated with the self-reported (perceived) prior experience-based and studies-based intercultural competence. Compared with domestic students, international students scored higher only on the Cognitive dimension of CQ.

Tian et al. (2018) conducted a mixed methods study in China among 118 international students. The study aimed to investigate the experiences of students during their undergraduate study in an English-medium 5-year medical course at a Chinese university. Data were collected via annual interviews, complemented by two rounds of questionnaire surveys respectively held at the beginning and end of the course. Drawing on self-determination theory, findings reveal the learning process through which the participants, responding to and interacting with new academic and social environments, gradually achieved adaptation and personal growth. The research concluded that students' dissatisfaction arises mainly from three aspects of their university environments: linguistic, pedagogical, and attitudinal.

Irvine et al. (2020) performed a mixed methods study among 76 postgraduate students in Australia. The study aimed to assess whether teaching for self-regulated learning (SRL) improved students' self-regulatory strategy use in an accelerated nursing program and if there are differences between international and domestic students' motivational and learning strategy use. For this purpose a quasi-experimental design using the Motivational Strategies for Learning Questionnaire (MSLQ) was employed to assess motivational behaviours and learning strategies of students before and after participating in instructional activities over the first semester. Data from two open-ended questions were analysed using content analysis. Study findings indicated that student median scores were above average on motivational behaviours and learning strategies with a slight decrease post-intervention. At post-intervention, international students had statistically significantly lower task value and lower control of learning beliefs than domestic students. All median values for motivational behaviours and learning strategies decreased for both groups at post-intervention, except help-seeking which increased for domestic students.

Zimmermann et al. (2020) studied the effect of international student mobility (ISM) to increase students' multicultural effectiveness and their (international) job market potential. Study took place in Germany among 3070 students at German higher education institutions who were assigned to three groups (i.e.,

control students with no mobility plans, present sojourners who participated in ISM during the study period, and a waiting group of future sojourners who participated in ISM in the semester sequencing the study period). The analyses with (moderated) latent change models showed substantially higher pre-departure multicultural effectiveness in present and future sojourners compared with control students as well as positive effects of ISM on the development of multicultural effectiveness. The strongest effects were observed amongst students without previous international mobility experiences.

Walsh et al. (2020) delivered an exploratory observational study among 38 postgraduate business students. Researchers used log-file data to identify hidden patterns of student online behaviour in a flipped classroom environment in relation to their command of the home language of the institution. A twelve-week knowledge management course was offered to 24 of which were native Irish, 2 international students whose first language was English, and 12 were students whose native language was other than English. Using cluster analysis, categories were identified regarding when and how often online flipped lessons were accessed: (i) before class, (ii) after class and before a weekly exam, and (iii) after the weekly exam but before an assignment. Findings indicated that there was sustained access to flipped materials throughout the semester for all students. In addition to accessing online lessons prior to class, students also accessed online lessons prior to weekly exams and project submission deadlines, indicating the value of such material for revision. Interestingly, two clusters of non-native English-speakers were identified where one group accessed the material more often than native students, and the second group accessed the material less frequently than the native English-speaking students.

Table 1. An overview of studies' characteristics, aims and findings

Author (year)	Study characteristics	Aim of the study	Measures/ interventino	Main findings
Kurpis et al. (2017)	US Mixed- methods 69 undergraduate students	To assess the effectiveness of a cross cultural experiential learning activity on the development of students' cultural intelligence	Cross cultural Experiential Cultural Intelligence Development Activity based on the CQ model, experiential learning theory, and contact theory. Traditional, cognitive-centered means (lecture, assigned readings, case discussions) Online post activity survey	<ul style="list-style-type: none"> • Increased engagement of the learner at a deeper level, • Improved motivation, expanding the size of her intercultural knowledge base and, possibly, • Strengthening the humanistic component of business education by reducing ethnocentric attitudes and emphasizing the students' sense of relatedness to people from other cultures
Tian et al	China	To investigate the experiences of students during their	Participation to the intercultural course	A supportive context where the students perceived they had access to adequate learning opportunities and

(2018)	Mixed- methods 118 undergraduate students	undergraduate study in an English-medium 5- year medical course at a Chinese university.	Self-determination theory surveys, custom-designed by the team to collect broad qualitative and quantitative on students' motivations and expectations, academic and social experiences throughout their course study Annual interviews complemented by 3 stages of questionnaire surveys including SERU-I questionnaire.	university services, and their points of view were recognized, respected and cared about, more positive educational experiences were reported. The benefit of intercultural studies include: <ul style="list-style-type: none"> • Enhanced academic skills and abilities • enhanced self-awareness and feelings of independence and maturity, • enhanced sense of belonging to host communities and the abilities of understanding and connecting selves with others in the globalized world. Students' dissatisfaction, arising mainly from three aspects of their university environments: linguistic, pedagogical, and attitudinal.
Irvine et al (2020)	Australia Mixed methods Quasi- experimental, non- randomised,	To determine if teaching for self regulated learning (SRL) improved students' self-regulatory strategy use in an accelerated nursing program and if there are differences between international and	Instructional support for SRL including motivational and learning strategies adopted from Pintrich's theory and the MSLQ manual uploaded to the students' online	<ul style="list-style-type: none"> • International students had statistically significantly lower task value and lower control of learning beliefs than domestic students. • All median values for motivational behaviours and learning strategies decreased for both groups at post-intervention, except help-seeking which increased for domestic students.

	pretest post-test design	domestic students' motivational and learning strategy use.	learning platform combined with hard copies.	<ul style="list-style-type: none"> • Students were highly motivated, valued the program, believed they could do well in the program and employed metacognitive strategies, such as elaboration, to retain information in long-term memory. • Students engaged closely with the task, organised appropriate information to construct connections, demonstrated the ability to apply previous knowledge to new situations, and made critical evaluations and modified behaviours to improve performance as they completed a task.
	Qualitative section		Motivational Strategies for Learning Questionnaire and interviews (two open-ended questions to determine how useful the students found the instructional intervention).	
	76 postgraduate students			
Zimmermann et al (2020)	Germany Mixed methods 3070 students	To measure the effect of international student mobility (ISM) on the development of multicultural effectiveness among 3 groups of students [control students with no mobility plans, present sojourners who participated in ISM during the study period, and a waiting group of future	ISM experience Questionnaires, interviews Multicultural self-efficacy Metacognitive intercultural competence Intergroup anxiety	Present sojourners and future sojourners showed: <ul style="list-style-type: none"> • substantially higher levels of multicultural self-efficacy • substantially metacognitive intercultural competence • lower level of intergroup anxiety

sojourners who participated in
ISM in the semester].

Walsh et al (2020)	Ireland Exploratory analysis 38 postgraduate students	To identify hidden patterns of student online behaviour in a flipped classroom environment in relation to their command of the home language of the institution.	12-week knowledge management course Flipped-learning Log-file data recorded	<ul style="list-style-type: none">• Flipped learning succeeded in engaging most students in the class and constituted inclusive support that can provide the flexibility that current students demand.• 2 clusters of non-native English-speakers were identified [group1 accessed the material more often than native students, and group 2 accessed the material less frequently than the native English-speaking students]
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4. CONCLUSIONS- RECOMMENDATIONS

Although the importance of learning and teaching in the content of IM has drawn significant scientific attention over the last years, very few studies were found to focus on interventional studies and their effectiveness. Specifically, studies that use quantitative data or assess the impact of an educative education on students learning and IM competencies are scarce and on teachers totally neglected. The present literature review attempted to identify the most recent publications to this extremely interesting area of research and education. The variety of the study design and outcome measures among the limited number of included studies did not, however, allow the performance of a synthesis of the retrieved findings although still provided us with some conclusions and recommendations for future research and practice.

Drawn upon existing evidence we present below some recommendations for future research and education in the area of IM:

- Enhancement of training in intercultural communication (cultural awareness and competency and intercultural communication) for students and staff.
- Enhancement of research in intercultural communication (cultural awareness and competency and intercultural communication). Indicative research areas of intercultural communication include: the values of language training; cultural and global awareness; cultural “competence”; cross-cultural engagement in teams; language studies; sensitivity and willingness to engage with others in a cultural setting; intercultural differences; stereotypes; personal space; values and ethics; verbal versus nonverbal communication.
- Consideration of cross-cultural instructional design when creating an online course and inclusion of the perspectives of international students and staff when establishing programs, building relationships, and improving experiences in higher-education classrooms.
- Enhancement of research in the area of barriers and motivators for IM among students and staff with the aim to link barriers and motivations to show parallels and identify areas for further research and intervention.
- Establishment of an agency within institutions which will allow students and staff to share their perspectives of practices and values in the university setting.

- Enhancement of research on the design, development and implementation of effective interventions and strategies to enhance IM among students and staff.
- Establishment Contact with Peers (classmates or colleagues) while the international student and staff is still in his or her home country either through organizations- alumni or through social media networks etc.

5. REFERENCES

- Kurpis LH, Hunter J. Developing Students' Cultural Intelligence Through an Experiential Learning Activity: A Cross-Cultural Consumer Behavior Interview. *Journal of Marketing Education* 2017, 39(1): 30–46.
- Tian M, Lu G. Intercultural Learning, Adaptation, and Personal Growth: A Longitudinal Investigation of International Student Experiences in China. *Front. Educ. China* 2018, 13(1): 56–92.
- Irvine S, Brooks I, Lau R, McKenna L. Self-regulated learning instructional support for students enrolled in an accelerated nursing program. *Collegian* 2020, 27: 402–409.
- Zimmermann J, Greischel H, Jonkmann K. The development of multicultural effectiveness in international student mobility. *Higher Education* 2021, 82:1071–1092.
- Walsh JN, Riskey A. Using cluster analysis to explore the engagement with a flipped classroom of native and non-native English-speaking management students. *The International Journal of Management Education* 18 2020, 100381.