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# The 11th International Conference on European Transnational Educational (ICEUTE 2020)



# Advances in Intelligent Systems and Computing

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Editors

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 Springer

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# Preface

This volume of *Advances in Intelligent and Soft Computing* contains accepted papers presented at ICEUTE 2020 conference held in the beautiful and historic city of Burgos (Spain), in September 2020.

The 11th International Conference on European Transnational Education (ICEUTE 2020) has been a meeting point for people working on transnational education within Europe. It has provided a stimulating and fruitful forum for presenting and discussing the latest works and advances on transnational education within European countries.

After a thorough peer-review process, the ICEUTE 2020 International Program Committee selected 44 papers which are published in these conference proceedings achieving an acceptance rate of 41%. Due to the COVID-19 outbreak, the ICEUTE 2020 edition was blended, combining on-site and on-line participation. In this relevant edition, a special emphasis was put on the organization of five special sessions related to relevant topics as: Role of English in Transnational Education and Teacher Training, Personalization and ICT: a Path to Educational Inclusion, Innovation and Research Findings in Engineering Higher Education, Practical Implementations of Novel Initiatives, Innovation in Computer Science Higher Education.

The selection of papers was extremely rigorous in order to maintain the high quality of ICEUTE conference editions and we would like to thank the members of the Program Committees for their hard work in the reviewing process. This is a crucial process to the creation of a high standard conference and the ICEUTE conference would not exist without their help.

ICEUTE 2020 has teamed up with “Research Papers in Education” (Taylor & Francis) and “European Journal of Education” (Wiley) for proposals of special issues including selected papers from ICEUTE 2020.

Particular thanks go as well to the conference main sponsors Startup Ole and the IEEE Systems, Man, and Cybernetics Society—Spanish, Portuguese, French, and Italian Chapters, who jointly contributed in an active and constructive manner to the success of this initiative.

We would like to thank all the special session organizers, contributing authors, as well as the members of the Program Committees and the Local Organizing Committee for their hard and highly valuable work. Their work has helped to contribute to the success of the ICEUTE 2020 event.

September 2020

Álvaro Herrero  
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# The European Foreign Language Teacher Training Programme: A Comprehensive Proposal

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**Abstract.** Mobility has been a key and central concept for the Bologna Process. Labour mobility of the teaching and learning community within the European borders is in continuous growth. But so far, despite this dynamic reality, there is no unified format for teacher training at a European level. In the light of this, a virtual solution for a comprehensive and coordinated training for foreign language teachers in Europe is needed. Within the frame of the VIR\_TEACH Erasmus+ project, this article outlines the creation of a digital tool to improve the postgraduate certificates on Masters on Education (Foreign Languages), and to provide teachers, researchers, student teachers and policy-makers with open-source tools and resources.

**Keywords:** Teacher Training · Language Teacher · European education

## 1 Foreign Language Teacher Training in Europe: An Overview

Labour mobility within the teaching and learning collectives is in continuous growth within the European borders. This fact is clearly detected in the Eurydice report on teacher mobility which states that:

In half of the education systems surveyed, less than a third of all teachers appear to be transnationally mobile. In the EU, Executive Summary 13 12.4% of respondents reported that they had gone abroad solely when they were already practising teachers, whereas 5.9% had done so only during their Initial Teacher Training, and 3.6% only in both cases. In all countries surveyed except Iceland, modern foreign language teachers are the most transnationally mobile, compared to teachers of four other main subjects [1].

Many factors contribute to this situation, among which we can point to a constant increase in opportunities for university study abroad [2], which favours the

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internationalisation of teacher training, and a static labour market resulting from the last years of economic crisis [3], which impels graduated students to seek jobs beyond their frontiers.

Despite these trends, there is no unified format for teacher training at a European level. Added to that, university trainers do not usually have a space where they can share their worries and advances in their education practice. This lack of common environments also affects teacher students who miss unified digital tools that cover their supervision and tutoring needs, especially during their internship phase. In terms of educational policy, national agencies tend to design and develop their lines of work on teacher training in each country separately.

The evident unbalance between nationally-oriented training and international practice demands urgent action towards the internationalization of the teaching profession as a whole. Within the European Higher Education Area, this may be facilitated thanks to the possibility of homologation of university degrees. However, so far there is no unified format for teacher training at the international level. At the level of educational policies, there is also a need to converge towards a more unified and coherent set of principles among the different European countries, particularly in terms of curricular content and experiences of internships. In general terms, Initial Teacher Education (hereinafter ITE), suffers from an excessively local projection that limits the future teaching exercise of teacher students beyond their borders. Hence, a greater degree of internationalization and convergence of the training of future language teachers is an urgent need within European borders.

## 2 Data Gathering: Consultation and Report

As Freeman et al. affirmed in the prologue of their famous volume *Teacher Learning in Language Teaching* [4], “in order to better understand language teaching, we need to know more about language teachers”. Hence, before addressing the construction of a coherent proposal for foreign language teacher training, we deemed necessary to collect the opinions and experiences of the stakeholders involved in the matter. This, would help build consensus on the lacks and needs of current foreign language training programmes, and improve them coherently at a European scale.

For these purposes, in October–November 2019, a survey was passed among stakeholders to test the perception of language teacher training in Europe.

The main objectives of this survey were to detect current weak aspects regarding language teacher training and to implement positive measures for the advancement of foreign language teacher education in Europe. In particular, this survey sought to:

- Collect comparative data.
- Build consensus during the project.
- Fix potential issues.
- Improve methodological approaches, materials and resources.
- Prioritise intellectual outputs, contents and events’ main topics.

The survey was launched in November 2019 and was open for 3 weeks. It reached a total of 508 participants from different gender, ages, countries of residence and profiles, which ensured the heterogeneity of the sample.

The survey was intended to offer a national and international picture of the current situation of foreign language teacher training in Europe. For this purpose, the survey was conducted in several European countries. The countries of residence of the participants were closely related to this fact, with 41,6% of respondents living in Portugal, 27,0% from Spain, 12,0% from Romania, 10,5% from Poland and 5,6% from Belgium. Other countries of residence such as Finland, Iceland, Germany and Turkey, also participated in the survey but with a much smaller percentage (less than 4% in total).

The procedure and results of this survey have been published in detail elsewhere [5] with the following conclusions:

1. There is an urgent need to move towards homogenization of teacher training.
2. Digital platforms are particularly useful tools for internationalisation of foreign language teacher training.
3. The contents of the training programmes need modernisation and upgrading, providing tools, skills and resources to help professionals adapt to the continuous transformations taking place in a changing and dynamic society.
4. Investment in ITE, particularly in the financing of student and teacher mobility, is essential.
5. Feminisation of the teaching practice is related with a low status of the profession and unappealing salaries. Governing bodies and universities should invest in attracting high quality people into the profession, irrespective of their sex/gender. In the medium term, these measures should impact on gender balance in teaching and learning.

### **3 Language Teacher Training Through a Virtual Learning Environment**

In order to move towards language teacher training homogenization, virtual learning environments seem to be particularly useful tools for sharing and learning successful teaching formulas specific to this field of higher education. This way, cultural diversity and geographical distance could be overcome by a multi-national alliance of higher institutions. Moreover, this solution would facilitate cultural adaptation and favour international communication, two essential elements for teaching at an international level. However, a lack of coherence between teaching digital platforms that promote mobility and digital tools that guide the needs of students in their training and internship phases is problematic. As pointed out by Townsend and Bates [6], it is a set of tensions and pressures, inherent in an unstoppable process of globalization that makes a dent in the quality of teaching. This issue becomes more acute, if possible, in the training of language teachers, whose orientation towards communicative teaching requires the implementation of a series of strategies and predisposition to interaction and mutual understanding.

As Stanley [7] has affirmed, language learning with technology provides a wide range of interesting and useful activities, shows how any teacher can use technology, and offers a range of activities, which are suitable for all levels of proficiency to both novice and experienced teachers. Hence, in order to create a European Foreign Language Teacher Training Programme, it seems mandatory the development of a multinational dynamic and lasting over time environment that offers useful tools for the training of future teachers of languages. In the light of these reflections, a communicative approach seems a mandatory element to infuse in the training of 21st century language teachers. For this to happen, prospective teachers must acquire a reflective and critical training [8], oriented towards social commitment [9]. This implies the construction of a critical teaching identity among the candidates during their training process [10]. Added to that, the critical pedagogy received must be closely linked to a culturally receptive teaching practice [11, 12], especially in the multinational contexts in which future professionals of the teaching of languages will have to move. Finally, in a changing and global reality, future language teachers must know how to manage and apply to their teaching the digital technologies that best adapt to their teaching-learning objectives. In the same way, teachers that had been exposed to a learning process through MOOCs “expressed positive attitudes towards their learning experience and a desire to participate in more courses in the future” [13] showing not only gains in content knowledge but also in pedagogical knowledge, which is fundamental not only to the MOOC course design, but also to the overall future teacher’s learning process.

#### **4 Design and Methodological Guidelines for a European Language Teacher Training Programme**

The creation of an open digital space to promote the exchange of methodologies and good practices that inspire a common, comprehensive and effective training of future professionals of language teaching at European level. This idea must be reflected in the design and development of a platform for online courses, the development of coherent levels of competence at the international level and the advancement of methodologies for better regulation in education policy. In addition, it must promote a greater degree of transparency of the training processes and the creation of a series of digital tools that favour the convergence of educational systems and the exchange of good practices.

Likewise, it must offer a consistent functionality in progressive, significant and cumulative learning sequences developed through a wide variety of learning resources. These must incorporate in turn the diversity that new technologies offer today. Therefore, these resources will have multiple formats, among which videos, readings, infographics, discussion forums, and so on, can be counted. Besides, the design of the exercises will seek to prioritize the interaction through formulas such as multiple choice, open questions with peer review, drag and drop, etc.

Added to that, the implementation of digital tools that facilitate coherence and follow-up between the phases of training and practice in the education of future language teachers should be considered. This measure should include a common protocol and interactive communication spaces. In addition, as indicated by the Finnish Institute



for Educational Research, the training of future language teachers should contemplate competences related to pedagogical, communicative and reflection skills. Furthermore, attention to diversity and collaboration with colleagues and peers should be contemplated too. Therefore, the practical phase, or Practicum, must be oriented towards a reflection on the action that the future teachers carry out in the classroom [14]. For this purpose, it is appropriate to incorporate a digital tool that, based on a predetermined protocol, allows to monitor the internship period and to facilitate communication between the different agents involved: the teacher students, their respective mentors from the educational centre, and their academic tutors. As a result, the role of the mentors is expected to acquire more relevance and professionalism in the learning process, a concern addressed in numerous studies [15, 16]. Besides, this tool will allow the establishment of more intense interaction and support among the participants, an issue that brings positive outcomes according to Tomáš, Farrelly and Haslam [17]. Particularly, this virtuous communicative triangle will greatly facilitate the interaction between the aforementioned stakeholders, displaying a reflective, dynamic and enriching learning experience for all parties.

Also, the establishment of international networks that facilitate mobility and exchange among future teachers in training would be desirable. Although there are previous experiences of networks that have been pursuing the internationalization of educational practice, such as the Thematic Network on Teaching Education (TNTEE) and the Policy of Teaching Education in Europe (TEPE), one of the main challenges has been the lack of communication, cooperation and collaboration between the actors of the different countries. The VIRTEACH project tries to fill these gaps through the establishment of organized professional groups and networks of teacher educators.

At the same time, this question poses an enormous challenge that goes beyond the purely academic sphere, bringing into play factors such as intercultural communication or the development of the ability to adapt. As demonstrated by He, Lundgren and Pynes [18], the integration of teaching-learning experiences of languages abroad, included within a study program, offers future teachers a unique opportunity to develop empathy and innovative strategies for instruction. In order to collect the best results from this type of experience, it is advisable to follow up through open reflection journals, in which teaching beliefs and previous intercultural experiences are included, as well as the development of individual goals [19]. For these purposes, the European Portfolio for Student Teachers of Languages (EPOSTL) is an adequate tool for reflection and self-assessment of the knowledge and didactic skills necessary to teach languages [20]. It is an instrument that takes as reference the Common European Framework of Reference for Languages (CEFR) and that allows future teachers to connect their experiences with their teaching practices, so that these same reflections serve as evaluation and self-assessment tools. With permission already granted by the European Centre for Modern Languages of the Council of Europe, VIRTEACH will adapt EPOSTL to the requirements of the virtual environment to maximize its functionality.

The design of protocols and lines of action common to the European Higher Education Area in relation to the training of future language teachers. In this respect, it is necessary to point out the necessary collaboration of the political institutions with competences in educational matters. From the universities themselves, which are the

immediate training entities, to the competent councils and governmental delegations, it is necessary to work on the convergence and coherence of curricula for the training of future language teachers with an international perspective, oriented to intercultural communication and that promote a collaborative, empathetic and reflective learning.

To finish, the national and international recognition of this training is essential and can be an interesting pilot project that ultimately would result in good teaching professionals who are dynamic and capable of adaptation and improvement.

## 5 Final Remarks and Conclusions

The previous sections have dissected the current state of Foreign Language Teacher Training in Europe and shed light upon a comprehensive proposal for convergence and quality enhancement in this field of education.

The suggested measures are expected to improve the quality of language teacher training programs and the coordination among the different stakeholders, through the design of comprehensive but coherent and converging curricula for ITE in the Member States of the European Union. The combination of open courses and teaching practices of a transnational nature must combine with a personalized orientation of the learning process. Coherence between theoretical and practical training, and the exchange of good practices, are the hallmarks of this proposal.

All in all, the final goal is to foster a more exigent training and selection of future educators of languages at an international level, to raise the quality of language teaching programs within the European Union, and to strengthen and unify European educational policies.

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# Cross-Cultural Experiences in Transnational Education: Preservice Teachers and Global Perspectives

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**Abstract.** In the European Higher Education Area, future foreign language teachers should receive training under a global perspective that integrates a global education and citizenship within a specific framework, to internationalize teacher education programs. In this sense, the development of academic coursework regulated by a policy of good practices is important for supporting global curriculum content and the inclusion of co-curricular and cross-cultural experiences. In-depth analysis at a national level demonstrates the lack of global design for the implementation of global and cross-cultural competences. Thus, the European project VIR\_TEACH suggests the design of a White Paper for a comprehensive Language Teachers Training at a European scale where coordinated policy actions and a strategy for engaging policymakers and public administrators are encouraged.

**Keywords:** Foreign language teacher · Internationalization · Globalization

## 1 Introduction

For the three last decades, the mobility of future foreign language teachers, has increased thanks to a constant growth in offers from universities that provides the most varied programs not only for studying abroad but also for preservice teacher training. All this sparks a need to internationalize teacher training. Furthermore, it has been shown that mobility in education is constantly increasing, which justifies the need for awareness of the internationalization and globalization of future foreign language teachers. [1]. Furthermore, as Phelps [2] states when referring to international doctoral students, as “cosmopolitan sojourners”, teachers are part of a transnational context, since their work takes place in a “space where their field of activity consists of simultaneous locations— at minimum their home country and the country in which they are studying, and possibly other locales of research, activism and professional work as well” [3].

First of all, it is necessary to recognize the importance of education in understanding and solving social, political, cultural and economic issues at a global scale. From this perspective, the role of an education aimed at building values and attitudes facilitating international cooperation and promoting social transformation, becomes essential. Today’s education counts with an omnipresent internationalization since it has become the final objective of the institutions dedicated to education.

Prospective teachers are faced with a training process which implicitly pushes them towards an increasingly imperative internationalization. As Leutwyler, B., Popov, N., and Wolhuter, C. [4] assert, the request of higher education institutions presents programs that clash with the training of future teachers since it is aimed at national and in some cases local training.

This dichotomy represents the starting point of this study. Based on what has been already said in the European Higher Education Area, future foreign language teachers should receive training under an international perspective that integrates global education and citizenship within a specific framework that pursue the internationalization of teacher education programs.

## 2 Training Under Global Perspectives

The continuous internationalization that has taken place over these last decades represents the answer to the growing increase of globalization [5]. International teacher training presumes languages, cultures and societies exchange different from those of origin and becomes, in this way, a new model for a personal growth and not only since, the future teacher compares different methodologies and educational skills to compare.

It is a matter of stimulating awareness of the global and interpersonal growth in future teachers as regards the development of interpersonal skills from both a communicative and a pedagogical point of view [6]. In a study under the Erasmus+ VIRTEACH project, A VIRtual Solution for a comprehensive and coordinated training for foreign language TEACHERs in Europe<sup>1</sup>, a questionnaire “to detect current weak aspects regarding language teacher training, and to single out positive measures for the advancement of foreign language teacher education in Europe has been filled by teacher students and graduated as a teachers of foreign languages, foreign language teachers, researchers at secondary or high schools, language schools and universities, and education policy makers and public administrators” [7]. The results of this questionnaire show that, both future foreign language teachers and experienced teachers—as well as policy makers and public administrators agree with a need for an internationalization of training programs.

In 2010 Quezada, R.L. [8] supported the internationalization of training programs for future teachers as well as for counselor and administrator candidates. In this same vein, Phelps [2] reminds us that there are different theories on globalization both from a social and educational point of view.

In our current society, where intercultural and international contacts are commonplace, students must be aware of two fundamental issues. In our societies where intercultural and international contacts are commonplace, students must be aware, on the one hand, of what a misunderstanding can lead to and on the other, the implicit enrichment resulting from intercultural exchanges. The impact of international

<sup>1</sup> For more information on the VIRTEACH project, please visit [www.virteachproject.eu](http://www.virteachproject.eu). The European Commission’s support for the production of this publication does not constitute an endorsement of the contents, which reflect the views only of the authors, and the Commission cannot be held responsible for any use which may be made of the information contained therein.

experience can be categorized in a global perspective and perceptual understanding [9] and international experiences for personal growth and new interpersonal relationships. Intercultural communication is deemed essential to increase their intercultural values because of the international relations and educational experience.

### **3 Academic Coursework Regulated by a Policy of Good Practices: The Global Curriculum Content, the Co-curricular Experiences and the Cross-Cultural Experiences**

In the context of internationalization, it is of paramount importance to regulate strategies and good practices with the aim of developing a model for a “comprehensive Internationalization” as defined by the Center for Internationalization and Global Engagement (CIGE) in American Council on Education (ACE). It is “a strategic, coordinated process that seeks to align and integrate international policies, programs, and initiatives, and positions colleges and universities as more globally oriented and internationally connected” [10]. The ACE defines it as “the obligation of colleges and universities to prepare people for a globalized world, including developing the ability to compete economically, to operate effectively in other cultures and settings, to use knowledge to improve their own lives and their communities, and to better comprehend the realities of the contemporary world so that they can better meet their responsibilities as citizens.” (2011) [11]. From this perspective, curricular learning experiences become essential for the development of a global awareness. Even more, “An internationalized curriculum and co-curriculum ensure that all students, including those who do not have the opportunity to study abroad, are exposed to international perspectives and can build global competence.” [11].

#### **3.1 The Global Curriculum Content and its Internationalization**

How has the perception of students, future teachers and experienced teachers changed for thirty years now towards the curriculum and its orientation? Just as we talk about internationalization of students and future teachers, it is necessary to introduce the concept of internationalization of the curriculum. And, when we talk about curriculum internationalization we refer to the involvement of students, teachers, public institutions and programs centered on the introduction of global perspectives within programs aimed at both international and national audiences. Knight (2004) defines this concept as something that is interpreted in different and sometimes confusing ways since it often turns out to be ambiguous in terms of its definition and implementation.

As for the types of global curriculum and the various and diversified processes to which it has been subjected, it is also important to mention the study of Crosling, G., Edwards, R., and Schroder, B. [12], an example of implementation of internationalizing the curriculum. The internationalization of the curriculum is not a new concept, it is part of a broader process mentioned in the previous pages, that of global citizen education. Another example of internationalization of the curriculum is offered to us by Renfors [13]. In this respect, it states that this is a somewhat difficult term to

conceptualize. It does not only involve students, but also—and most importantly—teachers aiming at “defining its formal aspects” [13]. Renfors also adds that “the lecturers may not always understand the meaning of internationalization of the curriculum.” [13].

### **3.2 Co-curricular Experiences**

The co-curricular activities, unlike the extra-curricular that form us on different fields than the central interest of our training, are those that complement our main activities and that provide us with specific but complete training in the specific training sector. The co-curricular experiences do nothing but motivate the students and help them in their training path aimed not only at a diversified specialization that can further support them in the search for a well-defined profession [14]. In the case of future teachers, co-curricular training is essential since it provides integrated experiences both from a practical and theoretical point of view.

### **3.3 Cross-Cultural Experiences**

Cross-cultural experiences play the same important function as co-curricular experiences since they contribute to the development of global skills in preservice teachers. Poole C.M. and Russell III W.B. [15] in their article conclude “Since the global content courses and co-curricular cross-cultural experiences investigated in this study were found to have a significant positive relationship with preservice teacher global perspectives, colleges of education should work toward increasing preservice teachers’ frequency of participation in these experiences.” (p. 50). Cross-cultural experiences enrich and benefit Institutions and communities [16].

## **4 VirTEACH European Project and the White Paper**

One of the aims of Virteach a consists of the design of a White Paper for a comprehensive Language Teachers Training at a European scale where coordinated policy actions and a strategy for engaging policy makers and public administrators are suggested. The White Paper for the coordination of policy actions, aimed at decision makers and teacher trainers to promote the internationalisation and convergence of national formats, to enhance a greater coherence between the training and practice phases and to facilitate dialogue and transparency among the actors involved. The research carried out by partners into the current literature in the fields of Language Teaching and Teachers training programmes at European and International level together with the knowledge acquired in the project implementation will lead to a White Paper (in the format of an e-book) including policy recommendations and general guidelines to public administrators, offering suggestions for improving the current educational approaches taken along the legislations and normative in the EU Member States. These contributions will also be useful for similar projects in the field of teachers training as well as long-life education and capacity building for teachers regardless the specialisation of the target group.

The tentative content of this e-book is:

- Best Practices summaries
- Fact-Sheets with Case Study
- Relevant Impact Assessment Conclusions
- Guidelines for stakeholder identifications and key messages for engagement
- Policy Recommendations.

It will be available for all society and specially addressed to policy makers to ensure the adequate and desired reception, adoption and widespread of the contents of the project, facilitating the early adoption of innovative methodologies. The White Paper will be professionally designed and edited using Open Source software (Scribus or any other alternative). It will be translated by the partners to their national language, then shared with representatives from different levels of the education systems from the countries participating in the consortium, and in participative workshops at a national level). Finally, project partners will analyze all their feedback and, if accepted, incorporate it into the final version of the Online White Book.

## 5 Conclusions

In conclusion, fostering global awareness and international collaboration is highly beneficial to future language educators. Global awareness and international collaboration during training courses encourage students to see things from different perspectives and helps them to make informed decisions and acquire transferable skills that will be useful to them and will remain with them for life. Apart from communicating effectively in a foreign language, building the identity of a global citizen is of fundamental importance. In fact, from what has been said, the new form of learning would derive not only lead to the development of a critical mind, but also—and above all—to act and participate in a world that is already global. Thus helping future teachers in the development of the new skills required, both technology and criticism and communication [17].

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