Intercultural Education in a Technology-Enhanced Foreign Language Learning Environment Implementing the TPACK Approach: Challenges and Possibilities

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In the plurilingual and multicultural contemporary international setting, the educational systems opt for successfully meeting as well as adapting to the rapid social, economic, and technological changes. Based on the premise that intercultural communicative competence holds a significant potential for foreign language instruction, focus should throw into combining teachers' intercultural knowledge with pedagogy and technology. The prospect of introducing intercultural material within the context of teaching scenarios in the curricula of a technology-enhanced foreign language learning environment where the Technological Pedagogical Content Knowledge (TPACK) approach is implemented, can positively contribute to the teaching process. Under this perspective, cultural and digitally competent teachers can create a framework which will enable learners to fully develop their interactive and linguistic skills and to effectively communicate in a foreign language promoting its social and multicultural dimension whatever the intercultural context.

Keywords: foreign language learning/teaching environment, pedagogical and cross-cultural challenges, intercultural communicative competence, TPACK approach, IT systems tools

Introduction

The impact of rapid technological changes intrigued in the contemporary world, namely the growing contacts through modern communications, the increased mobility of people, the large bulk of immigration, and the flow of refugees, obligate the 21st century multicultural societies to focus on issues such as the development of positive cross-cultural attitudes to future citizens through intercultural education, aiming at enabling individuals and groups to communicate successfully and live in a climate of mutual respect for cultural and linguistic diversity, lack of ethnocentrism, and cognitive flexibility (Sansoniou, 2007).

Within this framework the interconnectivity of people in a borderless global village leads to an increasing computer dependency; consequently, the development of new technological tools increasingly manifests the need

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for communication and interaction between people by cultivating digital skills (Efthimiadou, 2020). While, as Jupit, Minoi, Arnab, and Yeao (2011) note, various kinds of technology-driven intervention have already been integrated into conventional teaching methods during the last decade, the unpleasant current situation with the pandemic outbreak accelerated the process of designing and implementing innovative teaching scenarios based on sound methodological principles with the participation in remote digital learning experiences for primary, secondary or tertiary educational institutions, since under the circumstances all the above have to cope with the urgent necessity to offer distance on-line teaching.

Under these perspectives it is obvious that nowadays one of the tremendous challenges that foreign languages teachers face is to cater for a two-fold task: the promotion of intercultural communicative competence on the one hand and the development of technology-mediated teaching on the other, without neglecting the importance of complete content mastery and valid pedagogical techniques. Towards achieving the above goals, we argue that the Technological Pedagogical Content Knowledge (TPACK) widely-used approach proposed by Mishra and Koehler (2006) for effective teaching practice in a technology-enhanced learning-environment expanded with the integration of intercultural education holds a significant potential to positively contribute to the support of cross-cultural awareness in the learning/teaching process.

Intercultural Communicative Competence and Intercultural Education Implementing the TPACK Approach in Technology-Enhanced Teaching

Towards Intercultural Communicative Competence

The recognition of the close interrelationship between language and culture justifies the inclusion of cultural material in a foreign language curriculum, while it demonstrates that a language cannot be taught stripped off its cultural elements. Taking under consideration Kramsch's (1998, p. 126) remark on the context of culture, which is defined as: "the historical knowledge, the beliefs, attitudes, values shared by members of a discourse community that contribute to the meaning of their verbal exchanges", it is rendered evident that culturally-shared knowledge contributes to the interpretation of the meaning of actions and interactions of speakers in social contexts. This view is reflected in Atkinson (1999, p. 647) who notes that in principle "knowledge of language is impossible to be developed without at the same time developing knowledge of the sociocultural contexts in which that language occurs".

Following these guidelines, modern language teaching must take on a prime responsibility in the achievement of the task of enabling individuals to function constructively in multicultural and plurilingual societies, insofar as communication constitutes one of its most important objectives. Foreign language instruction to learners of all ages should be examined under this perspective, whereas there is a prominent necessity that positive intercultural attitudes and competences shall be adopted by teachers, students, and communities.

Various dimensions of culture can be stressed in varied teaching contexts at different levels of the learners' language proficiency, focusing on issues such as the promotion of intercultural communicative competence, defined in Killick (2001, p. 19) as "the linguistic, social and psychological abilities that contribute to a successful interaction with individuals or groups from other cultures". Eventually, teacher-training programs should introduce teachers to instructional strategies that promote intercultural awareness and offer a vast scope of intercultural education.

The Technological Pedagogical Content Knowledge (TPACK) Approach

Turning to the issue of technology-driven education, let us now explore "the basis of effective teaching with technology" (Koehler & Mishra, 2009, p. 66). Koehler and Mishra from the University of Michigan suggested a framework which attempts to clarify some of the essential types of teacher knowledge required for technology integration in teaching (Mishra & Koehler, 2006, p. 1025).

According to their model known as TPACK, three key components of teachers' knowledge are considered central for developing good teaching: knowledge about content (CK) (i.e., the subject matter to be taught), pedagogy (PK) (i.e., the teaching methods and principles), and technology (TK) (i.e., the digital resources and tools available). All three of these components are interdependent parts of a more complex knowledge structure called Technological Pedagogical Content Knowledge (TPCK), consisting of seven knowledge areas, where the three primary forms of knowledge: Content (CK), Pedagogy (PK), and Technology (TK) are not examined in isolation, but with emphasis on the kinds of knowledge that lie at the intersections between them: Pedagogical Content Knowledge (PCK) (the appropriate pedagogy for the specific content), Technological Content Knowledge (TCK) (the suitable technology to address that content), Technological Pedagogical Knowledge (TPK) (the pedagogical strategies to exploit the technological means), and Technological Pedagogical Content Knowledge (TPACK) which is the teacher's awareness of how technology relates to pedagogy and content (Koehler, 2012).
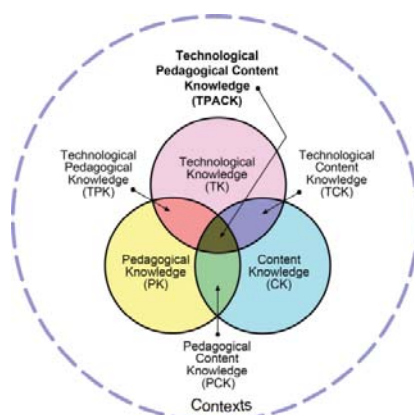

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Intercultural Education Combined With TPACK Approach

Bearing in mind that one of the teacher's primary objectives in a digital learning environment is to take strategic decisions when designing good practices, encouraging the active participation of the target group with multiple channels of communication (Efthimiadou, 2020), we suggest that while using the TPACK's model three key components (knowledge of content, pedagogy, and technology), foreign language teachers should add an essential fourth dimension: the intercultural knowledge pillar.

In the contemporary demanding situation of blended/distance, synchronous/asynchronous on-line learning, they are provided with a wonderful opportunity and a tremendous challenge to integrate intercultural elements while implementing the TPACK approach in technology-enhanced teaching, considering it as a vehicle for developing educational scenarios enriched by promoting cultural awareness in the foreign language classroom.

It is certain that the involvement of the learners in multiple collaborative tasks stimulates coherence and solidarity between them and at the same time emphasis is placed on the importance of mediation skills through the cultivation of team spirit in the design and development of complex commands through Learning Management Systems. (Efthimiadou, 2020, pp. 34-35)

After all, a way to actively teach in a multilingual and intercultural environment on Learning Management Systems (LMS) is to develop and use educational intercultural scenarios focusing on collaborative learning. As Efthimiadou notes, "According to the action-based approach, group interactions give a cognitive, socio-emotional and behavioral dimension to the implementation of collaborative tasks linking conviviality and pragmatism" (Efthimiadou, 2017, p. 178).

Applying Intercultural Education Within the TPACK Approach in a Technology-Enhanced Foreign Language Learning Environment

The Council of Europe's Educational Policies

According to the wider Council of Europe priorities in education, the majority of educational institutions in European Member States reform their national educational policies, their teacher training programs and school curricula based on the assumption that the teaching/learning process should encompass multilingualism, intercultural education, and development of digital competences.

At the threshold of the 21st century, Lisbon Agenda (2000-2010), succeeded by Europe 2010 (2010-2020), was development plans for a dynamic knowledge-based economy of the European Union focusing on investing in human resources, education, and training (https://ec.europa.eu/eurostat/statistics-explained/index.php/Glossary:Lisbon_ Strategy). At the same pace, the strategic framework for European Cooperation in Education and Training (ET 2020 Framework) (https://ec.europa.eu/education/policies/european-policy-cooperation/et2020-framework_en) whose policy support activities are funded through the Erasmus + programme (https://ec.europa.eu/programmes/erasmus-plus/about_en), pursues the objectives of improving the quality and efficiency of education through promoting the development of key competences and basic skills of students, such as language learning and digital literacy, highlighting the role of culture and inclusiveness in education. Besides, the year 2020 marks the launch of the European Centre for Modern Languages of the Council of Europe (ECML) 6th medium-term program (2020-2023) "Inspiring innovation in language education: changing contexts, evolving competences" (https://www.ecml.at/) focusing on inclusive approaches to education and on democratic citizenship, where the development of linguistic, intercultural, and digital competences plays a key role.

Necessity to Create Educational Technology Projects Involving ICT Tools and Developing Collaborative Tasks

It is therefore evident that not only in the European guidelines but also in the international educational context for foreign language teaching, cultural awareness and computer literacy feature among the main objectives. Within that framework, let us present how theory is turned into practice through exploring some indicative projects where educators endeavor to fulfil the aims stated by fusing intercultural learning within the TPACK approach.

To begin with, a prevailing European project launched as early as 2005 for distance school learning, the "eTwinning" virtual community for schools in Europe (https://www.etwinning.net/el/pub/index.htm), can serve as a prominent example of how teachers promote intercultural communicative competence while sharing their expertise, improving their teaching skills, and connecting through the development of educational projects with various ICT tools embedded in learning. The eTwinning project offers a platform for teachers working in primary or secondary education in one of the 44 countries which are involved in eTwinning, in order to communicate, collaborate, share and, in short, "feel and be part of the most exciting learning community in Europe". Through the collaboration among teachers, students, schools, parents from different countries during an eTwinning project, pupils not only improve their linguistic and computer knowledge, but also participate actively in interacting, respecting, and understanding each other.

A different international project relating to the tertiary education, based on the principle that methodogically sound applications of educational technology can serve as a bridge to introduce new cultures to students, is the International Leadership in Educational Technology (ILET) project. That specific project was selected by funding agencies in Europe and the USA in 2001 to create a model intercultural learning environment for doctoral programs preparing future leaders of educational technology (Davis & Cho, 2005). Six universities in both the United States and Europe were awarded a grant with the purpose to build a transatlantic doctoral community that focused on educational technology (Dawson & Ferdig, 2005, p. 24).

Within the process of applying the TPACK model, complex processes of cultural transmission are at work on many levels. Davis and Cho argue that the development of the ILET project has successfully proved that technologies are making the global world more connected (2005, p. 23) while among the main positive outcomes we note: (a) the successful intercultural participation in an existing community of practice, (b) the opportunity given to build intercultural programs through developing and implementing curricula that challenges students' notions of technology, society, and culture (2005, p. 35).

Furthermore, in 2011 Jupit et al. (2011) propose the Cultural Technological Pedagogical Content Knowledge (CuTPACK) framework as applied on a game-based learning (GBL) platform. Their strategic goals to promote cultural awareness to students through game-based learning using the Technological Pedagogical Content Knowledge (TPACK) approach are catered for by expanding the TPACK model with the incorporation of key cultural elements within the Pedagogy, Content, and Technology components, to mutually interact.

Specifically, the content-knowledge for promoting cultural awareness includes key elements of cultures, the pedagogical-knowledge includes methods to encourage understanding and respect of a culture, and the advancement of game technology encourages and sustains engagement in the learning platform. Although they underline that the work on cross-culture awareness in games is still very limited, we can assume from the assumptions drawn that the development of a GBL platform using the extended cultural TPACK framework will expose learners to culturally diverse scenarios and knowledge of different cultures since a game-based learning platform will provide an engaging environment to facilitate the transfer of cultural knowledge.

Therefore, the proposed CuTPACK framework seems to cover all of the aspects required for a game-based learning platform to support cultural awareness. As Efthimiadou puts it,

Due to globalization it would be interesting to focus on a broader framework of exchanging ideas and sharing values in order to develop the communication channels for understanding, processing and producing new information in a demanding environment of modern and asynchronous education. (Efthimiadou, 2020, p. 34)

Concluding Remarks

On the whole, we are convinced that foreign language instruction based on the integration of intercultural material in teaching scenarios on an e-learning environment, taking into account the quality of intercultural education added to the TPACK model of Content, Pedagogy, and Technology as essential parts of teachers' knowledge, could decisively support the needs of the learners in a culturally challenging educational environment. After all, abiding with Chisholm (1994, p. 213) we should note that "educational computing is not culturally neutral" and in order to cater for the learners' development as a whole, we should opt for culturally and technologically competent teachers to support it.

However, we must not underestimate certain issues which have to be initially addressed, prior to successfully integrating intercultural communicative awareness to the TPACK approach, such as the presupposition of targeted teacher training and professional development, the quest for effective methodology, the efficacy of pedagogical techniques, the reinforcement of evaluation procedures, the need for innovative educational institutions' curricula, the planning of coherent teaching scenarios, the selection of the most suitable technological applications to serve as vehicles of intercultural awareness, the familiarization of educators and learners with ICT, and the availability of technological means.

Among the most prominent areas requiring further attention in the FL teaching/learning context are: the definition of the content of intercultural education, the methodology fusing multicultural and technological expertise, and the implications for language education policy, materials, methods, and teachers' training which will contribute to the updating and upgrading of teaching practices. Language teachers should be introduced to fields of intercultural awareness, teaching multilingual and multicultural classes, and using technological tools in the light of the TPACK approach, aiming towards the perspective of enabling students to embrace cross-cultural communication in technology-enhanced learning environments.

References

Atkinson, D. (1999). TESOL and culture. *TESOL Quarterly, 33*(4), 625-654. Retrieved from https://doi.org/10.2307/3587880

Chisholm, I. M. (1994). Culture and technology: Implications for multicultural teacher education. *Journal of Information Technology for Teacher Education, 3*(2), 213. Retrieved from https://www.tandfonline.com/doi/abs/10.1080/0962029940030208

Davis, N., & Cho, M. O. (April 2005). Intercultural competence for future leaders of educational technology and its evaluation. In *Interactive educational multimedia* (No. 10, pp. 1-22). Retrieved from http://www.ub.edu/multimedia/iem

Dawson, K., & Ferdig, R. E. (April 2005). Experiences in promoting an intercultural perspective in an educational technology program. In *Interactive educational multimedia* (No. 10, pp. 23-37). Retrieved from http://www.ub.edu/multimedia/iem

Efthimiadou, E. (2017). Cultiver les tâches collaboratives pour une pédagogie de projet dans une perspective actionnelle. In *Enseigner/apprendre le français à l'université. Quelles applications pour la perspective actionnelle? De la construction individuelleà l'action collective* (pp. 175-188). Coord.: A. Maravelaki, K. Moussafir, J. Donckers, G. Geron. Ed: Le Langage et l'Homme. Louvain-La-Neuve: EME Editions.

Efthimiadou, E. (June 2020). The contribution of collaborative tasks to the development of mediation competencies through Learning Management Systems. *Frontiers in Education Technology, 3*(2), 31-36. doi:10.22158/fet.v3n2p31 Retrieved from http://www.scholink.org/ojs/index.php/fet/article/view/2825/2864

Jupit, A., Minoi, J., Arnab, S., & Yeao, A. (2011). Cross-cultural awareness in game-based learning using a TPACK approach. In J. Minoi, A. Yeo, and J. Abdelnour-Nocera (Eds.), *Designing for Global Markets 10: Proceedings of the 10th International Workshop on Internationalization of Products and Systems* (pp. 31-49). Product & Systems Internationalisation Inc. Retrieved from http://www.iwips.org/proceedings/2011/papers/cross_cultural_awareness_in_game_based_learning_using_a_tpack_approach/

Killick, D. (2001). Cross-cultural capability and communicative language teaching: Why the paradigm needs to shift. *Pulverness (Ed.) IATEFL. 35th Annual Conference: Brighton Conference Selections.*

Koehler, M. J., & Mishra, P. (2009). What is technological pedagogical content knowledge? *Contemporary Issues in Technology and Teacher Education, 9*(1), 60-70. Retrieved from http://one2oneheights.pbworks.com/f/MISHRA_PUNYA.pdf

Koehler, M. J. (2012). TPACK explained. Retrieved from http://matt-koehler.com/tpack2/tpack-explained/

Kramsch, C. (1998). *Language and culture*. Oxford: Oxford University Press.

Mishra, P., & Koehler, M. J. (2006). Technological pedagogical content knowledge: A framework for integrating technology in teacher knowledge. *Teachers College Record, 108*(6), 1017-1054. Retrieved from http://one2oneheights.pbworks.com/f/MISHRA_PUNYA.pdf

Sansoniou, V. (2007). Towards intercultural communicative competence: Possibilities and realities in the Greek primary EFL classroom (Master's dissertation, Hellenic Open University, 2007). Retrieved from https://apothesis.eap.gr/handle/repo/13232?mode=full