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**STUDENTS' PARTICIPATION TO VIRTUAL LEARNING  
ENVIRONMENTS AND ATTITUDES TOWARDS  
INTERCULTURAL EDUCATION PROGRAMS**

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*Abstract*

One of the most recent research directions in the field of virtual learning highlights the fact that students' participation to virtual learning environments positively correlates with the development of better cultural and intercultural competences, superior educational performances and occupational commitment. Starting from these considerations, the paper summarizes the results of an empirical research, whose purpose was to identify and analyze the relationship between student's participation to virtual learning environments and students' attitudes towards intercultural education programs. The study started from three hypotheses, that were later confirmed: first, that there is a positive correlation between the students' perceived utility (associated with the participation to virtual learning environments and systems) and their attitude towards the importance of intercultural education programs, at university level; second, that there is a positive correlation between the students' usage of internet and their attitude towards the importance of intercultural education competences (for a teacher); third, that most students appreciate intercultural education as important in the development of European identity. The survey used an adapted version of InterQ questionnaire that included students from the University of Oradea and University of Craiova. The main results, with significant implications for the optimization of academic curriculum, confirmed that there is a positive correlation between the students' perceived utility (associated with the participation to virtual learning environments and management systems) and their attitude towards the importance of intercultural education programs, at university level.

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**Keywords:** Virtual learning environments, virtual learning communities, virtual learning management systems, intercultural education programs, attitudes.



## 1. Introduction

The digital revolution that we are witnessing today in postmodern society is changing not only the way we experience culture, but also the educational visions, theoretical frameworks and professional practices used in higher education. According to the report entitled “DESI 2017. Digital Economy and Society Index 2017”, the percentage of Romanian regular internet users among younger persons aged 16-24 was 85.3% (European Commission, 2018) and the number is getting higher year by year. In the same time, complex demographical phenomena, such a migration, are developing in the European Union, creating a need for more inclusive, wider and efficient intercultural education programs, particularly at the university level. In this context, new virtual learning environments and systems are being developed and used in different intercultural settings starting from well-known services such as Edmodo, Schoology or Moodle to more immersive virtual reality solutions such as Second Life, Edusim, Active Worlds, Whyville, ALiS Online. Some of these services are targeted to teachers and, in this paper, we aim to analyse pre-service teachers’ attitudes concerning the use of new technologies (particularly virtual learning environments) towards intercultural education programs. The survey of these attitudes and strategies could help education sciences experts, researchers and professors in improving higher education curriculum and educational methodology (Orțan, 2013a; Orțan, 2015; Strungă, 2015).

Several theoretical models were proposed in the field of intercultural education (Mikulec, 2015): the global ethic model (based on Hans Küng’s Global Ethic Project), distance to the Other model (derived from Slavoj Žižek’s study of violence), constitutional loyalty model (centered on the works of Jürgen Habermas) and the recognition model (based on the theory of recognition). The first model is focused on finding the common denominator between different cultures and traditions. For example, the laws against murder, that are present in most of cultures, could serve as a principle in a potential global ethic. This approach values consensus and cohesion and could serve as a basis for generating new educational strategies that emphasize discussion, negotiation and finding common ground between individual and group cultures. The second model, distance to the Other, promotes a tolerance for the differences of the Other. The model can be, however, more difficult to sustain in cultures that not clearly differentiate between private and personal sphere or between the different levels of power in a state. (Mikulec, 2015). The operational value of this approach in education sciences could use empowerment strategies and methods that facilitate the development of a flexible understanding of identity, on multiple levels (that can overlap or not) and exposure to a lot of different values, cultures and traditions. The constitutional loyalty model makes the point of respecting the constitution as the bridge between different groups, offering equal access to traditions and practices by all citizens. The assumption is that all the citizens respect the constitution and that they may renounce to practices that are contrary to the constitution, being in the same time beneficiaries of extended rights and responsibilities as citizens of the state. This approach could be the starting point in developing curriculum programs that enhance the civic competences, particularly the knowledge of human rights and constitutional law. The instructional strategies could also highlight the positive impact of normativity in the microsocial interactions and the need to include all people in this renewed approach, starting with the cultural groups that are most marginalized in a society. The last model, inspired by a revised concept of Hegel’s notion of recognition, emphasized the necessity of dialogue between the groups with different cultures and traditions. This

recognition should not necessarily mean to adopt different values or lifestyles (Mikulec, 2015) but, insofar educational activities are concerned, to be flexible when meeting new values, and especially understand their relevance in one's community or tradition. If the discrimination remains hidden, unexposed (in other words, not recognized as such), the premises for intercultural dialogue and education can't be actualized. In this respect, the research on intercultural education can be the first step in addressing this issue.

Our study was grounded on Heyward's model of intercultural literacy, defined as "understandings, competencies, attitudes, language proficiencies, participation and identities necessary for successful cross-cultural engagement" (Heyward, 2002, p. 10) and his multidimensional model for the development of intercultural literacy, in which attitudes are placed on continuum, starting from the first monocultural level with limited awareness, when the subject is unconsciously incompetent ("No significant intercultural attitudes. Assumes that all groups share similar values and traits. Value neutral") to intercultural level - bicultural or transcultural, when the subject is unconsciously competent described by Heyward as "differentiated, dynamic and realistic attitudes" characterized by "an overall respect for integrity of culture(s) accompanied by legitimate and informed" (Heyward, 2002, p. 16). The concept of attitude is understood, in this paper as including three components: interests, values and tendencies towards self, others and the surrounding context (Inal, Ercan, & Saracaloglu, 2005).

## **2. Problem Statement**

A recent study, the Eurobarometer entitled "Discrimination in the EU in 2015" analysed the attitudes and perceptions of European citizens towards discrimination based on different criteria (gender, ethnic origin, religion or beliefs, age, disability, sexual orientation and gender identity). The document reflects very important differences between the European Union citizens, generally and particularly, Romanian citizens. The results are, to say at least, worrying. For example, 27% of Romanian citizens would be totally uncomfortable to have a person with a disability as an individual that has highest political function, resulted from election, compared to 8% in European Union, generally. At the same question, 39% of Romanian citizens would be totally uncomfortable with an individual with an age over 75 years old, compared to 29% in EU. Similar attitudes are manifested toward other religious and ethnic (Muslims, Buddhists, Asians, Jewish). The discrimination and insufficient social integration of other groups, such as Roma, is mentioned also by other studies such as "Background Report about the Roma in Romania" from 2014 by the Embassy's of Finland in Bucharest. The current situation surely needs a new approach, focused not only on the improvement of the judicial norms but also on developing new studies in the field of intercultural education, from an interdisciplinary perspective.

According to a very recent report – Digital Economy and Society Index (DESI), the percentage of Romanian regular internet users is 61%, compared to the average EU number – 81% (European Commission, 2018). Romania ranks on the 28<sup>th</sup> place (which is the last one), with a score of 32,1. The average score of the cluster is 42,2 while EU average is 56,5. According to the report, Romania "belongs to the low-performing cluster of countries" in spite of the fact that according 76% of Romanian households have access internet access (European Commission, 2018, p. 2). It is clear from this numbers that although the potential exists, the digital skills of both teachers and students are insufficiently

developed, particularly in the context of intercultural education programs. Hence, teachers and particularly pre-service teachers' attitudes analysis towards the use of ICT are of utmost importance and could be very useful for the optimization of teacher training curriculum (Boulay & van Raalte, 2014), particularly in the frameworks of the educational programs coordinated by teacher training staff departments and pedagogy specializations from the major Romanian universities.

### **3. Research Questions**

Based on the scientific literature from the field of intercultural education (Bunăiașu & Strungă, 2016; Heyward, 2002; Kovalainen & Bethell, 2016; Vélez & Olivencia, 2017), virtual learning environments, systems and the methodologic framework we constructed for this paper (Orțan, 2013b), we formulated several research questions, as follows:

- a) Is there a positive correlation between students' participation to virtual learning environments and students' attitudes towards intercultural education programs?
- b) How important is the intercultural education for students?
- c) Is intercultural education important in the development of a European identity, in the opinion for students?
- d) What are students' opinions on using virtual learning environments and systems, particularly for intercultural education programs?
- e) Which virtual learning environments and systems are mostly used by the students?
- f) From what sources do students get relevant information on intercultural education?

### **4. Purpose of the Study**

In our research approach, we pursued the following objectives: a) studying the impact of the students' participation to virtual learning environments and systems to students' attitudes towards intercultural education; b) identify and analyze students' mental images and representations of intercultural education; c) formulate several recommendations for the optimization and development of a potential new intercultural education curriculum for the Primary and Preschool Pedagogy specialization and Teacher Training Departments; d) analyze students' opinions on the advantages and disadvantages of virtual learning environments and systems; e) Identify students' suggestions on the improvements of intercultural education programs; f) identify which virtual learning environments and systems are mostly used by students; g) identify how much experience students have in using virtual learning environments and systems.

### **5. Research Methods**

#### **5.1. Hypotheses and variables**

We have identified the following hypotheses: 1) There is a positive correlation between the students' perceived utility (associated with the participation to virtual learning environments and systems) and their attitude towards the importance of intercultural education programs, at university level; 2) There is a positive correlation between the students' usage of internet and their attitude towards the importance

of intercultural education competences (for a teacher); 3) Most students appreciate intercultural education as important in the development of European identity;

We operationalized the concepts used in the hypotheses by deriving the following variables: a) for the first hypothesis, we analyzed the correlation of two variables: 1) students' perceived utility of virtual learning environments and systems (Edmodo) and 2) attitude towards the importance of intercultural education programs, at university level; b) for the second hypothesis, we studied the correlation of two variables: 1) students' self-reported internet usage and 2) students' attitude towards the importance of intercultural education competences for a teacher; c) for the third hypothesis, we used as a variable students' perceived importance of intercultural education in the development of a European identity;

To highlight the students' students' perceived utility (associated with the participation to virtual learning environments and systems) and internet usage as independent variables, we used as the indicators, the level of utility, measured by a Likert scale with five levels of frequency and a custom scale with 6 options; to highlight students' perceived importance of importance of intercultural education programs, at university level and importance of intercultural education competences (for a teacher) we used agreement levels, measured by a Likert scale; for measuring the importance of intercultural education in the development of a European identity, we used as the indicator the level of importance, measured by ten-point scale in which 1 is the lowest value and 10 is the highest value.

## **5.2. Sample**

Since our case-study is an approach to optimize the intercultural education programs' curricula for Primary and Preschool Pedagogy specializations and Teaching Training Staff Departments, we applied the research instrument to a sample of undergraduate students enrolled in the study program organized by University of Craiova - 22 students and University of Oradea – 21 students. Consequently, the survey's results are representative to students from the University of Craiova and University of Oradea, for the respective specializations. The average age of subjects participating in research was 27 years, 74.4% resided in urban areas and 25.6% in rural areas.

## **5.3. Procedure**

The survey was carried out between June and September 2018. We included in this study students from the first, second and third year of their undergraduate training (primary and preschool specialization) using a convenience sample. Most of the questionnaires were completed using Microsoft Forms. The link for the questionnaire (as well as additional information and clarifications) was provided during the seminar activities for the subjects "Methodology of Educational Research" and "Theory and Methodology of Instruction".

## **5.4. Instrument**

For this study, we constructed a questionnaire with 21 items entitled InterQ3 questionnaire. The first item (I1) included a list with all the subjects from the preschool and primary education specialization's curriculum and the students were asked to specify how useful and interesting would be to include CBIE for each discipline. All the answers from the first two items were codified on a Likert scale from 1-5 (1 - not useful at all and 5 – very useful, respectively 1 - not interesting at all and 5 – very

interesting). The next two items (I2 and I3) asked students what subjects they think should be added or removed from the curriculum. Items I4, I5 and I6 included questions regarding the access to various electronic devices (smartphones, laptops, tablet computers, smart TV, desktop), how useful these devices are for their professional development and how much they use them. The last items (I7, I8, I9 and I10) gathered factual data concerning the year of study, age, gender, family and residence. Overall, the questionnaire included 8 closed questions (I1, I2, I5-I10) and 2 open questions (I3, I4) and was based on previous studies in the field of curriculum preferences (Strungă & Bunăiașu, 2013). The research instrument was pretested in the framework of our seminar “Methodology of Educational Research” and students’ and colleagues’ observations were included in the revised version. The Cronbach’s alpha coefficient was equal to .993.

To reach the research objectives, we constructed a questionnaire to identify students' attitudes towards intercultural education (adapted after InterQ2 questionnaire), which includes 21 items grouped into the following categories: closed questions (17) and open questions (4). In terms of content items, the questionnaire aimed at accumulation of significant data on variables that have operationalized specific research hypotheses: The sources of information on intercultural education (item 1); The degree of agreement to a series of statements related to intercultural education using adapted Likert scales (items 2, 4, 5); The ranking of several definitions of intercultural education (item 3) and on the importance of intercultural education in the development of a European identity (item 7). The gathering of factual data (items 15-21). The questionnaire was constructed based on previous studies in the field of adult education, virtual learning communities (Strungă & Bunăiașu, 2013; Bunăiașu & Strungă, 2016) and intercultural education curriculum (Bunăiașu, 2015).

### **5.5. Data analysis procedure**

Using SPSS 25, we calculated the average age for the 43 subjects included in the curriculum for preschool and primary education specialization (3 years) from the University of Craiova and the age for all the subjects. To analyze the hypotheses, we calculated the Kendall’s tau correlation coefficient for the variables (utility associated with using Edmodo for professional development, internet usage, importance associated to intercultural education, importance associated with intercultural education by universities, background environment, experience in using virtual learning environments and systems). We also calculated the general mean (GM) for the answers associated to the perceived importance of intercultural education in European identity development.

## **6. Findings**

Regarding the first hypothesis, the statistical analysis confirmed that there is a positive correlation between the students’ perceived utility (associated with the participation to virtual learning environments and management systems) and their attitude towards the importance of intercultural education programs, at university level ( $\tau_b = .277$ ,  $p = .045$ ). Concerning the second hypothesis, our analysis confirmed that there is a positive correlation between the students’ usage of internet and their attitude towards the importance of intercultural education competences (for a teacher),  $\tau_b = .345$ ,  $p = .013$ . Regarding the third hypothesis, the analysis confirmed that most students appreciate intercultural education as important in

the development of European identity, the value of GM was 8.53. Additionally, we found no significant correlations between the experience in using virtual learning environments or management systems and the importance associated to intercultural education. However, other factors such as living environment (urban or rural) appear to influence the students' attitudes: importance associated to intercultural education ( $\tau_b = .422, p = .005$ ), the importance of intercultural education programs, at university level ( $\tau_b = .375, p = .012$ ), the importance of intercultural education competences for a teacher ( $\tau_b = .529, p = .000$ ). We also found that factors such as age is negatively correlated with the attitudes towards intercultural education - the importance of intercultural education competences for a teacher ( $\tau_b = -.468, p = .000$ ).

**Table 01.** Experience in using virtual learning environments and virtual learning management systems

		Frequency	Valid Percent	Cumulative Percent
Valid	Less than 2 years	11	25.6	25.6
	2-3 years	12	27.9	53.5
	4-6 years	1	2.3	55.8
	More than 6 years	19	44.2	100.0
	Total	43	100	

Concerning the level of agreement towards the importance of intercultural education, data shows that 58.1% of students totally agree with the statement, 34.9% mostly agree and 7% have a medium level of agreement. For the item related to the importance of intercultural education programs, at university level, 55.8% totally agree, 34.9% mostly agree, 9.3% have a medium level of agreement. Regarding the importance of intercultural education competences for a teacher, 67.4% totally agree, 25.6% mostly agree, 7% have a medium level of agreement.

**Table 02.** Internet usage / day by subjects

		Frequency	Valid Percent	Cumulative Percent
Valid	About 1-2 hours	3	7.0	7.0
	About 2-3 hours	13	30.2	37.2
	About 3-4 hours	8	18.6	55.8
	More than 4 hours	18	41.9	97.7
	I don't know	1	2.3	100.0
	Total	43	100.0	

On the item regarding the last virtual learning management system or virtual learning environment used 79.1% mentioned Edmodo, 2.3% Schoology, 2.3 Moodle, 7% Second Life and 9.3% other solutions. On the experience of using virtual learning management systems and virtual learning environments, 25.6% of the students have less than 2 years' experience, 27.9% have between 2-3 years' experience, 2.3% between 4-6 years' experience and most of them, 44.2% have more than 6 years' experience (see Table 01). Regarding the internet usage/day by subjects, 7% reported using about 1-2 hours, 30.2% about 2-3 hours, 18.6 about 3-4 hours, 41.9% more than 4 hours and 2.3% reported they didn't know (Table 02).

## 7. Conclusion

The results of study confirm the necessity of using virtual learning management systems and virtual learning environments in developing the attitudinal component of intercultural competences and literacy (Kovalainen & Bethell, 2016). Simply utilizing the internet and social media does not have a direct impact on developing intercultural education competences and intercultural literacy only if the virtual experiences are conducted in an environment or learning management system that are adapted to this aim. Consequently, several recommendations could be implemented in order to develop students' intercultural competences, first, by integrating more intercultural education programs, at the level of university (which has a deep impact on students, as our study demonstrated), in the context of an optimized knowledge management model. Developing good practices for using virtual learning environments and learning management systems, elaborating manuals for university professors, researchers and students are some concrete measures that could vastly improve the intercultural education attitudes. Second, more attention should be given to the digitalization of intercultural education curriculum e.g. using more extensively virtual learning management systems that are easy to use, accessible from multiple devices (smartphone, tablet computers), localized and, most of all, integrated with the university's curricula. Third, the participation to the virtual learning environments of students, from different minorities (ethnic, religious and of other types) should be encouraged, particularly in the context of international or European educational projects; in this context a regional strategy for cooperation between universities in the field of intercultural education, that aims to a more diverse participation, would be highly recommended. Fourth, particular attention should be directed to the factors that are negatively correlated to the development of intercultural competences and literacy, using virtual learning environments, such as the age and location of subjects; a starting point, in this situation, would be to organize more courses aimed to the development of digital competences, particularly with older students or those who lack the basic skills in this field (Strungă, 2015).

One limitation of our study is related to the size of the sample. This could be further addressed in the future by including more universities in the analysis of the impact that participation to the virtual learning environments has over the development of students' attitudes towards intercultural education programs. Also, the analysis of the differences and similarities between the sub-groups could be useful to know for the understanding of the various institutional and regional factors that are mediating the development of students' attitudes. However, as the new technologies are increasingly more used in different educational settings, their implementation at the university level for the development of intercultural competences and literacy will surely encourage more researchers to study this relationship in more detail.

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