Social interactivity dimensions in activities of students in higher education

Genutė Gedvilienė
Vytautas Magnus University, Lithuania

Abstract: *The paper analyzes dimensions of students' social competence in higher education institutions: the case of Lithuania and Spain. The basic elements of social competence, such as the development of social activity and the ability to engage in it, are analyzed. Respondents from two countries (Lithuania and Spain) participated in the survey. Empirical study disclosed, that social competence is important for the students not only for the communication and transfer of information, but also as the outcome of collective learning leading to the development of new capabilities applied by the learners in the learning process.*

Biographical note: Gedvilienė, Genutė is a professor of the Educational Institute of Vytautas Magnus University. Her research interests include: Development of generic competencies; social and social entrepreneurship competencies; problems of learning in groups; teaching and learning paradigm; learning and self-assessment of various institutional levels; development of interactive technologies; social and cognitive skills; teachers' training needs research; lifelong learning. E-mail: genute.gedviliene@vdu.lt

1   INTRODUCTION

Social competence is essential for people of all ages to develop communication and collaboration. These goals can be achieved through learning and sharing. In other words, participating in the learning process in various forms. The educational environment is understood as a complex of the learning process, i.e. development of social activities (involvement in various communications), development of social skills (ability to be in communion with others) and understanding of the meaning of social interaction (ability to assess communication situations).

The aim of this paper is to reveal the social interactivity dimensions in activities of students.

There will be compared betwee students in the countries (Lithuania and Spain) how the issues of cooperation and communication (Social activities, Social skills and Benefit of social interaction) in the learning and teaching processes are study in higher education.

Theoretical and empirical research methods were combined for research analysis. For the analysis the following methods were applied:

1) Literature and document analysis helped to highlight the communication and cooperation as fundamental phenomena of the social competence, it's importance for the digitalisation and globalisation. There were also analysed the research studies on the development of social competence in the overall competence profile of the higher education.

2) Empirical study is based on questionnaire survey method. Sample of the research consists of 226 participants: from Lithuania - 123 (53,5%) and 103 (45,6%) are from Spain.

Statistical analysis was performed with IBM SPSS Statistics, version 25. Confirmatory factor analysis was performed with Mplus program version 8.2.

Percentages of missing values in answers were acceptable, less than 9% for each question.

 The themes of survey questionnaire were defined on the basis of findings of the literature review and included the following:

1. opinions of the respondents on the Social skills and place of a social competence;

2. opinions of the respondents on the Social activities in higher education studies;

3. benefit of social interaction judgements on the implications of the higher education studies and for the development of social competence.

Data analysis disclosed a wide range of ways and modalities of the deployment and development of social competence in the preparation students. Social competence is important for the students   not only for the communication and transfer of information, but also as the outcome of collective learning leading to the development of new capabilities applied by the learners in the learning process.

2   THEORETICAL FRAMEFORK

Social competence concept developed using such elements as confidence, social interaction, creativity, ability to achieve social goals and self-motivation. Social competence is knowing how to work with people by communicating and constructively demonstrating behavior. Human behavior depends on the existing situation. Behavior is a change of a certain real-life field, the movement in a field, where we face the boundaries, objectives, forces and their systems (Levin,1999).

Social competence is a wide spectrum of skills, such as: conflict situations, public speaking, motivation system effectiveness, ability to listen to another opinion and articulate one's own, constructively deal with naturally arising conflicts, which in holistic learning are developed during various environmental transformations. They are developed by raising social objectives to a working group - how to be able to clearly and in detail describe the events of common interest groups, to teach by explaining how the task was done or dealt with some problems, actively participate in discussions and small groups to respond to other participants opinion, together with a group of tasks listening and encouraging each other to find the agreement.

Social competence can be described as a fully specific set of behaviors and skills which can be made to develop a project, or they can be encouraged to develop and effectively use a series of teaching-learning activities. There is no established standard or fashionable socially competent person or a student's picture, so the student's social skills is developed within the context of the overall higher education institution and this learning environment and needs.

3   METHODOLOGY AND SAMPLE

Social competence in a narrow sense is what helps people to adapt more easily to communicate and interact with each other and in cooperation activities. In a broad sense - the ability to acquire the right profession, activity in the labor market, purposefully develop careers and feel happy. Therefore, social competence skills are specific to social competitive, continuous learner and developing citizen. All these elements of social competence are developed through lifelong learning (LLL). Some of them are provided in the Figure 1.

Figure 1. Available components of social competence

Figure 1. Available components of social competence
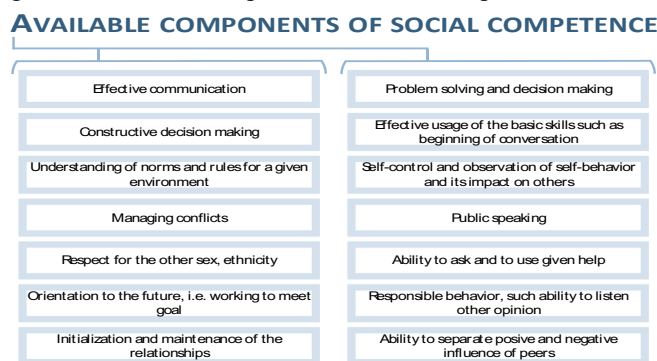
Social interactivity in the development of social competence: social contructivism approach to learning

What are the most pertinent and suitable approaches to develop social competence in the learning practices? During the last decades, constructivism is in the centre of attention among the theorists and practicians of education. Modern learning theory widely discusses attitudes of constructive theory that stress creative process in the learners of the higher education. In Lithuania, the theoretical fundamentals of teaching and learning are only being constructed, and theoretical basis of education science exists for only some decates, so Lithuanian researchers and practicians refer to theory and practice of Western countries (Bardauskaitė, Jakimavičienė, Sadauskienė, 2016).

Constructive theory analyzes the nature of human learning and the best social conditions, encouraging learning. The researchers of learning innovations maintain that creating knowledge and learning activities should appear in the authentic context of communication and collaboration under the influence of social interaction. Constructive learning atmosphere is very effective in organizing activities oriented to the student, stressing active learning, interaction among the students, reflection and collaboration. From the constructive point of view, the learner reveals creativity, using social and cognitive circumstances, sharing ideas, problems and interests (Chang, Fisher, 2003).

P. Cooper and D. Mclntyr (1994) analyze an important mechanism in the model of learning – calibration. Calibration is a process when either the teacher or the learner try to express their ideas in a way they could be understood to others. It is a real transactive process which requires involment of the students. Learning could be divided into: interactive and reactive learning.

Interactive learning offers the teacher's integral knowledge about the students and advanced plans where anticipatory goals, tasks and the requirements of learning programmes are revealed.

Reactive learning consists of creating learning plans. During this process, more attention is alloted to the knowledge about the students. Reactive learning is characterized by the teacher's intention to adjust learning objects to the interests of the (intentions-wishes-goals). It should be noted that „interactive – reactive" learning represents the strategies of learning. As P. Cooper, D. Mclntyr (1994) indicate, above interactive strategies there are transmissive (passing) and behind reactive – independent, self-oriented learning. (fig. 1)

The process of effective learning in higher education

This dynamics shows the connection between teaching and learning, the educator and the learner and making some decisions. Effective learning is when a learner expresses his opinion, his identity during conversations, dialogues and discussions. Thus, a learner understands the influence of social competence in learning.

Each person belongs to which social group. Being in a group gives you some incentives: it creates a sense of community satisfaction, security, pursuing common goals, transferring experience. Knowledge is transmitted, experience and behavior are naturally acquired through communication, and social life continues only if the transmission takes place. Students communicate and collaborate to achieve common goals, could learn how to balance individual needs with group interests, and interact to better express their talents. By interacting with the environment, the student influences and is influenced by it. This process is not complete, it takes a lifetime. Developing interaction with one another opens many of the student's personal qualities. It is suitable for different age groups, increasing innovation, promoting tolerance and improving social skills. Developing social skills encourages students to be open, listen, understand different points of view, allow for new activities, but most importantly, critical thinking helps to develop a shared understanding of reality.

Comparing factors for Lithuanian and Spanish participants

The goal of the factor analysis was to find out new dimensions (factors) in the given set of 30 items which should better correspond to the data of the research. Principal axis factoring was used to extract factors. The factor analysis was exploratory and heavily dependent on the current data. The final solution was obtained by gradually improving previous solutions. The final factors are provisional, intended to be used in the analyses which are described in the book. How well would they fit new data remains an open question. In order to use the factors in more general contexts, validity of the factors should be tested using new research and new data. Initial factor analysis was run using all 30 social interaction items of the questionnaire. Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) of the correlation matrix equals 0.705. This means satisfactory adequacy of the correlations for factor analysis (Tabachnik & Fidell, p. 614). Factor analysis was rerun with 6 factors.

This analysis was accepted as final. All communalities are sufficiently large: the smallest is 0,253.

6 factors are extracted, as previously. They explain 38% of the total variance in the correlation matrix. It is a rather moderate percentage – most of the variance remains unexplained by the factors. However, this happens rather often when analyzing questionnaires which aim to evaluate personality traits or behavior. Such a moderate extracted variance can be attributed to large measurement errors, of at least some of variables in analysis.

What about number of factors in the final analysis? In order to help to answer this question, eigenvalues of factors (principal components initially) have been identified. These factors were compared visually using boxplots (fig. 2):

Some differences between countries are easily visible: e.g. centers and spread of "Social activity related to organizations and volunteering "; centers of "Spending time. or social activity with friends and other people ".

In order to find out which of differences are statistically significant, non-parametric Mann-Whitney U-Test was used. Its results are presented in the two following tables:

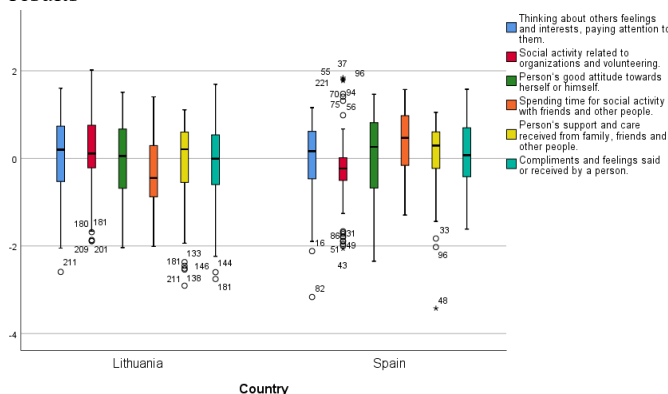Figure 2. Comparative factors of Lithuanian and Spanish results

Table 1. Differences in statistical significance between countries

	Country	N	Mean Rank	Sum of Ranks
Thinking about other feelings and interests, paying attention to them.	Lithuania	107	104,00	11128,00
	Spain	97	100,85	9782,00
	Total	204		
Social activity related to organizations and volunteering.	Lithuania	107	120,89	12935,00
	Spain	97	82,22	7975,00
	Total	204		
Person 's good attitude towards herself or himself.	Lithuania	107	98,94	10587,00
	Spain	97	106,42	10323,00
	Total	204		
Spending time for social activity with friends and other people.	Lithuania	107	77,11	8251,00
	Spain	97	130,51	12659,00
	Total	204		
Person 's support and care received from family, friends and other people.	Lithuania	107	98,53	10543,00
	Spain	97	106,88	10367,00
	Total	204		
Compliments and feelings said or received by a person.	Lithuania	107	98,56	10546,00
	Spain	97	106,85	10364,00
	Total	204		

Table 2. Statistical comparisons between countries

Test Statistics[a]

	Thinking about other feelings and interests, paying attention to them.	Social activity related to organizations and volunteering.	Person 's good attitude towards herself or himself.	Spending time for social activity with friends and other people.	Person 's support and care received from family, friends and other people.	Compliments and feelings said or received by a person.
Mann-Whitney U	5029,000	3222,000	4809,000	2473,000	4765,000	4768,000
Wilcoxon W	9782,000	7975,000	10587,000	8251,000	10543,000	10546,000
Z	-,381	-4,673	-,904	-6,451	-1,008	-1,001
Asymp. Sig. (2-tailed)	,703	,000	,366	,000	,313	,317

Social activity related to organizations and volunteering is more expressed in Lithuanian participants, p < 0.001. Spending time for social activity with friends and other people is more expressed in Spanish participants, p < 0.001.

Confirmatory factor analysis

Six factors' model was not confirmed by the data due to cross loadings between factors.

According to our interpretation, first factor express thinking about other feelings and interests, paying attention to them. Second factor express social activity related to organizations

and volunteering. Third factor express person 's good attitude towards herself or himself. Fourth factor express spending time for social activity with friends and other people. Fifth factor express person 's support and care received from family, friends and other people. Sixth factor express compliments and feelings said or received by a person. Three items in the final solution cannot be assigned to any factor with certainty: I share and consider opinion of others. I laugh a lot; I am friendly.

Chi-Square Test of Model Fit rejected the initial model: 2 = 288.8, df = 194, p < 0.001. Although goodness-of-fit indexes were not used in accepting or rejecting models, most popular of them are presented here for descriptive purposes: RMSEA (Root Mean Square Error of Approximation) = 0.047, its 90 Percent C.I. is 0.035 0.057. CFI = 0.928, TLI = 0.914, SRMR = 0.084. In the initial model every indicator depended only on one of factors. Modification indices suggested many cross loadings that is dependence of some indicators on other factors than their own. Among all those suggested modifications, the modification which seemed theoretically better justified than others was applied to the current model. This process was continued until modified model was confirmed by chi-square test with p > 0.05. 10 modifications were required to achieve a satisfactory model. The final model is depicted in Fig. 3 using conventional structural equation modeling notation:

Figure 3. A six-factor model
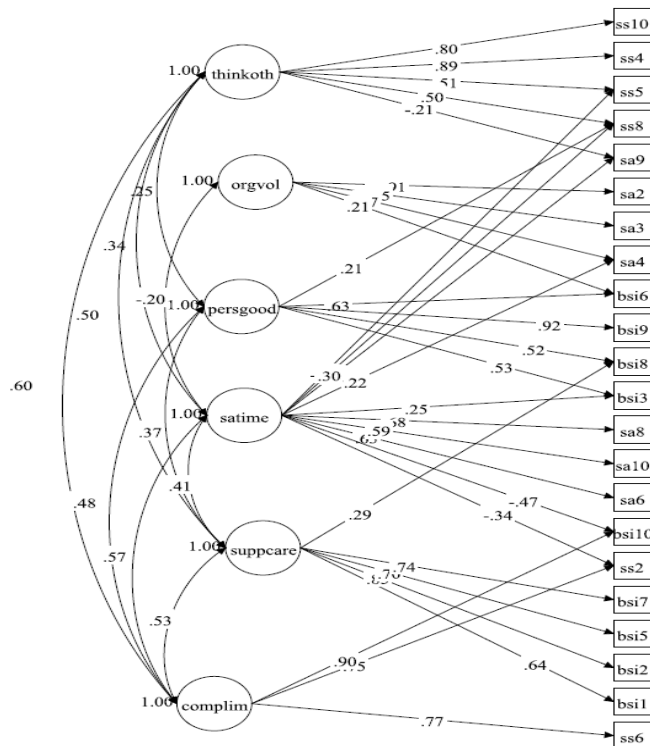
Note 1. Only statistically significant coefficients are shown.
Note 2. Factors variances and covariances are standardized, consequently, covariances between factors became correlations. Path coefficients from factors to indicators are also standardized.

Names of variables in the picture are explained in Table 3.

Table 3. Significant variables in the model

Name	Meaning
SA2	I participate in organizational activities.
SA3	I join various discussions or organizational activities.
SA4	I do volunteer work: I volunteer often.
SA6	I communicate a lot by phone or write letters to my friends.
SA8	I spend time with my friends.
SA9	I go in for sports.
SA10	I attend parties.
SS2	I say compliments to others.
SS4	I am a good listener.
SS5	Before speaking, I wait for my turn and do not interrupt others.
SS6	I tell others about my feelings: whom do I like, whom I respect.
SS8	I have good relations with others.
SS10	I think how others might feel.
BSI1	There are people who help me.
BSI2	I have friends with whom I communicate.
BSI3	I have a good opinion about myself.
BSI5	I trust in my friends.
BSI6	I am confident in myself: confident in my decisions or deeds.
BSI7	I feel that my family takes care of me.
BSI8	I feel healthy.
BSI9	I take care of myself.
BSI10	I receive compliments from other colleagues.
thinkoth	Thinking about other feelings and interests, paying attention to them.
orgvol	Social activity related to organizations and volunteering.
persgood	Person 's good attitude towards herself or himself.
SAtime	Spending time for social activity with friends and other people.
suppcare	Person 's support and care received from family, friends and other people.
complim	Compliments and feelings said or received by a person.

Chi-Square Test of Model Fit accepted this model: $\chi^2 = 215.5$, df = 184, p = 0.056. RMSEA = 0.028, its 90 Percent C.I. is 0.000 0.042. CFI = 0.976, TLI = 0.970, SRMR = 0.068.

Of course, such a "confirmation" is not a true confirmation because of:

1) The same data were used in creating and confirming models.

2) Sample size is obviously too small for models of such a complexity especially because ordinal variables and WLSMV estimation is used.

3) Too many partially data dependent modifications were required to fit model to the data.

4) Distributions of some items are too sparsely covered by the data, e.g. "I spend time with my friends" has only two responses "never", "I am a good listener" has only one response "never", etc.

Because of the above reasons, these models cannot be accepted as final solutions. They are only preliminary candidates to be tested and improved by new research and new data, not excluding even serious modifications of the questionnaire itself.

4 CONCLUSIONS

Social competence and its development play an increasingly important role in higher education.

These trends can be seen in education and lifelong learning policies. The study revealed that social competence is important for the students in Spain and Lithuania. Social activities, social skills, and the benefits of developing synergies have been observed is not considered to be insignificant or irrelevant. This observation reveals learners' awareness of the need for communication skills in society. The research has shown that this understanding is shaped by the specific requirements of practical life and the requirements of interaction, collaborative activities, and social and personal life. The development of social competence is usually reinforced by personal needs as a desire to participate in formal and informal organizations, a desire for improvement and self-realization.

The development of social competence is an integral and important part of students' studies in higher education.

The development of this competence also facilitates the learning process and creates preconditions for meaningful learning by creating and sharing meanings and values in the learning process. Social competence development also equips learners with the skills they need to overcome obstacles and challenges in social activities, to resolve occasional conflicts, to enable effective collaboration, and to contribute to effective social interaction.

The results of the study confirmed that students from both countries are involved in social activities in various forms, develop social skills through interaction with others and see the full benefits of developing communication.

REFERENCES

Avdimiotis, S. (2019). Emotional intelligence and tacit knowledge management in hospitality. Journal of Tourism, Heritage & Services Marketing, 5(2), 3-10. https://doi.org/10.5281/zenodo.3601651.

Bardauskaitė E., Jakimavičienė A., Sadauskienė R. (2016). Priešmokyklinio amžiaus vaikų socialinės kompetencijos ugdymas per patirtį// Mokslo taikomieji tyrimai Lietuvos kolegijose. Vol 1 No 12.

Cooper P., McIntyr D. (1994). Patterns of interaction between teachers' and students' classroom thinking, and their provision of learning opportunities//Teaching and Teacher Education. No.6.

Chang V., Fisher D. (2003). The Validation and Application of a New Learning Environmemnts. A Future Perspective. New Jersey, World Scientific Publishing CO. Pte. Ltd.

Fu, J., & Kapiki, S. T. (2016). Reengineering knowledge for e-tourism and hospitality curricula. Journal of Tourism, Heritage & Services Marketing, 2(2), 23-32. https://doi.org/10.5281/zenodo.376345.

Key competences for lifelong learning (2006). European Recommendation 2006/962/EC. European Commission, Luxembourg. [online] [06.12.2012]. Available at: http://europa.eu/legislation_summaries/education_training_yo uth/lifelong_learning/c11090_en.htm

Levin K. (1999). Lauko teorija ir mokymasis. M. Garbačiauskienė (sud.). Psichologai apie žmogaus raidą. Vilnius, Aušra.

Misirlis, N., Lekakos, G., & Vlachopoulou, M. (2018). Associating Facebook Measurable Activities with Personality Traits: A Fuzzy Sets Approach. Journal of Tourism, Heritage & Services Marketing, 4(2), 10-16. https://doi.org/10.5281/zenodo.1490360.

Mitsiou, Dimitra: The flipped classroom learning model as a means for acquiring the 21st century skills - In: Journal of Contemporary Education, Theory & Research 3 (2019) 2, S. 16-23 - URN: urn:nbn:de:0111-pedocs-190032.

Nair, R., & George, B. P. (2016). E-learning adoption in hospitality education: An analysis with special focus on Singapore. Journal of Tourism, Heritage & Services Marketing, 2(1), 3-13. https://doi.org/10.5281/zenodo.376329

Sigala, M. & Christou, E. (2007). Exploiting Web 2.0 in open and distance education: Developing personalised and collaborative learning environments. In A. Lionarakis (ed.), Proceedings of the 4th International Conference on Open and Distance Learning-ICODL 2007 (pp. 181-195). Athens: Propombos.

Skapinaki, A., & Salamoura, M. (2020). Investigating primary school quality using teachers' self-efficacy and satisfaction. Journal of Tourism, Heritage & Services Marketing, 6(1), 17-24. https://doi.org/10.5281/zenodo.3603340.

Tabachnik, B. G., Fidell, S. (2007). Using Multivariate Statistics (5th Ed.). Pearson Education, Inc., p. 607-675.

Vatou, Anastasia; Vatou, Athina: Collective teacher efficacy and job satisfaction. Psychometric properties of the CTE scale - In: Journal of Contemporary Education, Theory & Research 3 (2019) 2, S. 29-33 - URN: urn:nbn:de:0111-pedocs-190047