

## DEVELOPMENT OF KEY COMPETENCES THROUGH SERVICE-LEARNING<sup>1</sup>

### DESARROLLO DE COMPETENCIAS CLAVES A TRAVÉS DEL APRENDIZAJE-SERVICIO

**Alžbeta BROZMANOVÁ GREGOROVÁ / Zuzana HEINZOVÁ / Katarína KURČIKOVÁ / Lívia NEMCOVÁ / Jana ŠOLCOVÁ**

#### Resumen

La contribución responde a la pregunta de cuáles son los beneficios del aprendizaje-servicio en el desarrollo de las competencias clave de los estudiantes de profesiones solidarias. Utilizamos una combinación de métodos de investigación para responder a la pregunta de investigación. La muestra de la encuesta estuvo formada por estudiantes de trabajo social, pedagogía social y educación que se graduaron en las materias con estrategia de servicio-aprendizaje en los años académicos 2014/2015 a 2017/2018. Los resultados de la investigación mostraron los beneficios del aprendizaje a través del servicio en el desarrollo de competencias clave seleccionadas de estudiantes de profesiones solidarias.

#### Palabras clave

Educación superior, estudiantes universitarios, aprendizaje-servicio, competencia.

#### Abstract

The contribution answers the question as to what the benefits of service-learning in the development of key competences of Slovak university students of caring professions are. We used a combination of research methods to answer the research question. The survey sample was made up of students of social work, social pedagogy and teaching who graduated in the subjects with service-learning strategy in the academic years 2014/2015 to 2017/2018. The results of the research showed the benefits of service-learning in the development of selected key competences of students of caring professions.

#### Keywords

Higher education, University students, Service Learning, Competency.

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**Recepción:** 21/XII/2018

**Revisión:** 06/II/2019

**Aceptación:** 18/II/2019

**Publicación:** 31/III/2019

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### 1. INTRODUCTION

**T**he term “caring professions” defines a group of professions that are based on professional assistance to other people. They include, for example, health professions, pedagogical professions, professions focused on social assistance, but also psychologists and therapists. These professions have some common features that distinguish them from other occupations. Carrying them out requires a relationship with the client and the involvement of one's own personality helping the work process. Caring professions are a system where, on the one hand, helping (psychologist, social worker, teacher, nurse, doctor...), and on the other hand the person we have to help (client, pupil, student, patient...) (Geringova, 2011).

The preparation of experts for the performance of the caring professions is determined by several factors. One of the most important, there are the needs from real life and reflections of the state of society and its problems. These factors determine to a large extent both the content and

the objectives of education. The aspect of tertiary education in the field of caring professions, however, is not only formed by real life itself but also the requirements for university education in general. In recent decades, the interest of universities has shifted from the original focus to two main roles: education and research, acting as key actors in economic and cultural development, and the transformation into institutions engaged in industry and society in general (Etzkowitz, Webster, Gebhardt, Cantisano Terra, 2000; Vorley & Nelles, 2008). Today's universities are considering their role society and their relations with its constituent parts, institutions and communities. This link between tertiary education and society is considered the third mission of universities. The third mission concept generally includes many of the emerging requirements in relation to universities, in particular the requirement to play a more prominent role in stimulating the use of knowledge to achieve social, cultural and economic development. A strategy, which has been successfully developed in the context of the third mission of universities for several decades around the world, is the service-learning strategy. Thanks to this strategy, universities are able to perform their core missions in a comprehensive manner

and prepare a new generation of professionals who can integrate their acquired academic qualities and professional competencies with social responsibility and an active implementation of their civic roles in society. As explained by Benson, Harkavy & Puckett (2007), it is an approach to bridge the gap between higher education institutions and society by increasing the civic engagement of students and narrowing the gap between universities and communities. The other starting point for the transformation of education is the emphasis on developing and shaping the so-called key competencies. The development of key competencies is one of the starting points for the reform of education systems at various levels of education, not just university education. The aim of this study, in the context of these challenges, is to highlight the potential for developing key competences of students in the caring professions through the service-learning strategy.

## **1.1. Key competencies in the caring professions**

The competencies are skills, knowledge, practical behaviour and attitudes that inform about how we work in our working life. Knowing which competencies are relevant to our role is very important. They help identify the needs of development, and at the same time determine where each individual can use their natural talents.

The notion of competence is understood differently in the specialist literature. According to Mlák (2005), differences in the definition of competences are caused also by the fact that

there is insufficient distinction between the notion of competency in relation to one another, i.e. the competency in relation to the ability of a person to perform work well and competences in relation to work which indicate the competence, qualification, potential required by a particular job. Mužík (2012) describes professional competence as a worker's ability to occupy a certain job position, to play working roles and to achieve a desirable level of work performance. According to Veteška and Tureckiová (2008), the meaning of the word of competence is used in relation to the ability to perform the work or part of the work competently or also to a set of behaviours (how one should behave in order to carry out their work competently). The first concept is used for the area of behaviour and refers to personality (competence). Elichová (2017) states that competencies are a hypothetical construct that we believe to be conducive to behaviour in the performance of work. Therefore, most competency models are behaviourally defined, which means "how they are manifested", in practice it means to work at a certain level. Basically, what we do is reflect competencies, and we believe that when we understand what a key factor in the success of the profession is, then we can work with them, choose people, train and develop.

Systems of professional competence of the caring professionals are country-specific. In this area, some uniqueness of the core or standard is also provided by international organizations and associations. For example, in 2004, the International Association of Schools of Social Work and the International Federation of Social Workers both

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adopted a Global Standard for Education and Training in Social Work, which contains a definition of basic competencies which graduates of social work courses should have at their disposal.

In addition to defining competencies that bind to a particular profession or profession in the field of caring professions, we meet with the concept of so-called key competencies (also referred to as cross-sectional or transversal competencies). The concept of key competences came about in the 1970s in the field of economics where it represented a set of specific requirements for the job seeker. In the late 1990s, this concept also reached the education sector as a bridge between the demands placed by employers on the job market and the competency profile of school graduates (Blaško, 2013). Similar to the concept of competence, the notion of key competence is defined differently and there is no unambiguous agreement in this area. Belz and Siegrist (2001) define *key competences* as competencies and skills that enable individuals to successfully integrate into social and working life, i.e. to hold different job positions and functions, to tackle unpredictable problems and to cope with rapid changes in work, social and personal life. Hrmo and Turek (2003a), Turek (2008), consider *key competences* as the most important competences in a set of competencies. They are suitable for solving many unpredictable issues and can help the individual to cope with rapid changes in work, personal and social life. The European Commission (2007) defines *key competences* as a portable and multifunctional set of knowledge, skills and attitudes that every individual needs

for their personal fulfilment and development, for their involvement in society and their successful employability. Experts agree that *key competences* should be learned by individuals during compulsory schooling, but also in non-formal education or informal learning, and to develop them throughout their lives.

Several models of key competency sets are currently being developed. A unifying tool for these models should be the Recommendation of the European Parliament and the Council of the European Union of 18 December 2006 for the European reference framework on key competences for lifelong learning, comprising eight key competences: communication in the mother tongue, communication in foreign languages, mathematical competence and basic competences in science and technology, digital competence, learning to learn, social and civic competences, sense of initiative and entrepreneurship, and cultural awareness and expression. The division of key competences into individual areas is orientational, individual competencies are mutually intertwined and complementary.

According to Belz and Siegrist (2001), key competencies help the individual to cope with reality and manage the demands of a flexible world of work. They state that key competencies go beyond the limits of individual expertise, have a longer life than expertise and are the basis for further learning. According to Veteška (2011), key competencies, together with specific professional competencies and competence in the field of methods, form the basis for qualified and competent performance of

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individuals and the functioning of the organization. At the same time, the acquired and adequately utilized key competencies become the guarantee of employability and the integration of their bearer into different social structures.

In the context of caring professions, key competencies can be considered as one of the core competencies of the profession, and in some cases professional and key competencies are mutually intertwined. For example, the ability to work in a team is one of the professional competencies, but it also belongs to key competencies. The prerequisite for successful and effective communication with the client is the development of key communication competencies and so on.

Despite the emphasis on the need for the development of key competencies, the analysis of the cross-sectional competency at Slovak universities (Vančo, Srnánková, Blanár, Slovíková, 2016) concludes that Slovakia lacks the concept of developing cross-cutting competencies in a university environment. Such concepts are also lacking at universities. Cross-sectional competencies are consequently developed rather intuitively and as an integral part of teaching, not as explicit learning objectives.

## **1.2. Possibilities for developing key competencies through service-learning strategy**

Developing key competences also plays a key role in teaching and learning strategies, trainings, programmes, or modules. Strategies are

broken down according to the preference they develop. However, it is self-evident that individual educational or learning strategies simultaneously target several key competencies (Belz & Siegrist, 2001).

One of the teaching strategies that has the potential to develop key competencies is service-learning. The term service-learning as a denotation of a learning strategy dates back to the 1960s in the United States of America and has been gradually applied to all levels and types of schools. Over the years, service-learning has been characterized in various ways. The various definitions can be grouped into specific categories, i.e., service-learning as a kind of education, a philosophy, and even a phenomenon (e.g. Jacoby, 1996; Moore & Lan Lin, 2009). Over the years, service-learning has been described as a movement and a field (Eyler & Giles, 1999), pedagogy (Bringle & Hatcher, 1995, Tapia, 2003), and learning technique (Cohen & Kinsey 1994).

Service-learning is often known in the literature as pedagogy that combines the service to the community with learning opportunities offered to the involved students (Heffernan, 2001). Service-learning is generally described as a balanced approach to experiential education that can ensure equal focus on both the service provided to the community and the learning that is occurring. In other words, service-learning is perceived as a method by which students can learn and develop social and professional competencies through active participation in community-oriented experiences that are connected to their

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academic curricula and provide them with reflective opportunities (Furco, 2011). Nowadays, international consensus defines service-learning through three key characteristics: 1) a focus on efficiently and effectively addressing needs with a community, and not just for the community; 2) active student involvement in all stages from planning to assessment; 3) intentionally linked to learning content (curricular learning, reflection, development of skills for citizenship and work, research) (Carla, 2017).

Studies focusing on validating service-learning and its connection to the third mission of universities deal with impact on students, on university and its teachers, and on target community of service-learning activities. The impact on students is analysed most often. Research studies documented that service can have significant positive effects on several aspects related to the academic performance of students, social and personal development, as well as active citizenship. Several studies documented also impact on chosen key competences of students. See for example: Astin & Sax, (1998); Celio, Durlak & Dymnicki, (2011), Conrad & Hedin, (1991); Eyler, Giles & Braxton, (1997); Eyler & Giles (1999); Eyler, Giles, Stenson & Gray (2001); Fiske (2001); Melchior, A. Frees, J., LaCava, L., Kingsley, Ch., Nahas, J., Power, J., Baker, G., Blomquist, J., George, A., Hebert, S., Jastrzab, J., Helfer, Ch. & Potter, L. (1999); Morgan & Streb (2001); Reed, Jernstedt, Hawley, Reber & DuBois (2005); Simons & Cleary (2006) Williams, King & Koob (2002) and many others.

Thanks to instrumental and innovative service-learning focusing on the social and professional development of students as well as community needs, we are currently experiencing the development of service-learning programmes at universities around the world. In Slovakia, service-learning for the academic public and educational practice is a new and still almost unknown pedagogical strategy. In recent years, this strategy has been spreading, especially from one of the Slovak universities - Matej Bel University in Banská Bystrica, not only within its internal environment but also in a wider context.

Since the beginning of the application of service-learning at Matej Bel University, the objective has been to empirically document the individual implementation phases and outputs of the application. Continuous findings are documented in several studies. One of the expected benefits of the application of service-learning is the development of key competences for students, so we have decided to empirically verify this aspect of strategy implementation in the classroom.

## 2. METHODOLOGY

In this paper, we try to find the answer to research question: what are the benefits of service-learning in the development of key competences of Slovak university students of caring professions?

Our research had an experimental design. The experimental group of students in caring professions completed a two-semester selective

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course Service Learning designed for students of all degree levels from various study programmes. An interdisciplinary team of teachers leads the subject from various university departments, and its concept is based on a survey of the needs among students at Matej Bel University (MBU). The aim of the subject is to develop the competences of students needed to implement activities for the benefit of other people, to develop key competencies and competencies in project management. The first part of the subject is realized in the form of several learning blocks. By using creative and activation methods of learning, students acquire theoretical knowledge as well as practical experience in group dynamics and team roles. They are aware of the need for consistent planning as well as planning in time, by practical analysis, they recognize the necessity of correspondence of the objective and the target group with a selection of promotion tools, they train in communication in model situations, they acquire budgeting skills, and so on. Reflection proceeds to self-evaluation and evaluation of each activity. In the second phase of the subject, the focus of the activity is transferred to the students who aim to identify their own needs, the needs of the community and school and create activities aimed at meeting the identified needs no later than the end of the summer semester of the respective academic year. In this work they continue to work with their teachers in the form of mentoring. At least twice a month, the suitability of the selected activity as well as its planning, implementation and evaluation are consulted on. At the end of the summer semester, all the students meet together to present to

one another and to the public the activities they have conducted and the outputs, they reflect on their own learning process and evaluate the whole course of the subject.

The research data on the assessment of the change in the subjectively perceived level of key competences of students was obtained through the Competence Questionnaire in paper-and-pen form. The students filled out the competence questionnaire voluntarily before and after completing the subject of Service-Learning (experimental group). At the same time, the control group also completed the questionnaires. We collected the data in the academic years 2014/2015, 2015/2016, 2016/2017 and 2017/2018.

The experimental group consisted of 114 respondents, whereas the control group consisted of 30 respondents. The research groups were equal in gender portion, study program and year of study. The time interval between the pre-test and post-test was 6 to 7 months.

The students considered 32 specific abilities and skills in total, with the individual skills described in more detail to avoid misinterpretations. The level was judged by a 5-point Likert scale (where 1 meant "very low skill, ability" and 5 "very well-developed skill, ability").

The basic framework for establishing the list of competences was the Recommendation of the European Parliament and of the Council of the European Union of 18<sup>th</sup> December 2006 on key

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competences for lifelong learning, European reference framework and competences included in the on-line tool for validation of competences gained through volunteering D-Skills for Employment. The questionnaire maps the following key competences:

- *Communication competences* (readiness to speak in one's mother tongue and in foreign languages) - 4 skills (the ability to communicate in the mother tongue, the ability to communicate in a foreign language, the ability to listen to others, the ability to participate in the discussion) are assessed.
- *Digital competences* (readiness to use information technologies and handling information) - 2 skills (computer skills and internet skills) are assessed.
- *Competences in solving problems* (readiness for creative, critical and independent problem solving) - 3 skills (ability to perceive and analyse problems and solve independently and creatively, ability to decide and think critically, ability to cope with stress and work in demanding and stressful situations) are assessed.
- *Learning to learn competences* (readiness to Learn) - 2 skills (learning and using new knowledge, ability to self-stimulate learning) are assessed.
- *Social and personal competences* (readiness for relationships with other people, self-development and self-regulation) - 6 skills (ability to develop and manage their personality, self-esteem and self-confidence, ability to participate in team work, adaptability and

flexibility, responsibility and reliability, ability to tolerate others).

- *Sense of initiative and entrepreneurship* (readiness for employability, executing one's ideas, sense of initiative and entrepreneurship, creativity, risk-taking, building and development of one's professional career) - 9 skills (entrepreneurial attitude and thinking, ability to manage projects, ability to present and promote, ability to organize one's time, ability to plan and organize work, ability to adapt to working conditions, ability to lead meetings, ability to lead other people, ability to orientate oneself to one's client) are assessed.
- *Civic and cultural competences* (readiness to engage in civic life and support of cultural values) - 4 skills (respect for laws and standards, ability to provide assistance in critical situations, cultural heritage protection, environmental protection) are assessed.

The data reliability was determined by Cronbach's alpha, and the pre-test and post-test results presented in Table 1 point to the satisfactory reliability of our research sample data. All Cronbach alpha values approximate or exceed the coefficient of 0.7.

Statistical analysis of data was performed through SPSS 19.0. The data of our set did not show a normal distribution, so we detected the difference in the subjectively perceived level of competence before and after completing the Service Learning course by means of the Wilcoxon test and Mann-Whitney test.



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Table 1. Data Reliability (Cronbach's alpha).

| Competences                              | Test  | Retest |
|--|-------|--------|
| Communication competences                | 0.708 | 0.737  |
| Digital competences                      | 0.719 | 0.78   |
| Competences in solving problems          | 0.738 | 0.781  |
| Learning to learn                        | 0.659 | 0.688  |
| Social and personal competences          | 0.818 | 0.803  |
| Sense of initiative and entrepreneurship | 0.847 | 0.889  |
| Civic and cultural competences           | 0.788 | 0.865  |

The research data on the subjective perception of the benefits of completing the subject with the service-learning application was investigated by content analysis of the written self-reflections of the students which they fill in after completing the subject. Self-reflection is structured into several areas of intrapersonal and interpersonal dimensions. We performed the analysis of qualitative data through Excel. We proceeded with the coding method, the core categories being the key competences identified in the Competency Questionnaire. The reliability was issued through direct quotations from self-reflection, double coding and coding by two researchers.

## 3. RESULTS

The descriptive indicators for key competences assessed by Competency Questionnaire (Brozmanová Gregorová, 2014) are presented in Table 2.

In the experimental group, we noted statistically significant differences in the subjective assessment of the level of development of key competences of students before and after completing the subject based on the overall service-learning strategy and in 6 competences out of 7. Only in Sense of initiative and entrepreneurship a statistically significant difference was not recorded. All differences are in favour of testing after completing the subject. In the control group (Table T3), a difference was recorded in 4 out of 7 competences as well as in competences overall.

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Table 2. Descriptive indicators of all variables in a sample of the Slovak university students – experimental group (N=114) and control group (N=30).

|   |        | Experimental group |       |       |        |        | Control group |       |       |        |        |
|---|--------|--------------------|-------|-------|--------|--------|---------------|-------|-------|--------|--------|
|   |        | Med                | M     | SD    | Skew   | Kurt   | Med           | M     | SD    | Skew   | Kurt   |
| <b>Communication competences</b>                | Before | 3.6                | 3.592 | 0.598 | -0.553 | 0.978  | 3.8           | 3.720 | 0.625 | -1.359 | 3.344  |
|   | After  | 3.8                | 3.860 | 0.509 | -0.003 | -0.805 | 3.6           | 3.480 | 0.785 | -0.523 | 1.160  |
| <b>Digital competences</b>                      | Before | 4.0                | 3.907 | 0.672 | -1.020 | 1.928  | 4.0           | 4.023 | 0.835 | -1.563 | 4.668  |
|   | After  | 4.0                | 4.037 | 0.625 | -0.438 | -0.295 | 3.7           | 3.743 | 0.843 | -0.405 | 0.890  |
| <b>Competences in solving problems</b>          | Before | 3.3                | 3.907 | 0.672 | -0.314 | -0.081 | 3.7           | 3.443 | 0.729 | -1.264 | 3.071  |
|   | After  | 3.8                | 4.037 | 0.625 | -0.386 | -0.066 | 3.0           | 3.290 | 0.757 | -0.676 | 1.313  |
| <b>Learning to learn</b>                        | Before | 3.5                | 3.365 | 0.504 | -0.140 | 0.135  | 4.0           | 3.585 | 0.744 | -1.383 | 1.588  |
|   | After  | 4.0                | 3.770 | 0.469 | -0.551 | 0.603  | 3.5           | 3.535 | 0.861 | -0.371 | -0.079 |
| <b>Social and personal competences</b>          | Before | 3.8                | 3.748 | 0.666 | -0.909 | 2.134  | 4.1           | 4.017 | 0.604 | -1.690 | 4.680  |
|   | After  | 4.0                | 4.050 | 0.517 | -0.087 | 0.047  | 3.8           | 3.700 | 0.641 | -0.518 | 0.596  |
| <b>Sense of initiative and entrepreneurship</b> | Before | 3.2                | 3.232 | 0.621 | -0.112 | -0.355 | 3.3           | 3.386 | 0.572 | 0.096  | -0.856 |
|   | After  | 3.6                | 3.596 | 0.615 | 0.190  | -0.232 | 3.2           | 3.322 | 0.617 | 0.776  | 0.037  |
| <b>Civic and cultural competences</b>           | Before | 4.0                | 3.860 | 0.733 | -1.051 | 2.665  | 4.3           | 4.033 | 0.782 | -1.307 | 2.423  |
|   | After  | 4.0                | 3.978 | 0.683 | -0.773 | 1.990  | 3.8           | 3.658 | 1.054 | -0.697 | 0.124  |
| <b>Total</b>                                    | Before | 3.6                | 3.546 | 0.532 | -0.776 | 1.314  | 3.8           | 3.715 | 0.540 | -1.585 | 4.754  |
|   | After  | 3.8                | 3.833 | 0.463 | 0.096  | -0.012 | 3.6           | 3.509 | 0.582 | -0.760 | 2.415  |

Note: Skew – Skewness; Kurt – Kurtosis.

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Table 3. Differences in the subjective assessment of the level of competence development before and after completion of the subject Service-learning in experimental group (N = 114) and control group (N=30).

|   |        | Experimental group |            |        | Control group |           |        |
|---|--------|--------------------|------------|--------|---------------|-----------|--------|
|   |        | Med                | Z          | CLES   | Med           | Z         | CLES   |
| <b>Communication competences</b>                | Before | 3.6                | -4.444a*** | -0.416 | 3.8           | -2.550a*  | -0.466 |
|   | After  | 3.8                |            |        | 3.6           |           |        |
| <b>Digital competences</b>                      | Before | 4.0                | -2.000a*   | -0.187 | 4.0           | -2.567a** | -0.469 |
|   | After  | 4.0                |            |        | 3.7           |           |        |
| <b>Competences in solving problems</b>          | Before | 3.3                | -5.043a*** | -0.472 | 3.7           | -1.773a   | -      |
|   | After  | 3.8                |            |        | 3.0           |           |        |
| <b>Learning to learn</b>                        | Before | 3.5                | -4.665a*** | -0.437 | 4.0           | -0.451a   | -      |
|   | After  | 4.0                |            |        | 3.5           |           |        |
| <b>Social and personal competences</b>          | Before | 3.8                | -4.860a*** | -0.455 | 4.1           | -2.926a** | -0.534 |
|   | After  | 4.0                |            |        | 3.8           |           |        |
| <b>Sense of initiative and entrepreneurship</b> | Before | 3.2                | -5.530a*** | -0.518 | 3.3           | -0.526a   | -      |
|   | After  | 3.6                |            |        | 3.2           |           |        |
| <b>Civic and cultural competences</b>           | Before | 4.0                | -1.485a    | -      | 4.3           | -2.533a*  | -0.466 |
|   | After  | 4.0                |            |        | 3.8           |           |        |
| <b>Total</b>                                    | Before | 3.6                | -5.827a*** | -0.546 | 3.8           | -3.105a** | -0.567 |
|   | After  | 3.8                |            |        | 3.6           |           |        |

Note: Med –median, CLES – Common Language Effect Size

In the testing of differences between experimental and control group before the intervention, we found out significant statistical differences only in Social and personal competences (1239.5) in favour control group. Apart from the diffe-

rences in the groups at the perceived level of competence development before and after the service-learning, we were interested in whether there was a difference between the groups in the post-tests.

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Table 4 presents the results of our Mann-Whitney statistical test, where a statistically significant difference in communication competences, competences in solving problems, social and

personal competences, sense of initiative and entrepreneurship competences as well as competences overall has been demonstrated. The differences were week and average size.

*Table 4. Differences in the subjective assessment of the level of competence development between the experimental and the control group after completing the service-learning.*

|   | <b>Group</b> | <b>Med</b> | <b>U</b> | <b>CLES</b> |
|---|--------------|------------|----------|-------------|
| <b>Communication competences</b>                | Exp          | 3.8        | 1179**   | 0.311       |
|   | Contr        | 3.6        |          |             |
| <b>Digital competences</b>                      | Exp          | 4.0        | 1331     | -           |
|   | Contr        | 3.7        |          |             |
| <b>Competences in solving problems</b>          | Exp          | 3.8        | 1155.5** | 0.324       |
|   | Contr        | 3.0        |          |             |
| <b>Learning to learn</b>                        | Exp          | 4.0        | 1444     | -           |
|   | Contr        | 3.5        |          |             |
| <b>Social and personal competences</b>          | Exp          | 4.0        | 1189.5** | 0.304       |
|   | Contr        | 3.8        |          |             |
| <b>Sense of initiative and entrepreneurship</b> | Exp          | 3.6        | 1237.5*  | 0.276       |
|   | Contr        | 3.2        |          |             |
| <b>Civic and cultural competences</b>           | Exp          | 4.0        | 1437.5   | -           |
|   | Contr        | 3.8        |          |             |
| <b>Total</b>                                    | Exp          | 3.8        | 1124**   | 0.343       |
|   | Contr        | 3.6        |          |             |

Note: Med – median, Exp – Experimental Group, Contr – Control Group; CLES – Common Language Effect Size

## 3.1. Communication competences

In the area of communication competences, statistically significant differences in the subjective assessment of the level of development of specific abilities and skills were recorded in 3 out of 5 (however, in all, the average assessment was higher in the output assessment than in the input). It was the ability to work with information ( $p = 0.048$ ), ability to participate in a discussion ( $p = 0.000$ ) and the ability to communicate in a foreign language ( $p = 0.014$ ). The development of communication competences is confirmed by the self-reflection of students:

*"Afterwards I learned to communicate more efficiently."*

*"I also expanded my communication skills."*

*"I've learned that I have a very good ability to communicate efficiently with different types of people because I know how to quickly adapt to their way of communication."*

*"I discovered that I had the ability to actively listen to others..." "... and I also liked being among them and listened to them and enjoyed observing how they live and experience life."*

*"I learned how to communicate more and discuss with my colleagues and the wider public."*

*"I've learned to communicate better by e-mail at the official level."*

## 3.2. Digital competences

Digital competences included an assessment of three specific skills. All demonstrated an average assessment of their level higher after completing the Service Learning course. A statistically significant difference in the average pre- and post-course score was recorded in the ability to critically and considered access to available information ( $p = 0.049$ ). The development of critical thinking was also identified in the analysis of the self-reflection of students:

*"It is necessary to hear the opinion of several people and choose the right solution."*

*"I learned to look at things and also from a different point of view."*

*"I've learned that not everything that is written on the internet is usable."*

*"I have once again learned to critically perceive each proposal. Understand the intentions and motives of my group members in relation to the approach to work."*

## 3.3. Competence in solving problems

In the area of problem solving, statistically significant differences were recorded in the average assessment of the level of development of individual capabilities and skills in both input and output testing in two abilities. Students noticed a more developed ability to perceive and analyse

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problems and to solve them independently and creatively ( $p = 0.002$ ) and the ability to cope with stress and work in difficult and stressful situations ( $p = 0.000$ ). Self-reflective expressions of students in the area of problem-solving development related to the following concrete benefits:

*"I've learned to find new solutions to problems."*

*"I realized I had to take responsibility for my decisions."*

*"I was able to perform well under stress."*

*"I learned to endure more in difficult moments and stay in the group, even if we did not succeed." "... I have partly overcome my fear that I have always had in the presence of mentally ill children."*

*"I've learned to be more patient when someone takes longer to do something because it's more difficult for them." "... I've also found that nothing is so difficult, and that I just need to persevere"*

*"... I learned not to give up and go for my goal, which is also very important for a social worker."*

## 3.4. Learning to learn

In the area of learning competences, two specific abilities were assessed: learning and using new knowledge and self-motivation to learn. From the point of view of the students, the ability

they developed both abilities: to learn and use new knowledge ( $p = 0.003$ ) and self-motivation to learn ( $0.007$ ) proved to be a statistically significant development after completing the subject with service-learning strategy. This ability has been documented in self-reflections:

*"It helps me better understand the subject I have."*

*"I can use it in other studies, for example, in other subjects and in creating group work or other school projects."*

*"I can use the acquired knowledge in theory and practice (service-learning) later in the implementation of another project."*

## 3.5. Social and personal competences

In terms of social and personal competences, we have statistically significant differences between input and output scores in four specific abilities and skills in six. Their development was also identified in the students' self-reflection. According to the subjective assessment, students developed the ability to develop and manage their personality ( $p = 0.023$ ) by completing the Service Learning subject. Within this particular ability in self-reflection, they identified in particular the benefits in the field of self-discourse and self-reflection:

*"I learned a lot about myself..."*

*"I was able to identify my shortcomings."*

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*"I discovered that it is very hard for me to work in a team and be part of it."*

*"I learned that I am a team player."*

*"I found out that I was afraid when I had to stand in front of a bigger audience or for a lot of people, especially when I did not have any prepared materials or text I had to talk about or in the presentations I had to have everything worked out, ready, otherwise I would not be able to do it."*

*"I found out that I am very stubborn." "... I've learned a few positive features about myself."*

*"I learned that I am quite easily influenced by others."*

*Based on subjective evaluation, students marked self-esteem and self-confidence as more developed after graduation ( $p = 0.007$ ). Identified statements in self-reflections:*

*"... I learned that I should not give up because, despite so many refusals, there is always at least one person who wants to help."*

*"I have the biggest problem with speaking in front of a lot of people and especially unknown people. I think that through such activities I am more relaxed and gain more confidence in presenting a particular activity."*

*"Thanks to service-learning, there have been a number of ideas that I have begun to implement because I have gained more self-confidence."*

*"I will have more confidence in myself than I had before."*

We also noted statistically significant differences in the ability to participate in team work ( $p = 0.033$ ) and adaptability and flexibility ( $p = 0.02$ ). The following specific statements from students testify to their development:

*"I've improved my teamwork."*

*"Thanks to the jointly selected service-learning activity, I learned how to work more efficiently in a team."*

*"I have more understanding of the importance of what is important in teamwork and how important it is for everybody in the team to have a role and not for everyone to do everything."*

Concerning the responsibility and reliability and ability to tolerate others, we did not notice a statistically significant difference between input and output testing, but the average score was higher at the end of the subject. The following expressions also reflect the development of these abilities:

*"Thanks to the jointly chosen service-learning activity, I learned to be more responsible."*

*"I also learned more responsibility."*

*"I've learned to be more patient when someone takes longer to do something because it's more difficult for them."*

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*"I learned not to judge others and to find enjoyment in small things."*

*"I realized that we are all different and everyone wants to be useful in their team. Everyone thinks differently and we had to adapt because of that."*

*"... I have learned that each client is different but unique because of that and everybody deserves a unique and personal approach."*

## 3.6. Sense of initiative and entrepreneurship

Sense of initiative and entrepreneurship was the largest group of competences under consideration. The statistically significant differences between the subjective evaluation of the level of development before and after the completion of the subject were recorded in 8 of the 9 skills and competences under consideration. We present them together with the identified statements in self-reflection of students specifically:

- ability to manage projects ( $p = 0.000$ )

*"I learned to plan a project budget and to write an application for a grant."*

- ability to present and promote ( $p = 0.000$ )

*"I learned to deal with potential sponsors."*

*"...I have gained experience in addressing potential project partners."*

- ability to organize one's time ( $p = 0.012$ )

*"I've learned to organize my time better."*

*"I learned how to organize my time so that when it was necessary, we could agree on a service-learning meeting, even if I had other plans on some of the days, it was simply that our duties sometimes limited us."*

*"... that I can better organize my free time."*

*"... when I need to revise for exams, I know how to better organize my time."*

- ability to plan and organize work ( $p = 0.005$ )

*"I found out it necessary to start planning and have an alternative plan ready. As there were various problems during the planning of the project."*

*"Start planning ahead and have an alternative plan ready..."*

*"I would be more careful... to better develop the timetable and the plan for the implementation of the activity thereby avoiding unnecessary delay and time wasted..."*

*"I guess I would have started my tasks earlier rather than the last minute."*

*"I would have another timetable, we might have had less stress..."*

*"I've learned for the future that it is necessary to work on the activities in advance," "...I've learned to plan out an activity schedule."*



*"I learned to perform my tasks at the given time because it was always a problem for me."*

- ability to adapt on working conditions ( $p = 0.013$ )

- ability to lead meetings ( $p = 0.004$ )

*"I've learned how important the minutes from meetings are."*

- ability to lead other people ( $p = 0.000$ )

*"I know how to manage and organise group work, how to lead other people."*

*"I am capable of coordinating a group of people."*

- ability to orientate oneself to one's client ( $p = 0.001$ )

*"I have learned that sometimes all it takes is a small change in my point of view to change what would be just another day for someone else into a day where they experience something nice and positive."*

*"I'm proud to have spent an enjoyable time with these people, and I was there just for them at the time." "I'm proud to help these people, and they felt good and pleasant at least for a little while."*

### 3.7. Civic and cultural competences

In the field of civic and cultural competences we didn't find any statistically significant differences. Even in self-reflections we did not identify the development of these abilities. We have also attributed to this area of competence the benefits of developing civic engagement and personal and social responsibility that we have identified in the self-reflection of students, and which are also the subject of independent research:

*"... I've found that helping others can fulfill people more than I thought."*

*"... to not think only of oneself but also on the needs of other people."*

*"It can help me to develop for the better and to see certain facts with a better outlook."*

*"It's a subject that has given me new experience and responsibility towards others."*

*"I would like to be more committed to these real issues in society and things that really work out in the community, and maybe to motivate people more in the future to carry out such similar activities for the community, for society."*

*"I know that helping other people is unavoidable and necessary."*

## 4. DISCUSSION

According to our findings, after completing the subject based on the service-learning strategy, a statistically significant shift in the subjective perception of the level of development of the key competences of the students has occurred. Students in the caring professions who have undergone the subject of Service Learning at Matej Bel University consider their core competences more advanced after graduation than before graduating. Differences were noted in 6 groups of competences and within specific skills and competences at 20 out of 32. In the control group we also found differences in 4 competencies. When comparing differences in post-tests between the experimental and the control group, we found the difference in the four groups of competences as well as in the overall competences, all in favour of the experimental group.

The results of our research correspond to other similar research into the development of skills, competencies or attitudes developed through the service-learning strategy. In the publication *At A Glance: What We Know about the Effects of Service-Learning on College Students, Faculty, Institutions and Communities, 1993-2000* (Eyler, Giles, Stenson, Gray, 2011), the results of dozens of research confirm the impact of service-learning for the personal development of students in personal identity, spiritual growth and moral development, interpersonal development, ability to work with others, leadership and communication skills, reducing stereotypes and promoting cultural and racial understanding;

to develop the ability to apply what the student has learned “in the real world,” on the ability to solve problems, develop critical thinking and cognitive development. Sevin, Hale, Brown, McAuley (2016) confirmed the positive impact of service-learning on the development of self-evaluation of students and their key competences. Their results demonstrate the effectiveness of service-learning as a method of preparing students to work with others in practice. Ramson (2014) states the positive impact of service-learning on the development of the so-called competences for employment that match the key competences we are monitoring. A meta-analysis of 62 studies involving 11 837 students indicated that, compared to controls, students participating in service-learning programs demonstrated significant gains in five outcome areas: attitudes toward self, attitudes toward school and learning, civic engagement, social skills, and academic performance (Celio, Durlak & Dymnicki, 2011).

We realize the limits of our research. The research was conducted on a small sample of students of Matej Bel University who completed the subject of Service-Learning in the academic years 2014/15, 2015/2016 and 2016/2017 and completed both questionnaires and self-reflections (total 114 students). We also approached the control group to confirm the impact of the service-learning graduation on the development of subjectively perceived competencies, but it had a lower number of respondents. The lower number of respondents in the control group is caused by a lower willingness to fill out a series of questionnaires which monitor the selected

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competences in the experimental group and, on the other hand, the “absence” of suitable respondents. The selection is carried out in such a way as to ensure representativeness from the perspective of the year and the study department, the control group according to this criterion was composed of only a low number of possible respondents. We plan to conduct research on a longitudinal basis and to extend it to other variables that are likely to be the determinants of the development of key competences of students through service learning courses (e.g. higher job satisfaction in the service-learning team, duration of activity, etc.).

## 5. CONCLUSION

According to Hrmo and Turek (2003b), key competences are applicable to most professions (and those not yet existing) and serve to solve many and varied problems, in different contexts, to achieve multiple goals, to be applied not only in different professions, but also in different areas of human activity: at school, at work, in social and personal life. The acquisition and improvement of key competences is seen as a lifelong learning process, not only at school, but also in employment, family, cultural, social and political life, etc. Acquiring key competencies is not only a matter of personal effort but requires a favourable social and environmental environment. Service-learning is one of the ways to develop these competencies.

Service-learning provides students with a structured opportunity to personally and profes-

sionally grow, but also be actively engaged and to develop their involvement. Service-learning is a strategy that responds to the challenges of university education and contemporary society and, on the other hand, it needs support and understanding from multiple directions for its development the same as other pedagogical strategies. We realize that the service-learning strategy has its limits and cannot be applied to each subject. However, we believe that by attending any course or form, students encouraged to move from self-education to engaging in their own learning as well as improving life in their neighbourhood.

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## NOTAS

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1. The contribution is the output of the project VEGA 1/0671/17 "The Influence of Service Learning – Innovative Strategy for Education – on Social and Personal Development and Citizen Involvement of University Students".