

# EFFECTS OF A SHORT COURSE TRAINING PROGRAM ON APPROACHES TO TEACHING IN HIGHER EDUCATION: EXAMPLE FROM CROATIA

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## Abstract

*European countries, in accordance with their higher education policy, regulate in various ways the need for additional professional education of higher education teachers. In the Republic of Croatia, despite the recognized need to improve the process of teaching and learning at the higher education level, efforts and activities in this direction are left to the universities.*

*The main aim of the present study was to examine how the participants of the short course training program on approaches to teaching in higher education in Croatia perceived their own teaching and learning competencies before and after attending the program. University teachers from five higher education institutions in the Republic of Croatia participated in the research. The participants assessed agreement with the statements related to various teaching competencies, important for university teachers, on a 5-point Likert-type scale. The results obtained through research quantitative and qualitative methods indicate that the participants of the short course training program on approaches to teaching in higher education evaluate their own teaching competencies better at the end than at the beginning of the program. The obtained results indicate the importance of formal training and improvement of teaching competencies of university teachers and can serve as an assessment of the expediency of the short course training program on approaches to teaching in higher education at the national level and as a basis for comparison with programs implemented at other European universities.*

**Keywords:** *higher education, short course training program, teacher training, university teachers*

## Introduction

The European higher education development policy aims to improve the quality of higher education in the European area, which is clearly visible in European strategic documents after the year 2000. Thus, in numerous documents, announcements, reports, standards, and guidelines, the need for professional development of higher education teachers in the European higher education area is emphasized (Bergen Communiqué, 2005; Berlin Communiqué, 2003; Crosier et al., 2014; COM, 2003; EC, 2011; European Commission, 2014; EC, EACEA and Eurydice 2014; ESG, 2015; EUA, 2009; Fabrice, 2010). Although a significant number of European countries do not require education in teaching competencies as a mandatory requirement for teaching in higher education, the quality of higher education is increasingly becoming a topic of scientific research with a tendency towards standardizing the development of teaching competencies based on standards for primary and secondary education (Postareff et al., 2008).

For quite some time, higher education teachers were expected to be experts in their scientific field (competent researchers), and less attention was paid to the competencies of higher education teachers that involve knowledge and competencies in adapting and transmitting professional knowledge to students and how to stimulate the learning process (Berthiaume, 2009; Martin & Parikh, 2017; Michael & Libarkin, 2016; Postareff et al., 2007).

The importance and need for additional education of university teachers in order to improve the quality of the teaching and learning process began to be emphasized in scientific studies, especially in the late 1990s. In this regard, scientific studies have pointed to the correlation between effective teaching and successful learning (Allan et al, 2009; Ambrose et al, 2010, Postareff et al. 2007; Ramsden, 2003) and the correlation between training and development of teaching competencies of university teachers and a more successful learning process by preparing and organizing student-centered teaching (Butcher & Stoncel, 2012; Gibbs & Coffey, 2004; Postareff et al., 2007; Stes et al. 2010).

However, it is not easy to determine what effective teaching involves, since it is conditioned by numerous factors that directly or indirectly affect it. Nevertheless, if we try to identify the main characteristic of effective teaching in higher education, it can be said that the main characteristic is based on the necessity of putting the student at the center of the teaching process, which involves active student participation in the learning process (Beaten et al., 2010; Damša & de Lange, 2019; Weimer, 2013). An explanation of student-centered teaching includes, among other things, that university teachers possess knowledge and competencies related to setting learning aims and outcomes; recognizing different learning styles among students; knowledge of strategies that encourage active learning; knowledge of different ways of evaluating students as well as the process of self-evaluation (Caffarella & Daffron, 2013; Fink, 2013; Healey 2005; Ramsden, 2003; Struthers et al., 2018; Svinicki & McKeachie, 2014). The aforementioned knowledge and competencies related to effective teaching in higher education clearly indicate that working with students involves competencies that go beyond professional knowledge related to a particular scientific field.

The Republic of Croatia is part of the European higher education area and is affected by the trend of considering the necessity of continuous education of teachers in higher education and the need for additional training in the area of effective teaching for university teachers. A significant step in this direction in Croatia was made in 2014 with the adoption of the Education, Science and Technology Strategy of the Republic of Croatia, which emphasizes the importance of designing and implementing additional programs for acquiring and improving teaching competencies of university teachers. However, to date, no significant progress has been made towards the obligation to implement additional programs on approaches to teaching for university teachers.

At the national level in Croatia, there is still no legal provision that obliges university teachers to complete a short course or training program on approaches to teaching in higher education. Nevertheless, it should be noted that relatively recently, at the initiative of individual faculties in Croatia, short course-training programs have been developed aimed at providing additional education to university teachers in terms of approaches to teaching in higher education. Currently, there are four such programs in Croatia, and one of them has been implemented at the Faculty of Croatian Studies at the University of Zagreb since 2020 and is open to university teachers from other faculties of the University of Zagreb.

The short course training program on approaches to teaching in higher education at the Faculty of Croatian Studies at the University of Zagreb covers topics related to learning theories and student motivation, ways of setting learning outcomes in higher education teaching, conducting active and collaborative learning in higher education teaching, appropriate ways of assessing students, as well as self-evaluation processes and the development of communication and social competencies. Certainly, these topics do not cover the breadth of what effective teaching in higher education entails, but all of the above is often considered in scientific and professional literature as the foundation of teaching work and a prerequisite for a successful teaching and learning process (Allan et al, 2009; Fakhruddinova et al, 2020; Moreira, 2023; Ramsden, 2003; Zhu et al, 2013).

### *Research Problem*

The fact that short course training programs in higher education are not usual lifelong learning programs for university teachers in Croatia has led to a lack of extensive studies on the effects of such programs in improving the quality of teaching and learning processes at the higher education level in Croatia. Therefore, the conducted research can serve as an assessment of the effects of the short course training program on approaches to teaching in higher education at the national level and as a basis for comparison with programs implemented at other European universities.

### *Research Focus*

The research focus was identifying the extent to which there has been a change in attitudes towards teaching competencies and approaches among participants after attending the short course training program on approaches to teaching in higher education.

### *Research Aim and Research Questions*

The main aim of the present study was to examine how the participants of the short course training program on approaches to teaching in higher education in Croatia perceived their own teaching and learning competencies before and after attending the program. Hence, two specific research questions were formulated as follows:

- Which teacher competencies do they consider to be the most important for teaching in higher education?
- Are there differences in the assessment of the importance of certain competencies at the beginning and at the end of the short course training program on approaches to teaching in higher education?

## **Research Methodology**

### *General Background*

This study recognizes the importance of continuous professional development for university teachers, particularly in enhancing their teaching competencies. The short course training program serves as an intervention to provide teachers with the opportunity to enhance their pedagogical knowledge, educational strategies, and overall teaching effectiveness. By comparing the self-assessments at the beginning and the end of the training, the researchers aim to determine the effects of the program in improving teaching competencies. This study seeks to contribute to the existing knowledge on the effect of short course training programs on enhancing teaching competencies and ultimately improving the quality of higher education instruction. The study employed a mixed-methods approach, incorporating both quantitative and qualitative methods. The purpose of combining these research approaches was to gain a holistic understanding of university teachers' perceptions on the importance of teaching competencies.

### *Sample*

For the quantitative data, 31 university teachers were selected according to a convenience sampling method. Convenience sampling is a non-probability sampling method which involves selecting participants based on their accessibility and willingness to participate, rather than

using a random or representative sampling approach (Milas, 2004). Limitations of convenience sampling are the possibility that the sample isn't representative of the entire population and the limited generalizability of the findings. However, this research was focused on a specific group within the relatively small population of university teachers in Croatia and specific characteristics of teaching competencies. Participants were teachers of the Faculty of Croatian Studies, Faculty of Transport and Traffic Sciences, Faculty of Mining, Geology and Petroleum Engineering, Faculty of Philosophy and Religious Studies and Algebra University College, conducted in the period from February 7 to June 10, 2022. 56.2% of the participants were male, and 43.8% were female. The average age of the participants was  $M = 32.7$  years,  $SD = 6.1$ , with a large total age range: the youngest participant was 25, and the oldest was 52 years old. The research was approved by the ethics committee of the Faculty of Croatian Studies.

### *Instrument and Procedures*

Empirical data obtained by the self-assessment by participants, collected by an anonymous questionnaire constructed for the purposes of this study, was used in the present study. The questionnaire was intended for teachers in the higher education system. The participants assessed agreement with the statements related to various teaching competencies, important for university teachers, on a 5-point Likert-type scale. Demographic questions included data on age, gender, university and department where the participants hold classes.

The participants took part in the one-month program by attending six teaching modules in duration: 1) learning theories, learning styles, motivation and lifelong learning, 2) academic achievements ("learning outcomes") in higher education, 3) active and collaborative learning in higher education, 4) monitoring, evaluation and assessment in higher education, 5) digital tools in higher education and 6) communication and social competencies in higher education teaching. Empirical results were obtained using the self-assessment method: at the beginning and at the end of the program, participants filled out questionnaires about attitudes towards the program in general and towards individual aspects of the application of educational principles in higher education teaching, constructed for the present study. 36 participants in the first wave, at the beginning of the program, and 31 participants in the second wave, at the end of the program, participated in the research. The reliability of the applied questionnaire was satisfying; Cronbach's Alpha was  $\alpha = .73$ .

### *Data Analysis*

After gathering the participants' responses, descriptive statistics such as means and standard deviations were obtained. Additionally, the data were coded based on the following variables: gender, the faculty and department where they work, and whether responses were collected at the beginning or at the end of the program. For the purpose of testing differences in perception at the beginning and end of the program, analysis of variance was performed. Qualitative data were collected in a way that participants answered open-ended questions about the competencies that they considered important for work in the higher education system and about competencies that they would like to acquire through future professional training. The answers are categorized into four categories and presented with selected examples in the second part of the Results. The quantitative data were analyzed using the Software Package for Statistical and Social Sciences (SPSS, 20).

## **Research Results**

The results in Table 1 show descriptive data, means and standard deviations, individually for each statement in the questionnaire at the beginning and at the end of the program. The results

presented in this way provide an insight into the perception of the participants about the different examined aspects of the short course - training program on approaches to teaching in higher education. Research Results showed that at the beginning of the program, the highest average marks were assigned to items that emphasized the role of creating a working atmosphere in class ( $M = 4.50$ ,  $SD = 0.56$ ), the role of the lecturer's communication competencies in encouraging students' motivation ( $M = 4.50$ ,  $SD = 0.61$ ) and the importance of motivation for mastering teaching competencies ( $M = 4.46$ ,  $SD = 0.74$ ). The participants also assessed the continuous evaluation during the semester as significant ( $M = 4.42$ ,  $SD = 0.94$ ) and the availability of the program on approaches to teaching in higher education to all university teachers, regardless of their professional titles ( $M = 4.28$ ,  $SD = 1.06$ ). In the self-assessment of competencies, the participants consider themselves competent in using digital tools in lectures ( $M = 4.36$ ,  $SD = 0.76$ ), achieving learning outcomes set at the class level ( $M = 4.23$ ,  $SD = 0.73$ ) and encouraging active and collaborative learning ( $M = 4.19$ ,  $SD = 0.86$ ), and the least competent in presenting content to students by taking into account different learning styles ( $M = 3.33$ ,  $SD = 0.93$ ). The lowest estimates were given to claims of a negative direction: claims that they do not need the program because they have developed teaching competencies ( $M = 2.81$ ,  $SD = 0.95$ ), that programs on approaches to teaching are necessary for teachers in primary and secondary schools, and not to teachers in higher education ( $M = 2.06$ ,  $SD = 1.26$ ), that digital tools in higher education teaching have more disadvantages than advantages ( $M = 1.97$ ,  $SD = 1.25$ ), that they believe that they will not use what they would hear in the program on approaches to teaching in practice ( $M = 1.61$ ,  $SD = 0.73$ ) and that they do not understand the obligation to attend the program on approaches to teaching for university teachers ( $M = 1.58$ ,  $SD = 0.94$ ).

At the end of the program, the participants gave the highest assessments to similar statements as at the beginning of the program: communication competencies of lecturers and their role in motivating students to work ( $M = 4.9$ ,  $SD = 0.30$ ), continuous evaluation during the semester ( $M = 4.71$ ,  $SD = 0.64$ ), encouraging active and collaborative learning ( $M = 4.45$ ,  $SD = 0.68$ ) and using digital tools in teaching ( $M = 4.45$ ,  $SD = 0.77$ ). However, compared to the first step of the research at the beginning of the implementation of the program, an increase was recorded in almost all average responses. In the following, we checked the statistical significance of the change for individual claims.

**Table 1**  
*Descriptive Results on Individual Claims*

	$M_{beginning}$	$SD_{beginning}$	$M_{end}$	$SD_{end}$
I expect that the short course - training program on approaches to teaching in higher education will be useful in my future teaching work.	4.08	0.87	4.32	0.87
I have developed methodological competencies and I think that I do not need this program.	2.81	0.95	2.39	1.05
I expect that the short course - training program on approaches to teaching in higher education will be interesting.	3.86	1.02	4.19	0.91
This program will contribute to the quality of teaching at my faculty.	4.00	0.94	4.39	0.80
I am highly interested in participating in the short course - training program on approaches to teaching in higher education.	3.44	1.25	4.00	1.15
I expect that with the help of the short course - training program on approaches to teaching in higher education, I will gain valuable knowledge and develop useful competencies.	3.92	0.91	4.23	0.80

Teaching competencies are a condition for quality teaching work in higher education.	4.11	0.87	4.65	0.61
Teaching competencies can hardly be acquired through education if one is not a good teacher by nature.	3.26	1.24	3.32	1.22
Teaching competencies can hardly be acquired through education if the individual is not motivated to be a good lecturer.	4.46	0.74	4.39	0.76
Teaching competencies are just as important as professional knowledge for teaching work at universities.	3.97	0.79	4.35	0.95
Short course - training program on approaches to teaching in higher education should be completed by all those who teach at higher education institutions, regardless of their title.	4.28	1.06	4.52	1.03
There should be workshops related to approaches to teaching so that university teachers are familiar with novelties and innovations in the field of higher education pedagogy/methodology.	4.17	0.94	4.52	1.03
I believe that I will not use anything of what I will hear in the framework of the short course - training program on approaches to teaching in higher education in practice.	1.61	0.73	1.52	0.68
I do not understand the obligation short course - training program on approaches to teaching in higher education.	1.58	0.94	1.52	0.96
I believe that the short course - training program on approaches to teaching in higher education should be a legal obligation.	3.39	1.25	3.68	1.38
Short course - training program on approaches to teaching in higher education should have a unique program at the state level.	3.72	1.28	4.00	1.44
In addition to the short course-training program on approaches to teaching in higher education, there should also be various shorter educational seminars and workshops for improving teaching competencies for university teachers, organized at the University level.	3.57	1.01	4.00	1.13
Short course - training program on approaches to teaching in higher education can be useful only by teachers in primary and secondary schools, not by teachers in higher education.	2.06	1.26	1.97	1.30
I believe that I have an excellent command of the subject(s) that I teach at the university.	3.71	1.10	3.87	0.67
I am always well prepared for my lectures/seminars/practice exercises.	4.14	0.72	4.03	0.66
I always prepare professionally and methodically for lectures/seminars/practice exercises.	4.03	0.77	3.84	0.82
I know the basic theories of learning are important for quality teaching.	3.44	0.84	3.58	0.67
I know how to present content to students with different learning styles in mind.	3.33	0.93	3.71	0.64
I am sure that the students understand what I want to achieve in my lectures/seminars/exercises.	3.80	0.68	3.84	0.58
At lectures/seminars/exercises, I make students aware of the importance and need of lifelong learning.	3.61	1.02	4.03	0.84
I understand the importance of setting goals and learning outcomes at the subject level.	4.06	0.75	4.32	0.75
I know how to achieve learning outcomes at the subject level in lectures/seminars/practice exercises.	3.97	0.65	4.13	0.81
I can list the competencies that students have acquired after listening to and passing my course or doing seminars/exercises.	3.94	0.83	4.39	0.56
In lectures, I encourage active and collaborative learning.	4.19	0.86	4.45	0.68

During the semester, I achieve the learning outcomes that I have set at the subject level (which the professor has set at the subject level).	4.23	0.73	4.39	0.67
I create a working atmosphere in lectures.	4.50	0.56	4.48	0.57
I use different teaching methods and strategies to encourage student activity in lectures.	3.97	0.81	4.32	0.54
In my lectures, students are encouraged to engage in higher cognitive processes such as analysis, synthesis, reasoning, making associations...	4.19	0.89	4.26	0.68
I evaluate students' acquired knowledge and competencies during lectures.	3.83	0.75	4.03	0.87
I evaluate student achievements only at the end of the semester.	2.22	0.99	2.71	1.40
It is important to evaluate students throughout the semester.	4.42	0.94	4.71	0.64
I value the learning outcomes that I have set at the subject level (which the professor has set at the subject level).	3.85	0.89	3.97	0.91
I am preparing for the lecture with constructive alignment in mind.	3.43	0.88	3.55	0.89
I consider myself proficient in using digital tools in class.	4.36	0.76	4.45	0.77
Digital tools should be used as little as possible in higher education.	2.03	1.25	1.77	0.92
I use different digital tools in lectures.	3.78	1.15	4.16	1.04
With the help of digital tools, it is not possible to stimulate students' activity and achieve higher cognitive processes.	1.86	0.83	1.87	1.09
Digital tools in higher education have more disadvantages than advantages.	1.97	1.00	1.77	0.96
The communication competencies of lecturers are important for motivating students to work.	4.50	0.61	4.90	0.30
I know appropriate verbal and non-verbal communication techniques.	3.83	0.94	4.06	0.77
Communication with colleagues and students is always stimulating and constructive.	4.25	0.73	4.16	0.69

As shown in Table 2, analysis of variance showed that there are differences in the assessment of participants at the beginning and at the end of the program on some statements. At the end of the program, the participants estimated that teaching competencies are a condition for quality teaching work in higher education with significantly higher estimates ( $M = 4.65$ ,  $SD = 0.61$ ) compared to the estimates at the beginning of the program ( $M = 4.11$ ,  $SD = 0.87$ ,  $F = 8.09$ ,  $df = 64$ ,  $p = .01$ ). Also, the participants estimated their ability to define the competencies that students acquired after listening to and passing the course or completed seminars or exercises as significantly higher at the end of the program ( $M = 4.39$ ,  $SD = 0.56$ ) compared to the beginning of the program ( $M = 3.94$ ,  $SD = 0.83$ ,  $F = 6.38$ ,  $df = 64$ ,  $p = .01$ ). An increase in the average assessment was also recorded in the assessment of the use of different methods and strategies in stimulating student activity in lectures ( $M = 3.97$ ,  $SD = 0.81$  at the beginning and  $M = 4.32$ ,  $SD = 0.54$  at the end of the program;  $F = 4.19$ ,  $df = 65$ ,  $p = .04$ ) and in assessing the role of lecturers' communication competencies in motivating students ( $M = 4.50$ ,  $SD = 0.61$  at the beginning and  $M = 4.90$ ,  $SD = 0.30$  at the end of the program;  $F = 11.21$ ,  $df = 65$ ,  $p < .001$ ).

**Table 2**

*Comparison of Attitudes about Short Course Training Program on Approaches to Teaching in Higher Education at the Beginning and at the End of the Program*

Questionnaire items		SS	df	MS	F	p
Teaching competencies are a condition for quality teaching work in higher education.	Between groups	4.63	1.00	4.63	8.09	.01
	Within groups	36.64	64.00	0.57		
	Total	41.27	65.00			
I can list the competencies that students have acquired after listening to and passing my course or doing seminars/ practice exercises.	Between groups	3.26	1.00	3.26	6.38	.01
	Within groups	33.24	65.00	0.51		
	Total	36.51	66.00			
I use different teaching methods and strategies to encourage student activity in lectures.	Between groups	2.04	1.00	2.04	4.19	.04
	Within groups	31.75	65.00	0.49		
	Total	33.79	66.00			
The communication competencies of lecturers are important for motivating students to work.	Between groups	2.71	1.00	2.71	11.21	< .01
	Within groups	15.71	65.00	0.24		
	Total	18.42	66.00			

The participants were asked four open-ended questions with the aim of determining the competencies that university teachers considered necessary and important for work in the higher education system, as well as competencies that they would like to acquire through future professional training. The questions were asked in the form of asking for an assessment of which contents in the program were the most useful to them, what they would single out as the least useful, whether they had any suggestions for improving the program and which topics within the program they would like to hear more about.

26 out of a total of 31 participants (83.9%) answered the question of what they would consider most useful in the short course - training program on approaches to teaching in higher education. In most of the answers, 8 of them (30.8%), participants mentioned communication and social competencies. The next category of answers related to the application of different methods and techniques in imparting knowledge and encouraging active participation of students in classes, which was stated in 7 answers (26.9%). Six answers (23.1%) emphasized the importance of learning outcomes, five answers (19.2) practice exercises and the practical part of the program, three answers (12%) constructive alignment, two answers each (7%) motivation, communication between participants that enabled the exchange of opinions and different experiences, and the opinion that the entire content of the program was useful. At the individual level, the role of empathy and self-evaluation in the work and professional development of university teachers and the introductory lecture on the importance of methodical competencies of teachers in higher education were mentioned.

Examples of answers to the question about the most useful part of the program with related categories:

Teaching methods, communication, self-evaluation: *Acquiring new knowledge related to teaching methods, students' learning and memorizing, and the importance of good communication. I believe that the teachers are encouraged to ask questions about the quality of their work, which is a good thing.*

Learning outcomes, constructive alignment, self-evaluation: *The program encouraged me to think about how well my lectures and exercises are aligned with learning outcomes and how well I transfer knowledge to my students. Showing video material (films). Encouragement to*



*think about how to restructure my lectures and exercises to encourage logical reasoning in students.*

*Everything: In my opinion, each segment was very useful in its own right, and I cannot single out just one thing. Every lecture and workshop will have a positive effect on my development and my teaching activity.*

19 participants (61.3%) answered the question, which part of the content they heard during the short course - training program on approaches to teaching in higher education they considered least useful. The largest number of responses, 11 of them (57.9%) pointed out that the entire program was useful to a lesser or greater extent. Five participants (26.3%) singled out the theoretical basis as the least useful in their answers, and three participants (15.8%) stated that part of the content was already known to them from before and specifically singled out learning outcomes and methods of evaluating students' knowledge. Individual participants emphasized the need to adapt the content to the target audience - specifically, the definition of learning outcomes should be intended for professors, not teaching assistants; also, prior knowledge that significantly determines the personal benefit of the program, and the unattractiveness of some presentations.

Examples of answers to the question about the least useful part of the program:

*Target audience: I believe that the modules for defining learning outcomes should be adapted to the target audience, the professors. Teaching assistants implement something they did not "write", and the outcomes of the case are often outdated.*

*Everything was useful: In my opinion, there was no useless part because the program is not individual and not everyone has the same prior knowledge and the same abilities.*

*Less theory, more practice: Personally, there was a little too much of a theory for me (but only a little) because this was not my first education like this.*

Suggestions for improving the program were given by 21 participants (67.7%). In their answers, the participants most often singled out the need for additional exercises and practical examples - 9 participants, or 42.9%. An additional emphasis on communication competencies was highlighted in three responses (14.3%), as well as the focus of the program on all teachers, not only assistants, and the proposal to schedule the workshops earlier in the day instead of in the afternoon. At the individual level, suggestions for adapting the content to the specific faculties and departments where the participants teach, more visually attractive presentations with less text, checking the prior knowledge of the participants with the aim of setting the appropriate level of complexity of the program, and continuing the program where all topics would be covered in more detail were highlighted.

Examples of suggestions for program improvement:

*More practice exercises: Focus more on exercises during lectures. Put more emphasis on practicing the communication and teaching competencies of teachers through the type of working group, presentations, etc.*

*Target audience: To involve other teaching staff. To add some more exercises at the end so that we remember the important things as well as possible.*

*Pre-checked competencies: The competencies of the participants should be checked in order to set a certain (appropriate) level of complexity and new knowledge.*

When asked about topics they would like to hear more about, 17 (54.8%) participants answered and highlighted communication and social competencies in the first place in their answers (6 or 35.3% of answers). In second place are different methods and techniques of teaching and motivating students with a total of 5 answers (29.4%). Four participants (23.5%) stated in their answers that they would like to hear more about all topics and work on them in more detail. Three participants (17.6%) mentioned continuous evaluation of knowledge during the semester as a topic they would like to know more about. Two responses each (11.7%) emphasize the importance of competencies for working with students in smaller and larger groups, adapting work to the individual needs of students and different learning styles, and presentation competencies. One participant emphasized the need to acquire knowledge about methods of

reaching disinterested actors in the higher education system, and how to instruct them to correct deficiencies.

Examples of answers:

Work with a large group of students: *How to work with students in larger and smaller groups. How to approach, teach, and evaluate when there are large groups of students.*

Changes on a higher level: *How to reach out to disinterested members of the entire higher education system, and how to instruct them to correct the shortcomings, without taking it as "nonsense".*

Everything: *Actually, I would like to hear more about everything, because, despite the large amount of useful information, I think that we have only scratched the surface and that such workshops are constantly necessary in order to increase the quality of our work and teaching and, in general, some of our personal qualities.*

## Discussion

The main aim of the present study was to examine how the participants of the short course training program on approaches to teaching in higher education in Croatia perceived their teaching and learning competencies before and after attending the program. In the context of assessing the importance of individual competencies, the results indicated the dominance of the lecturer's communication competencies, motivating students, continuous monitoring and evaluation, knowledge transfer with an emphasis on understanding the material, creating a stimulating work atmosphere, and active, collaborative learning. The results are in line with the results of contemporary research that emphasize the importance of the same competencies, with the addition of digital competence, which became a priority during the Covid-19 pandemic (Dervenis et al., 2022). The results showed that university teachers attach great importance to continuous student evaluation during the semester, communication competencies of university teachers aimed at student motivation, and believe that creating a working atmosphere and encouraging active and collaborative learning is important. The participants identified communication and social competencies, verbal and non-verbal communication techniques, and more practical activities as topics they would like to learn more about. Compared to other studies (Fernández-Batanero et al., 2021), the participants placed less emphasis on digital competencies and assessed them as good. Although a significant part of the feedback was of a technical nature (for example, the attractiveness of presentations or the timing of the program earlier in the day when participants' motivation and energy levels are higher - and in choosing the timing, the organizers prioritized the times when participants did not have classes), suggestions for improving the program in the form of greater emphasis on practical activities and communication competencies leave room for program development, but also positive impressions through expressed desires for continuation and more detailed coverage of all topics covered. The diversity of participants' responses to open-ended questions indicates individual expectations and the perceived benefits gained from the short course training program on approaches to teaching in higher education.

The results are in line with previous studies in which oral and written communication and different aspects of teaching planning and delivery were also identified as priorities, along with the addition of information literacy, which participants today likely assume has been achieved to a satisfactory level (Miočić, 2016). Participants also showed a positive attitude towards education in the field of teaching competencies, with confidence in the applicability and usefulness of acquired competencies in teaching, but also voluntary participation in additional forms of education compared to legally prescribed obligations. These results are consistent with the findings of our research, in which participants rated themselves less competent in understanding and applying learning theories, evaluating learning outcomes, teaching based

on knowledge of different learning styles, and constructive alignment. Expected differences in participants' responses at the beginning and end of the program were achieved in the areas of beliefs about teaching competencies as a prerequisite for quality teaching, listing competencies acquired after completing and passing the course, applying different teaching methods and strategies to encourage student engagement in class, and the role of communication competencies in motivating students. These differences were particularly evident in participants' responses to open-ended questions, in which participants once again emphasized communication and social competencies, as well as competencies for achieving active and collaborative teaching. Communication competencies predominated in the frequency of responses to the question of what should be added to the program to provide an even higher quality platform for personal and professional growth and development. Similar positive results, which justify optimism in promoting the significance of programs for developing teaching competencies for university teachers, have been obtained in other studies, in the context of a change in teaching approach among teachers in higher education after only twenty hours of the program on approaches to teaching for university teachers (González-Geraldo and Monroy, 2017), an increase in the proportion of teaching directed towards students (González Geraldo et al. 2021), but also evidence of two-way effects through a perceived deep approach to learning, focus on meaning and understanding of material, among students whose teachers participated in the program to acquire teaching competencies (Marchant et al., 2018).

### **Conclusions and Implications**

This research, in which university teachers participated as part of a short course training program on approaches to teaching in higher education, aimed to explore the perception of university teachers towards such programs and whether there were differences in the perception of their own teaching process among program participants before and after attending the program.

The results suggest that university professors, after completing the program, assess teaching competencies as more important for quality teaching in higher education. In addition, research participants evaluate their competencies related to defining acquired student competencies after attending the course, as well as competencies related to using various methods and strategies to encourage student activity in lectures, and place greater importance on communication competencies as one of the elements of student motivation.

It is important to note that the small number of convenience-sampled research participants who were motivated to attend the training program is the main limitation of the study, which may have affected the results and precluded the possibility of generalization. Nevertheless, given that this is a specific population with similar expectations, interests, and experiences, but also with significant differences in initial knowledge, competency development, motivation, and desire for improvement, the research results indicate that the participants of the short course training program on approaches to teaching in higher education evaluate their own teaching competencies better at the end than at the beginning of the program and provides valuable data on the self-assessment of teaching competencies among university professors and represents a possible basis for the development of new programs as well as future research on the need, justification, effectiveness, and usefulness of short course training programs on approaches to teaching in higher education.

## Declaration of Interest

The authors declare no competing interest.

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