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CORRESPONDENCE

Pavlos Stavridis

 pstavridis@uowm.gr

 Department of Primary Education,
University of Western Macedonia,
Greece.

AUTHORS DETAILS

Additional information about the authors is available at the end of the article.

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RESEARCH ARTICLE

The Contribution of Teaching Practice to Preservice Teachers' Training – Empirical Research of the Department of Primary Education of Western Macedonia University Students' Evaluation

Pavlos Stavridis  · Vasiliki Papadopoulou 

ABSTRACT

Background/purpose – Teaching practice is an essential and integral part of preservice teacher training. In this study, we investigated its role in guiding and supporting student work, and whether or not it contributed to their successful completion of a teacher education program.

Materials/methods – Evaluation was conducted by preservice teachers, who constituted a stable sample throughout the research (approx. 130 students per stage), as they were directly involved and deemed the most competent to evaluate the program. Three different semi-structured questionnaires, with quantitative (closed-ended 5-point, Likert-type scale items) and qualitative variables (open-ended questions) included.

Results – The research data showed that a connection between pedagogical theory and practical application in the classroom was achieved to a satisfactory degree. The preservice teachers recognized the importance of reflecting on the educational process during the final stage of their teaching practice, when they are required to teach on a daily basis. A number of issues were also identified; most importantly, mastering the subject matter of science courses and overcoming the difficulties faced in teaching those subjects.

Conclusion – Based on the study's results and in comparison with previous related research, we find that the evolution of the Teacher Training Program has shown improvement and is perceived more positively by preservice teachers. However, there are still several aspects that require further change and improvement in order to provide preservice teachers with the best and most comprehensive training possible.

Keywords – teacher education, teaching practice program, initial teacher training, preservice teacher training.

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1. INTRODUCTION

Teaching practice has always been an important part of preservice teacher training programs (Darling-Hammond et al., 2017). Its main components include observation and apprenticeship alongside experienced inservice teachers (Peterson, 2005). However, when teaching was finally recognized as a science, teaching practice became an applied theoretical model of apprenticeship; a means of applying the learned theory into practice (Celik et al., 2021; Smith & Lev-Ari, 2005). Today, it is considered a central element of preservice teachers' education and has a special place in the curricula of pedagogical departments (Orishev & Burkhonov, 2021). Teaching practicum involves preservice teachers, mostly during their final year of study, as part of their pedagogic requirement, and is therefore an important and integral component of becoming a teacher (Gebretinsae & Karvinen, 2018).

Teaching practice consists of a framework of observation and teaching, applied in an operational school unit within which each preservice teacher is employed for a specific period of time (Jacobus et al., 2020). In this context, each preservice teacher is primarily trained to transform the theoretical knowledge acquired during their academic studies into actual teaching ability and skills (Poulou, 2007; Zeegers & Smith, 2003).

The process of learning to teach is considered highly complex, personal, lifelong, and can present some learners with certain challenges. Teaching is a profession, like the legal profession, and has its own professional guidelines and procedure in order to serve the public (Han & Laughter, 2019). Teaching incorporates the responsibility to handle students' problems and demands, and requires teachers to familiarize themselves with the context in which they teach. Teaching also simultaneously builds and draws upon multiple bases of knowledge (Baxan & Broad, 2017).

In the process of becoming a teacher, the provision of opportunities for teaching practice plays a vital role. Teaching practice is a practicum which preservice teachers complete mostly during their final year of study as part of their pedagogic requirement (Rowan et al., 2019). It is therefore considered an important and integral component of becoming a teacher, and is specifically targeted at enhancing preservice teachers' abilities to further develop their knowledge and skills learned during their educational courses and to apply them in teaching students in a live school environment.

As noted by Gujjar (2016), *"Teaching practice is an important component of becoming a teacher. It grants students experience in the actual teaching and learning environment"* (p. 345). During teaching practice, preservice teachers will exercise how to draft their own lesson plans and activities, and learn to lead themselves accordingly. They learn appropriate ways of managing the classroom, organizing whole class activities or group-based, facilitating and monitoring student learning, evaluating each lesson they deliver and strengthening their future plans in light of it, and acquiring a solid understanding of the role of a professional teacher (Lautenbach & Heyder, 2019).

Similarly, a study by Mtika (2012) revealed that, *"teaching practicum is integral to trainee teachers' professional development, and shapes their beliefs and thinking about teaching. Trainee teachers consistently describe teaching practicum as the most valuable element of*

teacher education” (p. 552). Through teaching practice, students have time to observe and practice the art of teaching before they start their career as independent teachers. This period of professional practice helps preservice teachers to understand the value of teaching and is perceived as a supportive duty that prepares them for a future in the teaching profession (Kiomi & Ramírez-Montoya, 2021).

Teaching practice values and contribution to the practical professional preparation of preservice teachers has become increasingly recognized at the international level (Argyropoulou, 2005; Britzman, 2003; Melnyk et al., 2021). As an essential complementary element to any scientific professional specialization, it is considered a top priority on a global scale as a link between scientific theory and professional practice (Christoforidou & Kyriakides, 2021); a bridge connecting the theoretical and practical approach to knowledge (Allen, 2009).

In the Greek educational system, teaching practice takes place in the pedagogical departments of both preschool and primary education, and constitutes an integral part of the core studies for preservice teachers (Altan & Sağlamel, 2015). Previous experience from the operation of pedagogical and early childhood education academies (Darling-Hammond, 2010), as well as ideas and experiences from the international arena, together with experimentation during the early years of operation of pedagogical departments in Greek universities (Theodorou, 1998, p. 12) have contributed significantly in the design and establishment of today’s teaching practice programs. In recent years, Greek teaching practice programs have attracted increasing interest among the scientific research community (e.g., Bikos, 2011; Chaniotakis, 2011; Chaniotakis et al., 2006; Doufexi & Pampouri, 2020; Garzón et al., 2020; Kakana et al., 2007; Michalopoulou, 2011; Poulou, 2007; Spiteri & Chang Rundgren, 2020).

The Department of Primary Education of the University of Western Macedonia, based in Florina, Greece, implemented a process of systematic evaluation of their Teaching Practice Program, with the evaluation centered on the perspective of the preservice teachers themselves (Argyropoulou, 2005; Papadopoulou & Dimitriadou, 2007; Papadopoulou & Thoidis, 2008; Papadopoulou et al., 2007; Papadopoulou et al., 2012; Stavridis, 2018; Stavridis et al., 2014; Stavridis et al., 2015; Thoidis et al., 2005; Thoidis et al., 2011).

The preservice teachers were asked to express their degree of satisfaction with the content, organization, and implementation of the program, and to identify any issues or problems, as well as to put forth suggestions for any potential areas of improvement.

The current study focuses on the Teaching Practice Program of the University of Western Macedonia’s Department of Primary Education, and explores its role in terms of guiding and supporting the work of preservice teachers to successful completion of the program. The study presents an empirical investigation of the participant preservice teachers’ views.

2. LITERATURE REVIEW

Teaching practice is undoubtedly a key aspect of modern-day preservice teacher education, offering the opportunity to gain experience from within an actual operational school

environment (Koc, 2012). For this reason, it is considered an integral part of university pedagogical departments, constituting the strongest link between learned theory and professional practice (Rowan et al., 2021). This link helps students to consolidate the academic knowledge received during their university education and then to apply it in practice in their own classroom-based teaching (Papadopoulou & Dimitriadou, 2007, p. 436). Teaching practice is also the longest and most intensive exposure that preservice teachers have to real-world conditions of their chosen profession, enabling them to act with relative freedom whilst under the supervision of a mentor teacher or supervising professor (Cohen et al., 2013, p. 345). In addition, as it is usually undertaken within the final stage of preservice teacher training (Papadopoulou, 2016, p. 71), it is an essential means of assessing their competence, enabling them to apply in practice what they were taught during the theoretical courses of their academic studies (Altan & Sağlamel, 2015, p. 2). Thus, teacher practice holds a special place in the curriculum of pedagogical departments, especially for primary education, and is a required course for graduation from the bachelor's degree course (Darling-Hammond, 2010).

Therefore, as a cornerstone of teacher education programs, teaching practice aims to help preservice teachers to understand and become familiar with the reality and nature of their future professional work (Altan & Sağlamel, 2015), to recognize the connection between the theory taught at university and its application in the real world, prompting them to reconsider their educational decisions. As Poulou (2007) stated, *"It challenges you to use a variety of teaching models, to return to the theories you have been taught, to compare and evaluate the application of these theories in real classroom conditions"* (p.96). Connecting theory to practice is now a key demand of pedagogical education worldwide (Hascher et al., 2004; Hobson et al., 2008; Zeichner, 2010). The main goal of primary education training programs across the world is to prepare, as fully as possible, preservice teachers for their future career, providing them with theoretical support and the opportunity for practical training, in order that they learn to teach effectively in practice (Cohen et al., 2013, p. 354).

At the Department of Primary Education of the University of Western Macedonia (Florina, Greece), teaching practice holds a prominent position in the efforts to ensure that preservice teachers become competent scientists and professionals, and consists of four different aspects: a) pedagogical education, b) special sciences education, c) teaching training, and d) practical training (Papadopoulou & Dimitriadou, 2007, p. 438). The course is combined with the Teaching Methodology and, consequently, with the Teaching Methodology and Student Teaching Practice program (known locally as DI.ME.PA.), which is aimed primarily at the basic teaching training (theoretical and practical) of preservice teachers. The program consists of three separate phases, each with related objectives, content, and organization. It commences during the third semester of preservice teacher education and is completed in the eighth (final) semester, and all phases function as a laboratory (Pedagogical Department of Primary Education of Western Macedonia, 2019).

Phase A (Introduction to the theory of school and instruction) aims at introducing the preservice teachers to the theory and practice of school and teaching, with relevant theoretical lessons conducted within the department and systematic observation at primary

schools. Phase B (Teaching of primary school subjects) is aimed at the theoretical training of preservice teachers in the teaching of primary school subjects, and addresses the development of preservice teachers' planning, conducting, and evaluating skills regarding teaching these courses. Phase C (Training teaching for 2 full weeks at a primary school, with theoretical preparation and feedback) is aimed at introducing preservice teachers to the normal, daily pace of professional work and life at school, being responsible for the pedagogical and teaching work of a class of school students for a period of 2 weeks (Pedagogical Department of Primary Education of Western Macedonia, 2019).

Teaching practice at the Department of Primary Education at the University of Western Macedonia constitutes a significant part of the curriculum, and runs throughout much of the academic education program, starting in the third semester and concluding in the final (eighth) semester. It is organized on three levels, or phases, starting with the gradual introducing of preservice teachers to school life and the classroom through observation, then continuing with the teaching of individual primary school subjects, and finally, assigning the preservice teachers the responsibility to teach a class of school students for about 10 days.

Empirical investigation of the teaching practice programs for preservice teachers and their various parameters has increasingly captured the interest of the scientific community in recent years, with targeted research having been conducted. At an international level, Popova et al. (2022) investigated the effectiveness of professional development programs for teachers, while Loyalka et al. (2019) examined the content of such programs and found that their largely theoretical nature failed to appeal to participants. Finkelstein et al. (2021) and also Wright et al. (2022) attempted to investigate the effectiveness of teaching practices during the training of preservice teachers, while Woodcock et al. (2022) focused on teacher's practical training. In addition, Cilliers et al. (2019) examined the effectiveness of primary school teachers' professional training, as did Sáez-López et al. (2020), who also investigated its development and improvement.

At the national level, a first attempt in Greece to comprehensively evaluate teaching practice was conducted by Argyropoulou (2005), followed by several targeted studies that provided important results regarding the individual stages and phases of the various practical training programs. Papadopoulou and Demetriadou (2007) investigated the effectiveness of Phase A of the program, while Papadopoulou and Thoidis (2008) and also Thoidis et al. (2011) attempted a student-based evaluation of the practical training program. In a study by Raikou (2014), preservice teachers' reflection was investigated, while Stavridis et al. (2015) and Stavridis (2018) focused on Phase B and Phase C of the program, respectively. The current study attempts to address the gap regarding a unified and comprehensive evaluation of the whole Teacher Training Program (i.e., Phases A-C). The purpose is to examine, for the first time, the program in its entirety, continuously and thoroughly, from beginning to end, through all its stages and phases, keeping the sample constant for greater validity, and based on the opinions of the participating preservice teachers, thus providing results that offer significant reliability.

Through an overall assessment of the effectiveness of the Teacher Training Program implemented in the Department of Primary Education at the University of Western Macedonia, we attempted to answer the following:

- 1) Do preservice teachers achieve a connection between the pedagogical theories and teaching practice through the processes and structure of the Teacher Training Program?
- 2) Do preservice teachers engage in the process of analyzing and evaluating the teaching process (reflection process)?
- 3) To what extent do preservice teachers find the positive science subjects more difficult compared to theoretical courses, since most students come from a theoretical orientation in high school?

3. METHODOLOGY

3.1. Research Method

The research method chosen to examine the teaching practice program was case study. This method constitutes a way of approaching reality, an investigation process that is also, at the same time, the final product of the investigation (Cohen et al., 2008, p. 177). Case study is an empirical approach that holistically explores a *system* in its natural environment, which can be a situation, an individual, a group, or an organization (Murray, 2003, p. 3; Robson, 2007, p. 210).

More specifically, we chose a holistic single-case design (Robson, 2007, p. 216) since, according to criteria mentioned by Yin (2003, pp. 39-41), it allows for the investigation of the theoretical framework application, which matches the aim of the current study which is to investigate the conditions under which the Teaching Practice Program is applied in a Greek university. The second reason for choosing this design is based on the assumption that the preservice teachers studying at the Department of Primary Education at the University of Western Macedonia do not differ significantly from those of other Greek universities, and therefore constitute a representative sample. The preservice teachers who took part in the current empirical research were considered a typical sample for a Greek university (exemplifying case; Bryman, 2008, p. 56), in the sense that they present the main characteristics of preservice teachers attending Greek universities and therefore no selection or intervention was applied to this sample.

The researcher was a participant observer, and was also a mentoring teacher for a significant period of the research. Participant observation conducted by a researcher who is, at the same time, a teacher or mentor-supervisor is common practice in research related to teacher education (Yin, 2003, pp. 93-94). This type of research methodology is considered appropriate for educational researchers involved in case studies (Cohen et al., 2008, p. 157), despite criticism having been received regarding the interference of subjective factors (Bryman, 2008, p. 54; Yin, 2003, pp. 22-26).

3.2. Participants

The sample used in the current study, which was stable and rolling, consisted of all students who began their academic studies at the Department of Primary Education at the

University of Western Macedonia in 2014, and who went on to complete their studies in 2017.

In the first part of the research, the participant preservice teachers had completed the third semester of their studies, which is the point at which Phase A of the Teaching Methodology and Student Teaching Practice program is conducted. The study commenced during the 2014-2015 academic year, and a total of 121 preservice teachers took part in this phase of the research. The vast majority (80.2%, $n = 97$) of the preservice teachers were female, with the remaining 19.8% ($n = 24$) being male.

In Phase B of our research, which took place during the 2014-2015, 2015-2016, and 2016-2017 academic years, the same students who continued their studies participated, with some additions that emerged as a result of qualifying exams being held. In total, of 134 preservice teachers took part (male 17.2%, $n = 23$; female 82.8%, $n = 111$).

Phase C was conducted during the 2016-2017 academic year, with a sample of 126 students, noting some losses due to failures in the midterm exams (male 16.7%, $n = 21$; female 83.3%, $n = 105$).

An important characteristic of the stable final sample is that the ratio of male to female students was always maintained as 1:4.

3.3. Instruments

As previously mentioned, the unique and innovative value of this empirical research (Yin, 2003, pp. 14-15) lies in the approach of having followed the same stable sample of students throughout their academic studies (Bryman, 2008), from the third semester (when Phase A of the teaching practice starts) until their final (eighth) semester. Therefore, we were able to observe and investigate the preservice teachers' development throughout the various phases of their teaching practice, to assess whether and to what degree they improved upon any prior weaknesses and difficulties they experienced at the beginning of their academic career, and to evaluate the contribution that the teaching practice offered them. In addition, it was important to see, in the course of their academic studies, if they managed to connect the pedagogical theory with teaching practice, and to develop the ability to design a teaching curriculum under real working conditions as well as to reflect and self-evaluate on a daily basis.

Our research, therefore, was divided into three parts, which followed the structure of the teaching practice phases. Three different semi-structured questionnaires were employed, with one for each stage of the research (Robson, 2007). Through these, we sought to explore the preservice teachers' views on the Teaching Practice Program, assessing their personal experiences and identifying areas where it offered the most constructive resources for their teaching, as well as those that presented significant difficulties in terms of their students' work, with the ultimate goal of improving and correcting any issues.

The questionnaires, for the most part, consisted of closed-ended, 5-point Likert-type scale items. The concept of hierarchical scales (Likert-type scales, semantic differential scales, Thurstone scales, and Guttman scales) concerns how the responses regarding the grading of

items (Oppenheim, 1992, p. 115), as well as their intensity, and distance from the limitations of bifurcated questions (Wilson & McLean, 1994, p. 21) can be addressed. Hierarchical scales are very useful mechanisms for researchers since they incorporate a degree of sensitivity and variability of response, while, at the same time, yielding meaningful quantitative data (Cohen et al., 2012, p. 426). In addition, some open-ended questions were included where participants developed, based on their own experiences, personal views on the operational and organizational issues of the Teaching Practice Program.

3.4. Study Procedure

The research was conducted at the Department of Primary Education and included all students, starting almost from the beginning of their academic studies. A pilot questionnaire was initially administered to a limited sample of students. After editing and applying the necessary corrections, the final questionnaire was distributed, divided into three parts, with each part corresponding to a phase of the teaching practice. The preservice teachers completed the questionnaire at the end of each phase, in the third, seventh, and eighth semesters of their studies. Thus, questionnaires were collected and processed at three distinct time points of the program.

3.5. Data Analysis

At each point that a teaching practice phase ended, data were collected and subsequently analyzed. Qualitative data resulting from the open-ended questions were categorized and then coded for thematic analysis after careful assessment by the researcher (Miles et al., 2014). For the optimal organization of the collected qualitative research material, content analysis was the method chosen since it “is a research technique for making replicable and valid inferences from texts to the contexts of their use” (Krippendorff, 2013, p. 24).

Regarding the analysis of the quantitative research variables, descriptive statistics were calculated using IBM’s SPSS v.20.0 statistical analysis program. To investigate the correlations between the students’ responses to selected questions and to process the research data, Kendal’s tau-b statistical test was used and the observed level of significance (p -value) was calculated using the Monte-Carlo simulation method (Mehta & Patel, 1996). For all statistical tests, the level of significance was preset at $\alpha = .05$ ($p \leq .05$).

4. RESULTS

The data analysis shows that our sample were highly satisfied with the Teaching Practice Program and its contribution to the successful completion of the preservice teachers’ training. Overall, 95% of the respondents stated being satisfied with the way in which Phase A was conducted, with 99.3% satisfied with Phase B, and 96% satisfied with Phase C (see Table 1). From the teaching practice phases, 94.4% were able to better comprehend the teaching theories and methods taught in the theoretical courses, 96.2% were able to better understand the school environment, the classroom, and the dimensions of their future professional role, 84.3% stated that they were able to realize the pedagogical responsibility of teachers towards their students and the importance of their role within the school unit, while

95.2% claimed that they had gained direct experience of the expected daily work and school life associated with their chosen profession.

Table 1. *Satisfaction with conduct of individual teaching practice phases*

	Phase A	Phase B	Phase C
Extremely	9.2	18.7	18.3
Very	31.7	46.3	45.2
Moderately	54.1	34.3	32.5
Slightly	5.0	0.7	3.2
None	-	-	0.8
Total	100.0	100.0	100.0

More specifically, the respondents stated that the teaching practice structure offered significant help and guidance to their work, and that it largely achieved its intended goals (92.6%). One of its most important goals of the program is that preservice teachers are able to connect theory to practice, i.e., assessing whether the theoretical tools that they received during their academic studies were efficiently and effectively transformed into practical application within a real-world classroom environment.

On the first stage of the Teaching Practice Program, through simple observation of classroom teaching, 81.8% of the participant preservice teachers were able to state that the theoretical knowledge that they had received in their academic lectures were transformed in practice through observation of experienced teachers. From the same sample of students, when conducting their first lessons in the following semesters and were therefore called to apply the theory learned in the classroom, 64.7% stated that they achieved this goal. In the final stage, having experienced hour-long teaching sessions themselves, and after taking on the responsibility of teaching a whole class for 10 days, 88.9% claimed being able to connect the theory learned with actual practice (see Table 2).

The preservice teachers, through participating in the Teaching Practice Program, managed to successfully connect the theoretical knowledge they had acquired during their academic studies with its practical application in the classroom; furthermore, taking into account the experience they had gained, however limited, the degree of that connection was found to have become increasingly greater.

Table 2. *Connection of theoretical concepts with practical application*

	Phase A	Phase B	Phase C
Extremely	34.7	21.8	55.6
Very	47.1	42.9	33.3
Moderately	15.7	30.1	11.1
Slightly	2.5	4.5	-
None	-	0.8	-
Total	100.0	100.0	100.0

The vast majority of our sample (90.5%) recognized the important role that theory and practice play in the educational process, remarking that “practice leads to the consolidation of theory,” i.e., whatever is learned on a theoretical level, should be practically applicable in

the classroom, and to recognize that these two concepts are combined in an interrelated manner, where one cannot exist without the other.

Another element of the current research that highlighted the strength of the interdependent relationship between theory and practice was that the theoretical tools they received in the lectures were considered by many to be sufficient so as to make them feel “ready to teach.” Thus, from Phase A, 71.1% of the preservice teachers claimed that they were ready to apply the pedagogical theories that they had been taught in an actual classroom to their own students. As the time passed and they gained more experience, their self-confidence increased, so that 89.6% made the same claim in Phase B, and 88.9% in Phase C.

However, which theoretical courses offered the preservice teachers the most valuable tools in terms of practical classroom teaching? Based on the participants’ responses, we found that educational sciences courses such as pedagogy (34.1%), educational psychology (27.8%), and the core teaching practice course of teaching methodology (23.8%), were deemed to have been the most significant. Through these educational subjects, preservice teachers receive the necessary theoretical knowledge, the *pillars* upon which they will lean and then apply in practice in the process of classroom teaching.

With the preservice teachers having been equipped with the requisite theoretical tools, we then moved on to examine how capable they felt in proceeding to the planning and organization of well-structured teaching, a key goal of the Teaching Practice Program, and especially of Phase B and Phase C. From their hour-long lessons (Phase B), 85.7% of the preservice teachers stated that the knowledge they had received helped them to feel very confident in planning their own lessons, although in Phase C this percentage dropped to 72.8%, which is still significantly high. This change was most likely due to the important role that the reported increase in workload played, as by Phase C the preservice teachers were required to prepare six lesson plans daily, covering all courses, rather than just one hour-long lesson.

Through the theory lectures of Phase A, 92.6% of the preservice teachers stated that they had managed to get in touch with the most important aspects of education and teaching that takes place in schools, and that 93.6% had a better understanding of the teaching theories and methods within the school environment. During Phase B, 98.4% of the preservice teachers stated that they were able to develop the ability to plan, conduct, and evaluate an organized teaching lesson, and that 92.5% attributed that to the help and guidance of individual teaching sessions and teaching models. Thus, 87.2% of the preservice teachers reportedly felt ready to conduct their own first teaching lesson, whilst 95.4% felt able to apply the educational theories (teaching methods, forms, and means) they had learned during the requisite educational science courses.

When the preservice teachers reached the final stage of the Teaching Practice Program, they had been equipped with knowledge and experience from the previous two phases and also a small amount of practical experience. At this stage, 95.2% felt ready to lead a whole

class for a period of 10 days (2 weeks of practical teaching), whilst 98.4% felt able to organize and prepare the teaching by themselves.

An integral part of the educational process, however, is being able to reflect on the teaching, received or given, in order to be able to identify and attempt to correct our mistakes, as well as to realize our strengths and strive to enrich them and apply them again (Avgitidou et al., 2013). Thus, in the current study it was considered important to examine how well the preservice teachers, during the Teaching Practice Program, were able to develop the ability to reflect on their experiences of teaching. Initially, in Phase A, where they simply observed teaching given by experienced practitioners and then discussed their observations with their professors, 59.5% of our sample were able to identify the methodology they had followed and its contribution to the educational process. However, in the next phase, where they taught a class themselves, 72.2% were able to correctly evaluate their teaching and identify their strengths as well as the mistakes that were made, whilst by the third phase of the program, 81% of the preservice teachers reported having developed the ability to reflect on their teaching with correct and substantiated observations.

In addition, it is noteworthy that 64.3% of our sample stated that they considered daily reflection to be a necessary and integral part of the educational process, while 65% stated that the process helped them to more comprehensively plan and organize their future teaching.

During the teaching practice, the preservice teachers, in addition to the experiences and tools they gained, also faced several and sometimes significant difficulties, both in the preparation of their teaching and in the educational process itself.

In an attempt to determine the most important challenges, our study focused on the organization and preparation of the preservice teachers' teaching plans. On this, 31.7% of the sample reported having encountered several difficulties during Phase B, while this percentage notably decreased to 22% in Phase C, despite the increased pressure of preparing daily teaching plans for all lessons of the schedule and not only for one subject. Regarding conducting lessons in the subject that they were required to teach, 28.6% reported having found it difficult during Phase B, whilst by Phase C this percentage had dropped to 19.1%, indicating that both the theoretical courses and the teaching experience they had gained had helped them significantly.

Another challenging area was the management of teaching time, with 24.1% of the preservice teachers reporting having experienced some difficulty in Phase B, as opposed to 7.2% in Phase C. In terms of managing a class and its students, 22.5% found it challenging in Phase B, while in Phase C the percentage was reduced to 16.5%, which again highlights the contribution of the Teaching Practice Program.

Among the cognitive subjects that were reported as having been considered the most challenging to teach, ranked from most to least challenging, positive science courses came out on top, with mathematics (52.4%) and natural science (34.1%), while, somewhat surprisingly, physical education was third (15.9%), followed by music (11.9%). The difficulty experienced in positive science courses may be due to 84.2% of the current study's sample

having received a mostly theoretical orientation during their high school education, while the high percentage of difficulty reported in both physical education and music, two generally considered pleasant courses, may relate to there having been significant disciplinary issues amongst the classroom students combined with a lack of commitment of the preservice teachers to the teaching design and plan of these lessons.

5. DISCUSSION, CONCLUSION AND SUGGESTIONS

Through the study of the relevant literature and corresponding research, the importance of teaching practice within teacher education curricula at the university level becomes readily evident (Celik et al., 2021; Gokhan, 2022). Its contribution to connecting theory to practice, applying the theoretical academic knowledge learned in the classroom within a real-world classroom environment, and the continuous cooperation between universities and schools is an essential and effective element in the professional training of preservice teachers, and for teachers in general (Hulme & Wood, 2022).

In the current study, we attempted to present some of the fundamental objectives of Greece's Teaching Practice Program, through the perspective of those directly involved, i.e., preservice teachers studying at the Department of Primary Education of the University of Western Macedonia.

We found teaching practice to be an important element of the Teacher Training Program since it helps students to connect their learned theoretical knowledge with school-based experience (i.e., connecting theory and practice), as evidenced through teaching observations and numerous classroom lessons conducted (positive, strong and statistically significant correlation, $r_b = .526, p < .001$). As a cornerstone of the initial training of teachers, it has been shown to significantly help preservice teachers understand and become acquainted with the reality and nature of their future professional work, to recognize the connection between the theory taught during their university education and its application in real life, giving them the impetus to review their educational decisions. As Zmas and Papadopoulou (2007) pointed out, *"practice must be guided by theory, and the transition from theory to practice requires a mediating skill cultivated in real or experimental conditions"* (pp. 235-237).

We found that the vast majority of participants (97.5%) in the current study recognized that teaching practice helps them significantly in connecting the two core elements of teacher education; pedagogical theory and educational practice, as, according to Papadopoulou (2016), *"prospective teachers should understand the complexity of these concepts and perceive them as a continuum and not as two 'completely distinct poles'"* (p. 79). The current study's preservice teachers attempted to transform the learning theories they had been taught up until that point into actual educational processes taking place in the classroom. This was achieved first by simply observing the situations and behaviors of experienced teachers and their students (positive, moderate intensity and statistically significant correlation, $r_b = .343, p < .001$), and then by undertaking the design and implementation of teaching their own classroom lessons. They described themselves as being adequately theoretically trained and prepared to enter the classroom and teach, and believed that the theoretical subjects of the individual courses they had attended to date had provided them with all the necessary

tools to perfectly organize their teaching and to cope with the requirements of practical teaching to actual students (positive, moderate intensity and statistically significant correlation, $r_b = .383, p < .001$).

In comparing our results with those of previous research (e.g., Stavridis et al., 2015; Thoidis et al., 2011), we found that the academic level of course lectures remained high and was widely appreciated by the participants. Almost all of them (95.5%) tried to apply the pedagogical theories (e.g., teaching methods, forms, and means) that they had learned, mainly from education science courses. After familiarizing themselves with the core concepts, they applied them in the classroom during their hour-long teaching sessions, which further highlighted the interrelationship between theory and practice. From the first phase of the Teaching Practice Program, and from observation of the classroom teaching, the preservice teachers achieved a gradual and satisfactory acquaintance with the required teaching and learning processes and the general school environment, according to the perspectives of both the observer and themselves as future teachers. In total, 96.7% of the participant preservice teachers stated having gained systematic contact with teaching, having been afforded the opportunity to see, for the first time, educational process through the eyes of a teacher rather than as a student, as was the case up until that point. These research results confirm earlier conclusions of Papadopoulou et al. (2007), where preservice teachers had also recognized, to a large extent, the usefulness of Phase A of the Teaching Practice Program.

The preservice teachers in the current study, having mastered the basic theoretical training, as well as having acquired the necessary tools, proceeded to plan and organize well-structured lessons, followed by their best possible implementation, and then a period of critical reflection.

Compared to examples of previous published research (Theodorou et al., 2013; Thoidis et al., 2011), we found that 92.6% of our participants had a greater acceptance of the theoretical suggestions and pedagogical issues covered, which points to the improvement and development achieved. The education science courses (pedagogical, teaching methodology, developmental psychology) contributed the most to the preservice teachers' education as future teachers, followed by positive science courses (e.g., mathematics, natural sciences). This finding may be said to be in full agreement with the results of previous research conducted within the department, albeit in a smaller sample (Stavridis et al., 2013).

The development of the ability to plan a teaching course under real working conditions, along with guidance in the organization of classroom teaching, appears to have been achieved to a highly significant degree, with almost all respondents (98.5%) having reported that it helped them significantly. Being inexperienced teachers, they had at their disposal a lesson plan which they could follow and consult during their teaching, without deviation or being unduly affected by the classroom conditions or their class students; and were required to organize both the activities and the teaching time required in order that no spare time remained after having completed the teaching of the subject, but whilst also making sure that there was sufficient time to complete the task (positive, moderate intensity and statistically significant correlation, $r_b = .361, p < .001$). At the same time, the teaching plan helped them

maintain a smooth flow during the lesson, as the stress during initial teaching experiences can be intense and they may otherwise omit important elements of the lesson.

Nevertheless, there were also several difficulties noted in the preservice teachers' teaching of certain subjects, and especially with mathematics; a finding also notably observed in other research (e.g., Moreno-Guerrero et al., 2020; Perryman & Calvert, 2020; Rahimi et al., 2021). A little over half of the participants stated that they had experienced difficulties in teaching mathematics lessons, especially in larger-sized classes, due to both the high demands of the subject and their less than ideal command of it, as well as a lack of the necessary prior knowledge upon which they could draw. Several of the preservice teachers reported having to re-read the subject themselves in order to master the content of the lessons they were required to teach (positive, moderate intensity and statistically significant correlation, $r_b = .332, p < .001$). Furthermore, they faced significant challenges with the students in their classes, as in several cases their level was not adequately high, while there were also significant difficulties in their understanding of the lessons as well as behavioral issues, which made their task as teachers even more difficult (positive, moderate intensity and statistically significant correlation, $r_b = .361, p < .001$).

Other difficulties that the preservice teachers encountered during their classroom teaching concerned the time-consuming process of preparing the daily teaching plans, disciplinary problems with students in the class, finding and selecting the appropriate supervisory material for their teaching, as well as management of their teaching time, something that was observed and noted in other research studies (e.g., Argyropoulou, 2005; Theodorou, 2013; Thoidis et al., 2011).

Through analysis of our collected research data, we also found that the participant preservice teachers developed the ability to reflect upon their performance to a significant degree (99.2%), with daily self-evaluation of their work (positive, moderate intensity and statistically significant correlation, $r_b = .371, p < .001$). Through critical self-evaluation, the participants were more easily able to identify their mistakes and weaknesses, to better discern the preferences of their students and their particularities, and thus properly adapt their teaching in the following days based on their specific conditions. Through this process, the preservice teachers' lessons became more efficient and they became somewhat closer to their students, which improved their teaching significantly. The vast majority of the participants considered reflection to be an important part of the educational process, regardless of the additional workload entailed, thus striving to improve the quality of the course through the development and application of more comprehensive teaching plans.

To summarize, through the empirical research conducted, we concluded that the majority of the participant preservice teachers in our department demonstrated an understanding of the usefulness of teaching practice, and that it adequately supported their teaching work and helped guide them through the successful completion of the Teacher Training Program. In comparison with previous research, it appears that the overall percentage of acceptance was higher (Argyropoulou, 2005; Thoidis et al., 2011; Thoidis et al., 2005), a fact that may be said to relate to the efforts for continuous improvement and adaptation of the program according to the respective research data.

Through their teaching practice, the current study's preservice teachers managed to connect the pedagogical theories they had previously learned with educational practice, gaining direct experience of the daily work and school life as teachers, to develop the ability to plan their classroom teaching methodically, efficiently, and flexibly, under real working conditions, and to learn how to reflect upon and self-evaluate their teaching work on a daily basis (Finkelstein et al., 2021; Woodcock et al., 2022).

The teaching practice demonstrated in the current study followed the demands of the times regarding the conditions of modern-day schooling, with the inclusion of appropriate milestones to help prepare preservice teachers for their future professional career, which was a new and very different endeavor from their prior experience as students (Sáez-López et al., 2020). The modern educational context requires teachers to be vigilant and able to comprehend students' messages, and to develop workable and appropriate solutions to difficult situations (Popova et al., 2022). This requires that teachers know their school teams well and are able to combine their theoretical training with creative ingenuity in order to properly manage the situations that arise daily in the classroom and to demonstrate the required initiative and decision-making to enhance their students' learning efforts.

6. LIMITATION AND RECOMMENDATIONS

The current research was conducted with a sample of preservice teachers studying at a single Greek university, which constitutes a limitation of the study. Therefore, it is recommended that similar research be carried out in other pedagogical departments, nationally or internationally.

Considering that no other research had previously examined all the same variables considered in the current study, we recommend that similar studies be conducted in the future that involve different samples, as it would be inappropriate to form an opinion based on a single set of findings.

Furthermore, we showed that teaching practice is a multifaceted process in which, in addition to the university students directly involved, also included seconded teachers, university professors, postgraduate scholars, practicing primary school teachers, and, of course, elementary students who took part in the study. However, in this work, we investigated only the views of the preservice teachers, without taking into account the other factors and involved parties. The evaluative results obtained resulted solely from the experiences of the preservice teachers as university students and, thus, it cannot be said whether or not they agree with the opinions of the seconded teachers or even the elementary students of the schools that participated in the Teaching Practice Program. For a more complete assessment of the program and its effectiveness, the views and opinions of the other parties involved should also be included in order to allow for results comparisons, leading to safer and more generalizable conclusions, as well as the potential to realize more substantial changes and improvements, both in the program's structure and its content and organization.

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ABOUT THE CONTRIBUTORS

Stavridis Pavlos: PhD candidate at the Pedagogical Department of Primary Education, University of West Macedonia, Greece.

E-mail: pstavridis@uowm.gr

ORCID ID: <https://orcid.org/0000-0002-8292-9512>

Papadopoulou Vasiliki: Professor at the Department of Philosophy and Pedagogy, Aristotle University of Thessaloniki, Greece.

E-mail: vpapadopoulou@edlit.auth.gr

ORCID ID: <https://orcid.org/0000-0002-2014-7865>

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