Future preschool teachers’ professional competence in planning, implementing and evaluating the learning process

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Abstract. One of the most important tasks in the 2022 UNESCO report is the preparation of teachers in the field of higher education, which is oriented towards the improvement of professional competence. The teacher is described as a creator of knowledge, and as a central person in educational and social transformation, while knowledge and learning are described as the basis of renewal and transformation. Opportunities for meaningful and high-quality education should be available at every stage of a person’s life. Preschool education is the first level of education and is where a child gains first knowledge, skills, and experience about the world around them. The preschool teacher and their professional competences are of particular importance in this cognitive process.

Using the teachers’ professional competence assessment tool (survey), this study analyses the self-assessment of future preschool teachers’ professional competence in the planning, implementation and evaluation of the learning process. Our results show that the survey that we created can be used as one of the tools for the evaluation of the teacher’s professional competence. In addition, the professional competence of future preschool teachers can be promoted in the study process in the unity of theory and practice. From the survey, it can be concluded that the planning, implementation and evaluation of the learning process interact and are mutually dependent components of the teacher’s professional competence. In the data analysis, it was found that the professional competences of preschool teachers are strengthened, which helps to identify the individual needs of children and to plan, implement and evaluate the learning process in accordance with them.

Keywords: preschool teacher’s professional competence, planning, implementation and evaluation of the learning process, self-assessment of competence

Introduction

Qualified, competitive specialists are one of the main goals of higher professional education of the twenty-first century. The professional competence of teachers is especially important given the changing educational paradigm and is one of the main pillars of quality education. The theoretical preparation and professional mastery of a preschool teacher is the beginning of a high-quality education. Therefore, the professional competence of future preschool teachers is one of the main priorities of higher pedagogical education [3].

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A recent UNESCO Report *Reimagining our futures together: a new social contract for education*, emphasizing the preparation of teachers, has raised the requirement for the improvement of the professional competence of teachers. According to knowledge and learning as the basis of renewal and transformation, the teacher is seen as a creator of knowledge and a promoter of social transformation. Because preschool education is the first level of education and is where a child acquires the first knowledge, skills, experience of the surrounding world, and because meaningful and high-quality educational opportunities must be available at every stage of a person’s life, preschool teachers and their professional competence are of special importance in this cognitive process [19].

A child’s knowledge, skills and attitudes depend on the teachers’ professional competence because the foundation for children’s life experiences and values is formed in preschool. Research on early childhood education and care, preschool education and quality of care, more specifically, on the competence of preschool teachers, has analysed a development perspective, according to which more attention is paid to the integral role of professional development in improving the quality of preschool education and care [17].

In Latvia, which is currently introducing the new competence approach in preschool and school, the study “Assessment of student competences in higher education and the dynamics of their development during studies” is being conducted. Our questionnaire, which is a tool for self-assessment of professional competence, was created in this framework.

This study focuses on the current events in Latvian education policy in the context of preschool, school and university, which resonates with the tasks of the UNESCO report [19]. In particular, this study will analyse the self-assessment of future preschool teachers’ professional competence in the planning, implementation and evaluation of the teaching process, using the teachers’ professional competence assessment tool (survey). This research will adopt a case study. Accordingly, research methods such as literature analysis, document analysis, questionnaires and data processing with SPSS software were used. This research was conducted in 2021 among 104 future preschool teachers who were studying at the University of Latvia.

1 Theoretical background

Teacher competence is a relatively widely studied issue in the context of modern changes to the education system. This interest is related to the dynamics of social, cultural and technological changes in society as a whole, which creates the need to constantly promote and supplement the professional education of teachers. Challenges related to competences are also relevant for preschool teachers because the quality of preschool education largely depends on the competence of the teachers [15]. In particular, only a competent, professional teacher can ensure a quality pedagogical process in an educational institution, and provide the necessary support for the diverse needs of children and for the satisfaction of their interests.

The professional competence of a preschool pedagogue includes a wide range of activities—starting with planning and implementation of the learning process in preschool and ending with evaluation and self-evaluation, which is one of the tools for measuring the quality of preschool education [5].
To learn the professional competence of a preschool teacher in the planning, implementation and evaluation of the learning process in the unity of theory and practice, the students should encourage lecturers to include innovative teaching methods and evaluation techniques in the study process that the students could use in their practical activities in a preschool educational institution. This would promote their pedagogical performance in practice and motivate the search of new pedagogical solutions [13].

The professional competence of preschool teachers is an integrated formation of the holistic structure of the personality. This structure includes a positive attitude towards pedagogical activity, professional knowledge and skills, and personal qualities. It can also be described as the professional culture of educators [1]. The professional competence of preschool teachers allows students to develop their knowledge and skills to plan, organize and evaluate the pedagogical process. Competence allows not only the integration of knowledge, skills and attitudes but also motivation, which is gradually promoted during the study process [13].

The structure of the professional competence of preschool teachers is formed through the interaction of three component groups, as follows:

- Personality-accentuating elements: knowledge, skills, values, attitude, beliefs;
- Operational functions: cognitive, communication, didactic, management, reflexive;
- Professional qualities: cooperation, interest, motivation, openness to innovation, positivity [7].

A 2014 study in Sweden [9] identified three dimensions of preschool teacher competence, which correspond to the previously named groups of components of professional competence of a preschool teacher. The dimensions ‘know what’ and ‘know why’ form the teachers’ content knowledge. These dimensions of competence include the accentuating elements of personality (e.g., knowledge, skills, values, attitudes and beliefs), and is also part of the competence for self-education and self-evaluation. They are also dimensions reflecting operational functions because they include cognitive, communication, didactic, management, and reflexive functions. Professional qualities fit into the third dimension of ‘knowing how’ and are closely related to the others. Together, these dimensions reflect how teacher competence is constructed from the perspective of pre-service teachers and highlight the relationships between specific aspects of teacher competence [9].

These components are important in ensuring the preschool pedagogical process. Research is being conducted to determine the self-efficacy of the professional competence of preschool teachers. For example, in China Hu et al. [6] used multilevel mediation modelling to investigate whether teacher self-efficacy—specifically teacher self-efficacy regarding instructional approaches, group management, and children’s engagement—influences children’s self-efficacy and social skills. Their study showed that it does not always work positively. Therefore, the preschool teacher must evaluate both cognitive, didactic and management functions in reflexive action to achieve an optimal result. The pedagogical approach, didactic system and methodological tools of preschool teachers shape their practice and help children to realize their potential [12].
Research has shown that teacher qualifications are the main issue affecting children’s learning and development, and improves the achievable results set for preschool children. Finally, teacher competence is one of the main factors affecting preschool quality [9].

2 Methodology

The content of the teacher’s professional competence assessment tool was developed within the second round of the research project: “Assessment of the Students’ Competences in Higher Education and their Development Dynamics During Study Period”. One of the tasks of this project was to develop a survey for the assessment of teachers’ professional competence and to approve it.

The tool for assessing teachers’ professional competence was created as a survey, in which various characteristics of the teachers’ behaviour were proposed in the form of statements. The statements were created based on the standard of the teaching profession [18], taking into account its structure and the knowledge, skills, attitudes and competences necessary to fulfill the tasks of the teacher’s professional activity embedded in it. The teacher professional competence assessment tool consists of three question sections: teaching process planning (Q1); implementation of the learning process (Q2); and evaluation of the learner’s learning performance and growth (Q3). Each section included five to nine subsections with statements.

The respondents were asked to rate the extent to which the behaviour described in each statement corresponds to them on a scale from 1 to 7: 1 denotes that the indicated behaviour was not typical at all (including the situation of never doing it), while 7 indicated that the behaviour was typical to the fullest extent.

The questionnaire was available for completion from 1 February 2021 to 15 April 2021. The questionnaire was posted in electronic format on the QuestionPro platform. In total, 106 respondents completed the survey, of which 104 survey forms were valid. Consequently, $N = 70$ for the questionnaire replies analysed within this paper (answers from preschool student teachers at the University of Latvia). The average time to fill out the survey was 54 minutes. In the selected group of future preschool teachers, it was 58 minutes on average.

IBM SPSS (Statistical Package for the Social Sciences) (version 28) and Microsoft Excel software were used for data analysis. This study considered all of the ethical research standards in accordance with the General Data Protection Requirements (GDPR). The questionnaire was anonymous and participation in it was completely voluntary.

3 Results

Based on the Teacher Professional Standards (2020), three sections for the evaluation of teachers’ professional competence have been proposed, as follows: planning the learning process (Q1), implementing the learning process (Q2), and evaluating learning achievement and growth (Q3). All of the criterion groups are characterized by high data reliability, which justifies the validity of the obtained data (Table 1).
Table 1. Reliability statistics for the questionnaire

<table>
<thead>
<tr>
<th>Competence</th>
<th>Mean</th>
<th>Median</th>
<th>St.dev</th>
<th>Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q1</td>
<td>5.24</td>
<td>5.35</td>
<td>0.77</td>
<td>0.876</td>
</tr>
<tr>
<td>Q2</td>
<td>5.40</td>
<td>5.48</td>
<td>0.89</td>
<td>0.941</td>
</tr>
<tr>
<td>Q3</td>
<td>5.17</td>
<td>5.27</td>
<td>0.99</td>
<td>0.882</td>
</tr>
</tbody>
</table>

Although there are relatively small differences in the mean values between the teacher competency groups involved in the study, future preschool educators rate the implementation of the learning process, the planning of the learning process, the evaluation of learning achievement and growth higher than the teacher competencies. Based on the change of the teaching approach and the planning of new teaching content in preschool (Regulations Regarding the State Guidelines for Preschool Education and the Model Preschool Education Programmes, 2018), the planning of the learning process of future preschool teachers results from the implementation of learning, when the lessons in the preschool educational institution have been implemented in study practice and the theoretical knowledge about the planning of the learning process has been approved. The preschool teacher plans the learning process while respecting the individual characteristics, interests and needs of children, which are identified in the implementation of the learning process. Preschool education guidelines and curriculum samples provide for the age distribution of children and certain achievable results in learning areas. The obtained data characterize the flexibility of preschool teachers, following regulatory documents and planning the learning process.

Table 2. Correlations of question groups

<table>
<thead>
<tr>
<th>Correlations</th>
<th>Q1</th>
<th>Q2</th>
<th>Q3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spearman’s rho</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Q1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td>1,000</td>
<td>,831**</td>
<td>,631**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>,000</td>
<td>,000</td>
</tr>
<tr>
<td>N</td>
<td>70</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>Q2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Correlation Coefficient</td>
<td>,831**</td>
<td>1,000</td>
<td>,830**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td>,000</td>
<td></td>
<td>,000</td>
</tr>
<tr>
<td>N</td>
<td>70</td>
<td>70</td>
<td>70</td>
</tr>
<tr>
<td>Q3</td>
<td></td>
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<tr>
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<td>,631**</td>
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<tr>
<td>N</td>
<td>70</td>
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</table>
Table 3. Implementation of the learning process

Q2.1 — The ability to create an inclusive, intellectually stimulating and emotionally safe, cooperative learning environment that meets the learning and development needs of children.
Q2.2 — The ability to develop children’s and own social and emotional competences.
Q2.3 — The ability to appropriately resolve conflict situations by identifying the risks of children’s behavior, communication and violence.
Q2.4 — The ability to act in emergency situations.
Q2.5 — The ability to quickly define the goals of the individualized learning process and plan learning activities according to the learning outcomes to be achieved.
Q2.6 — The ability to diagnose children’s needs and provide support.
Q2.7 — The ability to proactively cooperate with colleagues and children’s parents or guardians.
Q2.8 — The ability to use factual, theoretical, regularity and technology knowledge in an integrated manner for the implementation of a learning process appropriate to the needs of children’s individual development and the achievable learning outcomes and close to life situations.
Q2.9 — The ability to implement learning activities that stimulate the development of children’s competencies, the transfer of knowledge in different contexts and practical application.

There are statistically equally high correlations between all sections of the assessment of professional competence. This shows that the planning of the learning process, the implementation of the learning process, and the assessment of learning achievement and growth are interrelated and equally important in the evaluation of the professional competence of future preschool teachers (Table 2).

In the assessment of the professional competences of future preschool teachers, each section of the competence assessment is considered separately.

In the implementation of the learning process (Table 3), the ability to appropriately resolve conflict situations, identifying the risks of children’s behavior, contact and violence (Q2.3), and then the ability to quickly define the goals of the individualized learning process and plan learning activities according to the achievable learning results (Q2.5), the ability to develop the child’s and own social and emotional competences (Q2.2) and the ability to act in emergency situations (Q2.4) were rated the highest. The obtained data show that the respondents in the implementation of the learning process indicate
that the socio-emotional well-being of the children, which results from the new educational content, determines the equality of academic knowledge and socio-emotional learning.

Children learn and use the knowledge and skills that are necessary to manage themselves, to be able to understand and get along with others, to be able to set achievable results together with the teacher, and make decisions that determine academic knowledge and achievements, as a result of which attitudes towards learning are formed.

In the implementation of the learning process (Table 3), the ability to diagnose children’s needs, and provide support (Q2.6) and the ability to implement learning activities that encourage the development of children’s competencies, knowledge transfer in different contexts and practical use (Q2.9) are rated lower. The answers of the respondents show that future preschool teachers should be encouraged in the study process and in practice to develop the professional skills to identify the children’s needs and implement learning activities in accordance with their needs, which promote the transfer of children’s metacognitive skills, knowledge and experience in practical activities. Personal qualities are emphasized in the structure of professional competence of preschool teachers. This corresponds to the most highly valued criterion in the implementation of the learning process, which is the ability to appropriately resolve conflict situations, identify the risks of children’s behavior, communication and violence, and taking care of children’s social-emotional well-being. Meanwhile, the lower-rated skills of recognizing children’s needs create a discrepancy between the higher and lower-rated positions because conflict situations are often based on the children’s different needs.

In planning the learning process (Table 4), the sub-competences include the ability to plan an interdisciplinary, individualized and personalized, flexible learning process, ensuring the achievement of the child’s individual learning goals (Q1.3), the ability to define individualized goals of the learning process and plan learning activities according to the achievable learning results (Q1.4) and the ability to assess the needs of individual development, learning, personality and social growth according to the inclusive education approach (Q1.1). In the planning of the learning process, future preschool teachers point to an individual approach in setting the goals of the learning process and implementing the achievable result as the strength of their professionalism. These indicators indicate the planning of interdisciplinary curriculum, emphasizing the set of skills in different learning areas and subjects in the planning of the learning process.

The planning of the learning process (Table 4) includes the ability to systematically evaluate the course of the learning process and to plan learning content, methods, means and resources for the implementation of the learning process corresponding to the needs of children’s individual development (Q1.5), the ability to purposefully choose and create clear and achievable learning goals for children is evaluated appropriate evaluation criteria (Q1.6) and the ability to analyse and interpret educational policy documents and curriculum standards (Q1.2). The obtained data indicate that future preschool teachers can improve their knowledge and skills in the evaluation and analysis of the learning process during the study process, which depends on the planning of the further learning
Q1.1 — The ability to assess the needs of individual development, learning, personality and social growth according to the approach of inclusive education.

Q1.2 — The ability to analyse and interpret educational policy documents and curriculum standards.

Q1.3 — The ability to plan an interdisciplinary, individualized and personalized, flexible learning process, ensuring the achievement of the child’s individual learning goals.

Q1.4 — The ability to define individualized goals of the learning process and plan learning activities according to the achievable learning results.

Q1.5 — The ability to systematically evaluate the course of the learning process and plan learning content, methods, means and resources for the implementation of the learning process that meets the needs of children’s individual development.

Q1.6 — The ability to purposefully choose and create clear and appropriate assessment criteria for the children’s achievable learning goals.

process. In this case, educational policy documents and curriculum standards determine the achievable learning outcomes on which the implementation of the learning process and interdisciplinarity depend.

The question of planning an interdisciplinary learning process is raised for discussion because the ability to interpret normative documents is rated lower. But that documents determine the possibilities of interdisciplinary learning. However, it is not clear how the individual development of children can be assessed.

In the assessment of learning performance and growth (Table 5), among the sub-competencies of the section, the ability to improve one’s pedagogical competence to improve children’s achievements in a targeted manner (Q3.3) was rated higher. This shows that the respondents are aware of their professional needs. However, the future preschool teachers may lack the knowledge and skills to facilitate regular feedback on the child’s performance and achievements in the learning process. The willingness of the respondents to improve their pedagogical competence is commendable, which shows the self-directed activity of future preschool teachers.

The respondents have assessed their ability to recognize different learning needs and provide support to both talented and children with learning difficul-
Table 5. Assessment of learning performance and growth

Q3.1 — The ability to purposefully carry out a systematic and systematic evaluation of the dynamics of the individual development of children and the results achieved, using appropriate methods and taking into account the different abilities and needs of the learners.

Q3.2 — The ability to critically evaluate children’s assessment information in the context of their pedagogical practice.

Q3.3 — The ability to improve one’s pedagogical competence to purposefully improve children’s achievements.

Q3.4 — The ability to provide timely, understandable, specific and usable feedback to children in the learning process about their performance and growth, involving learners in the evaluation of their work and offering appropriate opportunities and support for improving performance.

Q3.5 — The ability to recognize different learning needs and provide support to both gifted and children with learning difficulties.

ties (Q3.5), and their ability to purposefully carry out a systematic and systematic evaluation of the dynamics of individual development of children and the results achieved, using appropriate methods and taking into account the different abilities and needs of learners (Q3.1). The obtained data correspond to the results of the implementation of the learning process. Respondents rated lower the ability to identify children’s individual and learning needs, which provides support to talented and children with learning needs.

The results of the empirical study reveal that the future preschool teachers rate their skills relatively high in almost all aspects, which corresponds to the assessment of the professional competence of Estonian preschool teachers [10].

According to the future preschool teachers, the knowledge and skills that help identify the individual needs of children, and plan and implement the learning process in accordance with them are strengthened. This is also closely related to the identification of learning needs and the provision of support. This indicates the need to strengthen the ability to analyse children’s learning and, based on the analysis, to select suitable teaching content, methods and evaluation criteria. According to preschool teachers, the transfer of knowledge in different contexts and practical application must be strengthened to implement this.
Based on the results of this study, the cross-sectional competencies of future preschool teachers can be promoted in the study process, especially entrepreneurial competencies, which are related to the ability to see or transform ideas and opportunities, mobilise action and effectively use the necessary resources to achieve goals. This results from critical thinking, and evaluating and analysing children’s learning. Transversal competencies are an essential part of education in higher education because they include several skills that are necessary for future preschool teachers to successfully adapt to changes in both the study process and in the working environment in preschool [10].

The evaluation of the professional competence of future preschool teachers should be related not only to the self-assessment of the teachers’ professional competence but also to the observation of the teacher’s activity in practice, which reveals the quality of interaction between preschool teachers and children [4,5]. Teacher-child learning interactions help us to assess emotional support, classroom organization, and instructional support. This has become the most widely used tool for measuring the quality of early childhood education (ECE) and is associated with children’s socioemotional, cognitive, and academic outcomes [2, 8, 16].

Conclusion

1. The quality of the pedagogical process at every level of education largely depends on the professional competence of pedagogues. In the planning, implementation and evaluation of the learning process of the preschool teacher’s professional competence, the personality-accentuating elements are especially important in the structure: knowledge, skills, values, attitude, beliefs, operational functions, as well as professional qualities such as positivity, cooperation, interest, and openness to innovation.

2. To determine the professional competence of future preschool teachers based on the Teacher Professional Standards, a questionnaire was created with three sections for the assessment of teachers’ professional competence criteria, as follows: planning the learning process, implementing the learning process and evaluating learning achievement and growth.

3. Prospective preschool teachers rated their knowledge and skills in implementing the learning process the highest, followed by planning the learning process and evaluating learning achievement and growth. Therefore, it is necessary to include more questions that are directly related to evaluation in the content of the study courses.

4. The data analysis found that all components of the teachers’ professional competence (i.e., planning the learning process, implementing the learning process and evaluating learning performance and growth) correlate with each other.

5. In the implementation of the learning process, the professional skills of future preschool teachers to identify children’s needs and to implement learning activities in accordance with these needs (which promote the transfer of children’s metacognitive skills, knowledge and experience in practical activities) are promoted.
6. In the planning of the learning process, future preschool teachers can improve their knowledge and skills in the evaluation and analysis of the learning process in the study process and in practice, on which the further planning of the learning process depends.

7. In the implementation of the learning process, and in the assessment of learning performance and growth, future preschool teachers can strengthen their skills in identifying the individual and learning needs of children. This results in the provision of support to talented children and to children with learning needs.

8. The evaluation of the professional competence of future preschool teachers is revealed not only in the self-assessment of the teachers’ professional competence but also in the observations of the teacher’s activity in practice. Therefore, self-assessments of the teachers’ professional competence and evaluation of their performance in practice should be included in the future assessment of the teachers’ professional competence.

References


