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Development of a Scale of Professional Competence of Preschool Teachers

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ABSTRACT

Circular 26/2018/TT-BGDDT of Vietnam's Ministry of Education and Training promulgates standards, policies and guidelines for measuring and assessing professional competences of preschool teachers in Vietnam. However, this set of standards has not yet met the requirements of action research on professional competences of preschool teachers. Therefore, this study aims to construct a valid and reliable self-reporting scale to measure the competences of preschool teachers in performing their work in preschools as one of the tools for impact assessment. The researchers approached Johnson's theory of action research (2008) to research and develop a competency assessment toolkit according to 4 components of professional competences of preschool teachers (knowledge and understanding, operational skills, self development skills, social interaction skills). The validity and reliability of the scale was established by examining the responses of 186 preschool teachers of the selected preschool educational institutions in Southeast provinces in Vietnam. Cronbach's alpha was also calculated as an internal consistency measure for the scale. Therefore, the findings of this study provide important evidence of the validity and reliability of the preschool teacher professional competency assessment standards.

1. INTRODUCTION

In the world, there have been so many educational reforms in which the quality of teachers is seen as one of the main driving forces of the process. These reforms shape the role of schools and have a profound impact on the professional life of teachers (Madden et al., 2012). This is because teachers should effectively respond in these systemic changes; otherwise, these can actually be seen as "deforms" which would lead to the creation of pressure, causing sufferings for teachers and the educational community (Arnove, 2005). In Vietnam, the fundamental and comprehensive innovation in education and training has exerted an impact on the change of preschool education, which is manifested not only in the scale, but also in the content and methods of education with the new goal of quality. Implementing the innovation of preschool education, many localities have not only expanded the number of preschool institutions, but also renewed the curriculum and teaching methods, which is considered the most important change. Preschool education is escaping the stereotypes of the teacher-centered approach, moving towards childcentered education. Preschool teachers need to improve their career skills despite their limitations. Given the situation, the problem of preschool teachers' professional competences becomes an urgent problem of research. Meanwhile, the context of international integration and the development of science and technology has impacted social life in Vietnam, and preschool education also has certain influences. Challenges to the professional competences of preschool teachers in the context of Science and technology development require teachers to improve their working methods (McNiff & Whitehead, 2006).

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In the face of this situation, Vietnam's government and Ministry of Education and Training issued several documents concerning the policy of supporting and promoting career development for preschool teachers. Specifically, Circular No. 01/2021/TT-BGDÐT (dated February 2nd, 2021) stipulates the codes, standards of occupational titles and appointments, salaries of teaching staff in public preschools; and Circular No. 26/10/2018/TT-BGDÐT promulgates regulations on occupational standards of preschool teachers. However, the issues related to assessment and impacts on the professional development of preschool teachers have not been adequately addressed in the practice of educational innovation in Vietnam. Studies on teacher career development programs based on 04 components: beliefs, attitudes, knowledge and skills (Guskey, 2002; Clarke & Hollingsworth, 2002; Desimone, 2009) or 03 components of vocational competencies: knowledge, practice, attitudes (Evans, 2012) can be referenced to develop a framework for assessing the vocational competencies of preschool teachers in Vietnam. The problem arises: how to build a scale to measure the change in professional competence of preschool teachers? Addressing this issue means assessing the impact of professional capacity development training, and at the same time serves as the basis for developing a scale for the rest of the teacher competency structure in future research.

2. LITERATURE REVIEW

2.1. Professional competences of preschool teachers

The close connection between the professional competence of preschool teachers and the quality of preschool education is a formal debate on agendas concerning international policies, showing a movement towards the professionalization of the preschool teaching workforce (Nasiopoulou, 2020, p. 16). With this trend, Nasiopoulou's thesis entitled "The profession of preschool teachers under conditions of change: Competence and intentions in pedagogical practices" focuses on the professional competence of preschool teachers with the goal of "exploring the relationship between the professional competence of preschool teachers and their considerations of pedagogical practices around social policies and discourses, in creating optimal conditions for the health, learning and development of children" (Nasiopoulou, 2020, p.15). The problem of the professional competence of preschool teachers in accordance with the change is also studied in another case. In the article "Capacity building for school improvement or creating capacity for learning? A changing landscape", Stoll (2009) states that, "building capacity for teachers is an extremely complex endeavor. Add to that the challenges facing school improvement over the past decade and we see a rapidly changing picture of the true meaning of improving the capacity of teachers to improve schools today" (p. 117). She emphasizes career competencies that make a difference for preschool teachers, whose goal is defined as "building competencies that need to go beyond focusing on supporting teaching improvements to emphasize learning" (p. 118). Thus, besides the competence components that preschool teachers are trained and fostered, the capacity for practical activities to make a difference is the requirement for teacher quality in the context of current educational innovation.

In a study on the scale of the group of children for the quality of Education, it is also argued that "in addition to the theoretical knowledge of children's learning and development, preschool teachers need to have the knowledge of content and pedagogical competence to carry out high quality pedagogical activities and realize the areas of curriculum content in their daily activities" (Williams & Sheridan, 2016). Along with this view, Urban (2008) posits that preschool teachers need to act professionally and realize their acquired theoretical knowledge in pedagogical practices in reciprocal relationships with all agents involved in the system and on the basis of questions arising from the conditions in place (p. 136).

The professional competence of preschool teachers is also studied in different aspects. Debra Michal Drang's thesis entitled "The beliefs, knowledge and practices of preschool teachers in relation to classroom management" (2011) approaches the problem on the basis of the ecology of human development models and their suitability for preschoolers. Drang asserts that" the beliefs, knowledge and practices of teachers related to classroom management are also particularly prominent in the field of special education" (p. 1) and studies it in the context that "more and more children with disabilities receive educational services in an inclusive environment", requiring "the teacher's awareness of their behavior which is essential to understanding the components of successful inclusion" (p. 3). The research in this thesis aims to demonstrate that if fully equipped with the knowledge and experience acquired in kindergartens, the preschool teacher can create confidence, conditions for a child to complete his educational tasks through classroom management activities with many students with disabilities participating in inclusive education. Liza Isyqi Binti Ramli's thesis entitled "Attitude of preschool teachers towards the introduction of inclusive education

in Malaysian state preschools" (2017) emphasizes the importance of knowledge and understanding of special education of preschool teachers in professional activities in preschools. In his thesis, Ramli points out that "this study emphasizes the importance of knowledge and understanding of inclusive education, the skills and abilities of teachers as well as the necessary values and commitments from every institution. The recommendations address the issues of enhancing professional development of in-service and pre-service teachers as well as upgrading school facilities. Most importantly, this study highlights the need to raise awareness about and strengthen knowledge of inclusive education and special education through enhanced collaboration between parents, professionals, schools and society" (p. 3). In the aforementioned theses, the authors have added many elements of preschool teacher professional competence.

In Turkey, in addition to the STEM program for preschool education launched by the STEM Working Group (Early Childhood STEM Working Group, 2017), many also propose to integrate STEM education in preschool education programs and raise the issue of the capacity of preschool teachers to fulfill this task (Clements & Sarama, 2016; McClure et al., 2017; Moomaw & Davis, 2010; Soylu, 2016; Torres-Crespo et al., 2014). In his article entitled "Another perspective on early childhood STEM education: STEM education and technical perspectives", Abdulhamit Karademir and Bekir Yıldırım (2021) conducted an experimental study with over 30 preschool teachers who were about to be recruited to find out about their perspectives in order to determine their competence and propose additional contents for the preschool teacher training program. Affirming the importance of professional knowledge, Karademir and Yıldırım argue that "the attitude of teachers in the classroom and their own effectiveness depends on the results of equipping knowledge process" (p. 339). This suggests that the provision of knowledge to preschool teachers in any form must stem from the requirements of teaching practices, the needs of children's learning and playing.

Accordingly, it is possible to distinguish the capacity and professional capacity of teachers. Competencies are the measurable or observable knowledge, skills, and abilities, for successful job performance. Professional competencies are skills, knowledge, and attributes specifically assessed by professional associations, organizations, and bodies relevant to teachers' future careers.

2.2. Preschool teachers' occupational competence scale

The Indeed team (2020) believes that the professional competence of preschool teachers is a structure, consisting of 09 skills: (1) Organizational skill; (2) Collaborative skill; (3) self-mastery skills; (4) Creativity; (5) Patience; (6) Enthusiasm; (7) Authoritative skill; (8) Empathy; (9) Communication skill.

The Nebraska Department of Education (NDE, 2016) in the United States, has launched a professional competency structure for preschool teachers including 9 core areas.

According to *Figure 1*, the core competence of preschool teachers is structured as an operating apparatus in a mutually binding unity. The 09 areas of knowledge and skills in the Nebraska Core Competency include: (1) Children's growth and development; (2) Health, safety and nutrition; (3) Study environment; (4) Planning, learning experiences and curriculum; (5) Relationships and social-emotional guidance; (6) Observations, documents and evaluations; (7) Partnering with family and community; (8) Professionalism and Leadership; (9) Program administration, planning and development.

The Department of Human Services (DHS, 2020) of North Dakota (USA) introduces a set of core competency standards for teachers with 08 skills as follows:

(1) Understanding child growth and development: understanding how children acquire language and develop physically, cognitively, emotionally, and socially.

(2) Learning environment and curriculum: establishing an environment that provides learning experiences to meet the needs, abilities, and interests of each child.

(3) Assessing and planning for individual needs: observing and evaluating what children know and can do to provide curriculum and instruction that meet their developmental and learning needs.

(4) Interacting with children: establishing supportive relationships with children and guiding them as individuals and as part of a group.

(5) Families and communities: working collaboratively with families and agencies/organizations to meet children's needs and encouraging community participation in early childhood education and care.

(6) Health, safety and nutrition: establishing and maintaining an environment that ensures the health, safety and nutrition of children.

(7) Program planning and evaluation: establishing, implementing, evaluating, and enhancing the operation of early childhood care and education programs.

(8) Professional and leadership development: Professionally serving children and families and participating in the community as an advocate for early childhood education and care.



Figure 1. Nebraska Core Competency Structure

In Vietnam, the professional standards for preschool teachers according to Circular No. 26/2018/TT-BGDĐT involve a competency structure consisting of 5 standards: (1) Ethical qualities of teachers; (2) Professional development; (3) Building an educational environment; (4) Developing family, school and community relationships; (5) Using foreign languages (preferably English), ethnic languages, applying information technology, demonstrating artistic ability in childcare and education activities. These 05 standards include 15 evaluation criteria:

- Criterion 1: Ethics of teachers;

- Criterion 2: Working style;

- Criterion 3: Personal professional development;

- Criterion 4: Developing a plan to care, nurture and educate children towards comprehensive development of children;

- Criterion 5: Nurturing and taking care of children's health;

- Criterion 6: Education and comprehensive development of children;
- Criterion 7: Observing and assessing children's development;
- Criterion 8: Managing groups and classes;
- Criterion 9: Building a safe, healthy and friendly environment;
- Criterion 10: Exercising democratic rights in schools;

- Criterion 11: Coordinating parents, guardians and the community to improve the quality of childcare and education;

- Criterion 12: Coordinating parents, guardians and the community to protect children's rights;
- Criterion 13: Using foreign languages (preferably English) or children's ethnic languages;
- Criterion 14: Information technology application;
- Criterion 15: Showing artistic ability in childcare and education activities.

The core skills of the professional competence of preschool teachers in the US states share many similar elements and mainly focus on action skills. Meanwhile, the professional competency standards in Vietnam cover many factors: qualities, knowledge, action skills. In reality, in preschools today, there are many educational problems such as inclusive education, STEAM education, environmental education, ecological education, special education, etc. requiring the teacher to have comprehensive knowledge and understanding; action skills as well as other social skills. The very research aims at fulfilling the requirements for professional competence of preschool teachers in all circumstances.

3. MATERIALS AND METHODS

3.1. Participants

This Selective study involved some preschool teachers in Ba Ria - Vung Tau province, one of the provinces in the Southeast region to test the psychometric properties of the Teacher's Competence in Action Research (TCAR). These teachers' qualifications fulfilled the requirements under the Education Law (amended in 2019). Before distributing the questionnaires, the researchers worked with the principals to inform them about the purpose and asked for their approval of the implementation of the survey questionnaire with their consent. Once approved, the questionnaire was distributed to 215 teachers and 186 responses were returned, meaning a response rate of 86.51%. Attached to the questionnaire was an invitation to participate in the survey and consent. The following explains the purpose and context of the study, its procedures, confidentiality, benefits, and whether participation was voluntary.

3.2. Materials

Previous action research studies on teacher career competencies have presented many different definitions, depending on the scope of its application. Action research can be defined as the process of studying a real school or classroom situation to understand and improve the quality of actions or instructions (Hensen, 1996; McTaggart, 1997; Schmuck, 1997). It is a systematic and orderly way for teachers to observe their practice or to explore a problem and a possible course of action (Dinkelman, 1997; McNiff et al., 1996). Action research is also a type of inquiry that is preplanned, organized, and can be shared with others (Foshy, 1998; Tomlinson, 1995). Action research is a planned, methodical observation related to one's teaching (Johnson, 2008).

Research on the professional competence scale for preschool teachers was developed under the practical guidance of Barry et al. (2011). Accordingly, the scale has gone through several stages of development and validation including (a) outlining the structure(s), (b) developing the design and structure of the scale, (c) creating sample items and (d) design evaluation. These steps characterize the nature of sequential exploratory mixed method research design, integrating both qualitative and quantitative data with previously collected data.

- Outlining the professional capacity structure of preschool teachers: Outlining the structure - the first and most important stage in scale development is to outline the areas or context of the structure. Note that the component structures for researcher development of Evans (2012) can provide the constructs that can be translated into components of occupational competencies (i.e. Intellectual, behaviors, attitudes, relationships) but each has other aspects or subcomponents that make up a structure.



Figure 2. Preschool teacher professional competency structure

The structure of professional competence of preschool teachers consists of 4 components in a unified whole and each component has a binding relationship so that it operates as a machine as shown in *Figure 2*. The first component is "Knowledge and Understanding" has a fundamental significance. Professionally executed skills must be based on this component. Knowledge and understanding is the key to help people become preschool teachers and apply it in child care, nurturing and education activities. The professional skills of preschool teachers are demonstrated in a cultural and social environment. This environment is always changing and evolving, requiring preschool teachers to adapt to it. In order to affirm their social position in this environment, preschool teachers must form deep-rooted development skills. Therefore, factors must always be improved including: attitude, responsibility, ethics and professional behavior. Teachers not only show their responsibility but also professional ethics to everyone around and in society. Social skills help teachers not only improve their self-improvement skills, but also perform better at preschool educational tasks. Thus, the capacity of preschool teachers is a combination of the four components mentioned above to demonstrate their professional functions.

Knowledge and understanding	Professional action skills	Social relations skills	Self-development skills	
Psychology	Create environment	Dealing with Parents	Moral standards	
Scientific education	Planning	Dealing with the community	Working style	
Natural Sciences	Organize activities	Respect	Self assessment	
Social science	Organize fun	Connecting people	Identify needs	
Law	Teaching organization	Motivating parents	Career motivation	
Nutrition	Organize the movement	Community mobilization	Faith	
Toilet	Psychological adjustment	Family support	Development plan	
Environment	Need assessment	Train	Professional development	
ICT	Communicating with children	Love	Studying skill	

- Developing the design and structure of the scale of professional competence of preschool teachers. The 4component gauge structure is designed based on the contents capable of representing it. Each component is structured by keywords that, when developed into a scale, create a survey sentence.

Literature	Telling stories	Help	State management
Language	Read and recite poetry	Cooperate	Children's rights
Art	Sing	Share	Perfection of abilities
Music	Drama	Interact	
Children with disabilities	IT Design		
Inclusive education			

Figure 3. Structure of professional competence of preschool teachers

- Creating sample items of the scale. Unlike a questionnaire, a scale is designed to estimate the strength of a personal characteristic or disposition held by an individual. The characteristics measured by a scale are called constructs. Preschool teacher career competence manifests itself in all three areas: cognitive, psychological and emotional. Cognitive measurement tries to determine what people know, understand, or can do intellectually. A measure in the psychomotor domain qualitatively describes an individual's ability to perform physical tasks. Measurement in the affective domain targets an individual's interests, opinions, beliefs, attitudes, or personality traits. Anderson and Bourke (2000) explain that measured affective traits must (a) be related to feeling, (b) describe something permanent rather than a temporary state, (c) orientate towards something (e.g., feelings about particular people, situations, or entities), (d) have a positive or negative direction (e.g., like or dislike) and (e) differ of degree or intensity to different individuals.

- Designing value scale. To determine the value of each item on the scale, we use the Aiken Value Index (AI) in which each item is rated on a Likert scale. This study uses 4 ranking categories and 2 ratings. The score for each aspect is 4 for the highest and 1 for the lowest. Content validity in this study was analyzed using Aiken's V formula (Azwar, 2015: 134). Aiken's formula V is:

 $V = \frac{\Sigma s}{n(c-1)}$

Ket:

V = Rater's Fit Index

- s = Average score the lowest score in the category
- c = Number of Categories

n = Number of Raters

After calculation, all items range from 0.78 to 1.00. The scoring results of the confirmation sheet are considered valid in terms of content when checking or refer to the V-index obtained when considering the specified criteria. Then, the scale was purposefully administered to 215 teachers, of which 186 responses were returned without missing data. This sample size was considered appropriate because 150 cases for exploratory factor analysis (EFA) and 100 cases for confirmatory factor analysis (CFA) were considered sufficient provided that the correlation between factors had strong realism. In this case, the correlation between the items ranges from 0.564 to 0.864 of all items. In addition, the adequacy of the sampling size was established by the Kaiser-Meyer-Olkin (KMO) calculation which gave a result of 0.954 and the Bartlett's Sphericity Test was significant (p < 0.000). Thereafter, the scale is available to calculate the principal component axis to estimate the feasibility of the correlation matrix and to determine the number of factors. Elements with Eigenvalues greater than 1 were included. Finally, the number of factors obtained went through principal components and maximum likelihood analysis via Varimax rotation with Kaiser Normalization as its rotation method. Finally, Cronbach's alpha was determined to establish the internal consistency of the scale and its factors. Only items with criteria of 0.5 or more will be selected to be included in the list of the scale.

4. RESULTS AND DISCUSSION

For the scale, we gave 54 items and conducted a factor analysis to test these items. The results showed that 14 items on the scale did not meet the criteria at < 0.50, so it was deleted. Meanwhile, in the scale there are three items that were found cross-load twice into two points. Two items 30 and 31 were found cross-load in Component 3 and

Component 2, but were ultimately assigned to Component 4. The practical reason for assigning these items to a particular element is based on alignment - the clarity or consistency with other items of the element. Therefore, factor analysis only retained 40 items which are divided into four Components, namely: knowledge and understanding, professional action skills, social relations skills, self-development skills. The total percentage of variance explained by these four Components is 68.541%.

Component 1 (knowledge and understanding) accumulates 60.546 percent of variance from the total and loading of 10 items. The composite items in this element explore teachers' self-reported capacity to collect, analyze, and present action research data identified as cognitive functioning.

Component 2 (operating skills): the area in which teachers self-reflect on their professional competence. Although 10 items were included in this Component, including those measuring the ability to communicate results, the proportion of variance explained was 4.245%. This draws a significant margin from Component 1.

When factoring switches to Component 3, the combined percentage variance of items drops to 3.417 but loads 10 items. These sections report on teachers' self-perceived ability to design a future plan where teachers improve more on professional capacity. In this regard, the factor is named self-development skills.

The items on integrating qualities and ethics included in Component 4 have 10 items. These items were initially assigned and allocated in four stages of action research but were eventually grouped into a single factor, which could, therefore, be classified as a latent factor. The purpose of these sections is for teachers to assess their cognitive competence within the ethical principles of professional competence.

The reliability of the scale determined by Cronbach's alpha ranges from 0.815 to 0.927 in the sub-ranges and 0.917 for the full scale. All of these confidence coefficients meet the minimum standard and are rated "very good". These results confirm that the preschool teacher professional competency scale has ideal stability.

#	Component/Items	Communalities	Mean	SD
	Component 1: Knowledge and understanding			
1	Basic knowledge of nature, society, science, politics, law.	.502	2.08	.758
2	Knowledge of child development and psychology.	.665	2.33	.896
3	Knowledge of nutrition and children's food and water needs.	.686	2.18	.869
4	Knowledge of the child's cultural and linguistic environment580		2.02	.786
5	Knowledge of fine arts, literature and music of the ECE program.	.628	2.19	.852
6	Understanding children's emotions and social emotions.	.643	2.15	.864
7	Understanding children's needs, interests, games.	.824	1.92	.824
8	Understanding types of children's disabilities and how to recognize and prevent them.	.813	1.90	.818
9	Understanding the organization for children to participate in inclusive education.	.738	1.80	.735
10	Understanding of ICT and its applications.	.699	2.31	.933
	Component 2: Professional action skills			
11	Ability to create an environment for children to play, learn and rest.	.525	2.01	.814
12	Ability to plan physical, social-emotional development for children.	.624	2.09	.859
13	The ability to organize learning and play activities to develop children's intelligence	.639	2.10	.814
14	Ability to organize and support children's movement and safety needs.	.682	2.07	.885
15	The ability to detect and regulate the child's psychological and physical reactions.	.594	2.05	.777

Table 1. Professional competence of teachers in surveying items

16	Communication skills with children.		2.09	.823
17	Program analysis skills and flexible application of the program according to each age group.		2.03	.766
18	Designing and organizing games for children.		1.99	.828
19	The ability to tell stories, sing and help children create art.	.658	1.95	.792
20	Skills in applying ICT in educational activities.	.699	2.01	.794
	Component 3: Social relations skills			
21	Understand the characteristics of family and community for proper behavior.	.533	2.10	.871
22	Communicate daily with families to support early care, health and education of children.	.617	2.03	.842
23	Support and engage families and communities through mutually respectful relationships within the parent association.	.643	1.92	.797
24	Mobilize families and communities to participate in the socialization of education.	.600	2.07	.798
25	Personalized curriculum for children in special care	.507	1.98	.746
26	Support children as they transition in and out of school.	.559	1.95	.749
27	Coaching colleagues and families with children with disabilities.	.642	1.93	.803
28	Exercise democratic rights and democratic regulations.	.673	1.96	.754
29	Cooperate and help colleagues, help each other to progress together.	.563	1.91	.729
30	Regularly interact with colleagues in professional development.	.542	1.90	.760
	Component 4: Self-development skills			
31	Maintain ethical standards of teachers	.507	2.10	.826
32	Personal self-assessment	.577	2.27	.834
33	Identify professional and career development needs.	.619	2.37	.890
34	Professional development and training plan development.	.515	2.20	.854
35	Motivated, professional belief	.606	2.10	.788
36	Seek professional development relevant to the job and educational audience.	.511	2.15	.828
37	Develop basic cooperative learning skills	.522	2.27	.897
38	The need for understanding about state management and leadership.	.574	2.13	.902
39	9 Learn about children's rights and have a positive impact on children's rights.		2.23	.864
40	The desire to rise to overcome difficulties	.569	2.13	.854

Note. Overall a = .988, Kaiser-Meyer-Olkin Measure of Sampling Adequacy = .954, Bartlett's Test of Sphericity = 13,199.766, p < .000, df = 1830, Total Variance = 68.541%

The results from this study provide us with a valid and reliable self-reporting scale that can test teachers' selfperceived competence. The scale specifically presents the necessary competencies listed in categories. Therefore, if used as a tool to assess the need for fostering professional development, the scale will provide guidance on which specific competencies need to be focused on and improved by teachers in your own refresher course. In addition, the current study may also have implications for the training policy of the Ministry of Education and Training, the government agency responsible for quality assurance in early childhood education. Afterwards, this proposed scale can be integrated into the scale of professional standards for preschool teachers of the Ministry of Education and Training according to Circular 26/2018/TT-BGDDT as one of the tools to assess training needs of the teacher. Finally, this study may also have implications for teacher training in setting output standards for the early childhood education sector. In this regard, training courses of vocational education institutions and universities can use the scale to develop and assess learners' competencies during training and also after completion of the course.

5. CONCLUSION

The professional competence of preschool teachers is a cognitive issue of the research on teacher quality. This four-component scale is built on the idea of action research by Johnson (2008) to provide assessment criteria based on action capacity. The "knowledge and understanding" component involves many different areas, each of which is a matter of perception and is the basis of professional skills. The component "professional action skills" refers to the educational behavior that teachers must perform in the process of working. The component "social skills" involves the action factors that ensure the existence and work of teachers in certain environments. The component of "personal development skills" requires teachers to have positive cognitive behaviors, along with beliefs, motivations, ethics to turn teachers' aspirations into reality. These competencies are very necessary and create conditions for the need for professional capacity development to be formed and implemented. The teacher professional competencies are presented to become the professional competence scale of preschool teachers. The scale is established by: Aiken's formula V to determine the validity of the content of occupational competency components, Sample size is established by calculating KOM, the reliability of the scale is determined by Cronbach's Alpha. This scale will be further improved to meet the requirements of professional development of preschool teachers in the context of fundamental and comprehensive innovation in education and training.

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