The Empirical Study on the Pedagogical Competences of Teachers of Different Qualification Categories

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Abstract

The study was conducted on the structural and functional peculiarities of various contemporary models of professional pedagogical competences formulated by foreign researchers from different countries, including Edmondo Lim and Susan Steiner (2008), Ferrández-Berrueco and Sanches-Tarazaga (2014), Philippe Perenoud (2001), and Suciu and Mata (2010). The experimental study were carried out simultaneously in the country and city schools of Ukraine and Armenia among 8,547 teachers. The factors of the study were the following: the type of educational establishment, the qualification category of a teacher, pedagogical experience, the academic performance of the students, and the qualification improvement courses for teachers. Based on their pedagogical practice and the proposed competence models comparison, the teachers ranked the competences by their improtance (in %): "comprehensively educating a child" (the main competence) - 68%; "working with others" (cooperation with parents, teamwork) - 65%; "improving knowledge" (master a subject, analytical thinking, entrepreneurship, creative education) - 60%; "learning about oneself and others" (emotional intelligence competences that are not formally evaluated) - 48%; "conquering hearts and minds" (understanding other people, help others to develop) - 34%. According to another model, the findings of the ranking were presented the following way: methodological competences (81.2%), personal competences (78.1%), scientific competences (77.5%), and social competences (61%).

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Keywords: Pedagogical competences; structural components; model of competence; methods.
1. Introduction

At the current stage of the development of education, the main approaches to and methods for the formation of competences in the professional pedagogical practice are developed clearly enough. In the last 15-20 years, in particular, the models of pedagogical competences were formulated in many countries around the globe (Ferrández-Berrueco & Sanches-Tarazaga, 2014; Scafani, 2008). Taking into account theoretical statements, it can be affirmed that the existing models of competences represent the entire pedagogical practice.

2. Problem Statement

Scientific and theoretical discussions about priority approaches proposed in various models of pedagogical competences raise the question concerning how teachers manage to choose and apply separate competencies in their practice (Karapetyan, 2009; Karapetyan, Gevorgyan, & Petrosyan, 2014). Moreover, the study of the levels of competence manifestation in teaching practice will allow determining the advantages and disadvantages of their practice, offer the qualification improvement courses in the system of postgraduate education.; plan and organize differentiated activity aimed at developing competences of teachers taking into account the peculiarities: type of school where they work, qualification category, overall pedagogical experience, level of preparation, personal qualities, and other aspects.

The place of the study: taking into account the peculiarities of the contemporary educational systems lasting 11 and 12-years, the study was conducted in 80 educational establishments of Ukraine and Armenia, the educational systems of which differ in the duration of school education.

The experimental basis: 80 Ukrainian and Armenian educational establishments (in rural and urban areas) equally divided.

The duration of the experiment: the last 4 years (2012-2016).

The description of the study population: at the different stages of the experiment, 8547 Ukrainian and Armenian teachers of various qualification categories from country and city schools participated in the experiment. Table 1 illustrates the percentage of the teachers of different qualification categories.

Table 1. The study population

<table>
<thead>
<tr>
<th>Pedagogical experience</th>
<th>Qualification</th>
<th>Qualification improvement courses</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-5 years</td>
<td>9,8 % Specialist</td>
<td>9,8 % 8,71 %</td>
</tr>
<tr>
<td>5-10 years</td>
<td>5,5 % II Category</td>
<td>12,3 % 17,42 %</td>
</tr>
<tr>
<td>10-15 years</td>
<td>32,5 % I Category</td>
<td>25,8 % 26,13 %</td>
</tr>
<tr>
<td>more than 15 years</td>
<td>52,2 % Top Category</td>
<td>52,1 % 34,84 %</td>
</tr>
</tbody>
</table>
3. Research Questions

At the different stages of the empirical study, the following principles were followed:

1. Humanism and objectivity in terms of attitude toward the analysis and assessment of the positive and negative aspects of the pedagogical practice of a teacher.
2. Comprehensiveness of the research about various competences that takes into account their structural and functional elements.
3. Unity of planned actions and actual pedagogical practice.
4. Reliability and validity of the diagnostic methods.
5. Trust in the diagnostic abilities of teachers.

Stage I: Confirmation of the teachers’ understanding of all the components of the proposed competences, their significance in practice where the methods of individual interviews and group questionnaires were used. When a teacher had difficulty with answering the questions, the experimenter explained the meaning of the competence.

Stage II: Ranking of the presented competences in accordance with the existing models, on the basis of which the level of competence application in the teaching practice was determined.

Stage III: Determination of the interconnections between separate competences in pedagogical practice of the study population.

The experiment progress and data analysis: in accordance with the determined categories of the groups of teachers (10-12 people), in the written form, there were given two competence models, which were proposed to be arranged basing solely on personal pedagogical practice while the purpose of arrangement was explained beforehand (the time was unlimited). Afterward, the results were entered into the tables according to each teacher category.

Taking into account the fact that it was inappropriate to present the ranking results of all qualification categories of teachers in one article, the average values of presented competences were considered and converted into percentage, on the basis of which the findings were evaluated.

4. Purpose of the Study

The purpose of the study: discover the level of mastered competences and their application in a daily practice of teachers.
5. Research Methods

The methods of the study: survey, interview, lesson analysis, questionnaire, statistics.

The justification of the methods of the study: for the analysis of the competence level of the study population, there were proposed two modern models of pedagogical competence: by Ferrandez-Berrueco and Sanches-Tarazaga, and by Edmond Lim (OECD, 2011). The choice was justified by the fact that one of them concerns the educational competences, and another, the didactic ones. We think that these modern educational models complete each other; they are easily observed during lessons and reflect all aspects of the teacher’s pedagogical practice; the structural and functional components are clearly defined and easily evaluated in the teaching practice.

6. Findings

The results of the competence ranking in accordance with Edmond Lim’s model demonstrate that teachers choose competences in their professional activities in the following order:

1. “Comprehensively educating a child” (the main competence) – 68%.
2. “Working with others” (cooperation with parents, teamwork) – 65%.
3. “Improving knowledge” (master a subject, analytical thinking, entrepreneurship, creative skills) – 60%.
4. “Knowing oneself and others” (the competences of emotional intelligence that cannot be formally assessed) – 48%.
5. “Conquering hearts and minds” (understand other people, help others to develop) – 34%.

The following question arises: do the teachers actually use the aforementioned competences in their practice? To answer the question, the lessons and the extracurricular activities of the teachers were analyzed. The degree of the application of the competences by teachers demonstrates that in general, the data corresponds to the findings if all teaching activities are analyzed from the perspective of the connection between reasons and consequences emphasizing on the formation of confidence about the teacher being right. The actual actions aimed at educating the students were assessed with the help of PARLA during the lessons and extracurricular activities.

Thus, according to the interview with the teachers, a comparatively low occurrence of some competencies in Lim’s model is the result of the inability to always analyze the actual environment where a
child lives and the fact that a teacher is not always capable of understanding a student, their contradictions and to convince them in terms of moral and ethical issues.

The ranking and determination of the actual level of pedagogical competences focus on the learning process according to the model of Ferrandez-Berrueco and Sanches-Tarazaga. This model consists of 4 parts containing 44 competencies in total. Among them, there are “Scientific competences” (10 competences), “Methodological competences” (17 competences), “Social competences” (9 competences), and “Personal competences” (8 competences).

The general ranking of the competences of 8547 teachers from Ukraine and Armenia in percentage terms by the average number is the following:

1st place – Methodological competences (81.2%);
2nd place – Personal competences (78.1%);
3rd place – Scientific competences (77.5%);
4th place – Social competences (61%).

Fig. 1. Competences according to the model of Ferrández-Berrueco and Sanches-Tarazaga (2014).

Having ranked the main competences in accordance with the model of Ferrandez-Berrueco and Sanches-Tarazaga, the quantitative indicators of intensiveness of methodological, personal, scientific, and social competences were analyzed separately for the same study population.

7. Conclusions

Comparing the correlations between the different components of the model, it was established that the group components are not interconnected. Considering that different groups of social and personal competences function in the modern educational systems, there is a need to discover the existing relations between the personal qualities of a teacher and the aforementioned competences or prove their non-existence. Consequently, a need to study a teacher’s personal qualities arises. The famous technique known
as the Big Five personality traits was chosen as the instrument of the study, it consisted of 40 questions aimed at studying the occurrence of 5 polar personality traits: extraversion or introversion, neuroticism or emotional stability, openness or distrust toward new experiences, self-possession or forgetfulness, amiability or animosity (Costa & McCrae, 1992).

During the analysis of the teachers’ personal qualities in accordance with the Big Five in the academic year 2015-2016, the experiment was conducted twice in order to determine whether the answers match. After the second analysis, it was established that 98% of the study population answered the same way as they had done before. Table 2 demonstrates the average results on the 5 qualities.

Table 2. The intensity of the indicators of the Big Five personality traits.

<table>
<thead>
<tr>
<th>Personal quality</th>
<th>Average indicators</th>
</tr>
</thead>
<tbody>
<tr>
<td>Extroversion/introversion</td>
<td>5.5 (above average)</td>
</tr>
<tr>
<td>Neuroticism/emotional stability</td>
<td>15.5 (high)</td>
</tr>
<tr>
<td>Openness/distrust toward new experiences</td>
<td>13 (high)</td>
</tr>
<tr>
<td>Self-possession/forgetfulness</td>
<td>12 (above average)</td>
</tr>
<tr>
<td>Amiability/animosity</td>
<td>13.5 (high)</td>
</tr>
</tbody>
</table>

The findings show that extraversion is below the average intensiveness, which indicates sociability and proactive approach. The high level of neuroticism suggests that a teacher emotionally reacts at each event and has low stress resistance, though it is the proof of sensitive, dynamic, and sympathetic personality at the same time.

As far as openness or distrust toward new experiences is concerned, it may indicate a teacher’s curiosity, flexibility, creative inclinations, preparedness to changes, and the application of new experience in their pedagogical practice. The study on teachers in terms of openness to new experiences shows that statistically, they have greatly expressed scientific and methodological competences, which indicates the connection between the personal qualities and the aforementioned competences.

A teacher’s consciousness establishes a connection to the reflection on one’s own activities when they pay attention to what they are doing, form a plan of actions, establish connections, and understand the consequences of their actions. All of this is associated with the understanding of oneself and other people as well as the self-development.

The results on self-possession or forgetfulness indicate the persistence, diligence, ambition, determination, and punctuality of the teachers.

High level of the expressed amiability as a personality trait shows that a teacher is trusting, helpful, understanding and sensitive, and gives good advice. There is a connection between amiability and social
competences, in particular, “the formation of the co-habitation skills of the students,” “developing and maintaining students’ national awareness, civil duty as well as critical thinking skills,” and other aspects.

Thus, the empirical study on the competences of Ukrainian and Armenian teachers during several years allows determining advantages and disadvantages of the competences manifestations. The experimental study of the modern competence model demonstrates the opportunities of various data comparison: lessons analysis, teacher’s personal qualities, separate competence groups. The ranking and assessments of the existing level of particular competence groups’ manifestations determines the methods and approaches to improving the teachers’ preparation in the system of postgraduate education.

References


