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Professional Trainee Teacher's Readiness to Use Cloud Technologies in Educational Process: The Role of Academic Motivation

Khmil Nataliia ^{a,*}

^a Municipal establishment "Kharkiv Humanitarian-Pedagogical Academy" of Kharkiv Regional Council, Kharkiv, Ukraine.

Abstract

This article examines the role of motivation in the formation of professional trainee teacher's readiness to use cloud technologies. The author observes that, it is possible to define the exact characteristics of the motivational criteria, which is a part of the motivational-valuable component of professional trainee teacher's readiness to use cloud technologies. These unique characteristics may include; (1) trainee teachers' knowledge of the importance of the pedagogical potential of cloud technologies, (2) their understanding of the importance of using cloud services in the training of their students, and (3) self-improvement, self-educational activity, the desire to create, implement and expand new ideas on using cloud technologies in the educational process.

Keywords: Cloud Technologies, Educational Process, Learning Motivation, Motivational Criteria of Professional Readiness, Motivational-Valuable Component, Trainee Teachers.

Introduction

"A cloud is an on-demand computing model composed of autonomous, networked IT (hardware and/or software) resources" (Hassan, 2011: 17). From a pool of computing systems and related resources come cloud computing or technology. Beginning from 2007, the term, 'cloud computing' was accepted into the scope of IT terminologies, though the concept of cloud computing is not new (Hassan, 2011). Presently, many fields are advocating for the use of cloud computing or technologies and the educational arena is not an exception (Ercan, 2010; Gartner, 2009).

According to Ercan (2010), the incorporation of cloud computing in education is very desirable for students and teachers. The impact of such technical progress on the process of professional and pedagogical activity is enormous. Influenced areas consist of; (1) the development of modern informational educational technologies [the Web 2.0, mobile studying, cloud technologies, etc.], (2) mainstreams the problem of training qualified and creative teachers, (3) assists in the provision of the means to master new opportunities for information and communication technologies [ICT], (4) provides effective pedagogical and information technologies to improve the quality of student learning, (5) provides opportunity for virtual educational environment, and (6) organizes the educational process at a high level, using modern information technology.

To foster the development of cloud technologies within the educational arena, a considerable rise in the motivation of trainee teachers as the main driving body – is chief. As a consequence, it is

* Corresponding author
E-mail addresses: nkravco@gmail.com (K. Nataliia)

important for existing training institutions to examine their existing educational process for training professional trainee teachers to identify their readiness to use cloud technologies.

The Essence of the Concept – “Motivation”

In a global world with large-scale informatization of the educational system, teaching with the help of cloud technologies forms one of the keys to trainee professional success of students. The readiness to use cloud technologies by teachers should not only be an ‘end’, but rather, a ‘means’ to training.

It should also be the basic condition for an effective realization of each individual’s potential. In this sense, the dialectical nature of readiness as both a quality of state as well as dynamic process cannot be taken too lightly. The study of the state of scientific development of the problem allows us to conclude that motivation and motives of behaviour and activity is one of the fundamental problems in psychology (Adusei, Sarfo, Manukure, & Cudjoe, 2016; Han, Yin, & Wang, 2016; Watt, & Richardson, 2007). Motivation is one of the most important factors that ensures the success of activities. All human activities depend on motivation that aims at achieving a clearly defined goal (Honcharenko, 1997; Watt, & Richardson, 2007).

In the dictionary of professional education, motivation [from lat. Motivation] is simply defined as an internal or external drive of a person in an activity to achieve certain goals (Vishnyakova, 1999). In some cases, motivation as a holistic process may eliminate the functional approach of studying some particular problems, facets, essence and conditions of development of individual motives, and their means of formation (Ilyin, 2000). As Asmontas (2002) noted, motivation allows the developing individual to determine not only the direction but also the ways to implement various forms of professional activities like emotional and volitional spheres. It is noteworthy that without a positive motivation, it is impossible to achieve great results in the personal career or professional development. The success of training activities among trainee teachers will therefore depend on their internal and external motivating factors.

Formation of Motivation among Trainee Teachers

The process of building drive in educational training of teachers may involve a complex system of motives. Organically, this system includes: cognitive needs, interests, efforts, ideals, and motivational attitudes that are active and directional in nature. Thus, academic motivation is characterized by both stability and dynamism (Zimnyaya, 2004). The notions of “educational motivation” and “professional motivation” are distinguished in psycho-pedagogical literature of trainee teachers. On the one hand, trainee teachers’ motivation cannot be equated with the school educational motivation. This is because the nature regular students’ motivation may not meet the professional requirements of future specialists’ motivation to engage in professional teaching activities.

Professional motives desirable for trainee teachers have more intensive influence on the efficiency of educational activities than the cognitive ones required by regular students. It is therefore advisable that professional motives are prioritized in the hierarchy of motives when training professional teachers. Nonetheless, cognitive and professional motives in educational settings are closely connected with each other and both are necessary to enhance performance (Adusei et al., 2016).

From these premises, trainee teachers’ readiness is a necessary component of both their motivation and successful professional career. It is a work that contains ‘basic’ professional and educational motive and ‘related’ motives.

Motivation Trainee Teachers to Use Cloud Technologies in the Educational Process

Equipping trainee teachers to build a stronger motivation, especially regarding the use of cloud technologies in the educational process is a vital process. Motivation to use cloud technologies among trainee teachers allows them to acquire both theoretical and practical knowledge on the use of cloud technologies in trainee professional activity. In addition, it takes into account their peculiarities in the organization of lessons with application of modern information technology, operational skills and abilities to work with cloud technologies, the development of reflective abilities, and emotional skills.

All the elements stated above interrelate, interact and integrate, and the consideration of each separate element is conditional. It is therefore important to apply the methods of active and interactive studying to: (1) create a problem situation, and (2) use a professional context in business games, situational tasks, and educational training to encourage growth of motivation of trainee teachers. The very structure of subject-subject interaction between teachers and students in the educational process should include: dialogue, pedagogical tact, and the creation of situations of success taking into account the interests and needs of students, and other reasonable requirements.

As a prerequisite, the successful formation of professional trainee teacher's readiness to use cloud technologies depends on both the drive, and the control of the dynamics of change in the educational process.

Motivational-Valuable Component as the Basis of Formation of Professional Trainee Teacher's Readiness

Motivational-valuable component is one of the main components in the formation of professional trainee teacher's readiness to use cloud technologies in the educational process. Komar (2011) explores wider, the motivational-valuable component. In her opinion, *"the study of needs, motives and interests of the individual is important in professional training of teachers. The needs of human, as says the scientist, though is impossible to do without, is the one of the vital drives that moves all activities of modern teachers"* (p. 89).

Thus, the motivational-valuable component is characterized by the trainee teachers' relation to work with cloud technologies. Specifically, this includes;

- their interest in cloud technologies,
- their desire to possess new cloud technologies and to achieve success in their acquirement,
- their ability to generate their own motivation, the level of confidence in their psychological and pedagogical readiness to implement cloud technologies in their own existing and future profession.

It can be said that the motivational criteria are indispensable when diagnosing the levels of formation of the motivational-valuable component of professional trainee teacher's readiness to use cloud technologies in the educational process. In the pedagogical dictionary, the criteria (from the Greek. *kriterion* – a mean for judgment [reasoning] is defined as *"the characteristic, based on which the evaluation, definition or classification of something; a measure of judgment, evaluation of a phenomenon"* (Kodzhaspirova, & Kodzhaspirov, 2005). H. Biletska notes that *"in the pedagogical science, criteria define the characteristics which assess and compare the pedagogical phenomena, processes etc."* (Biletska, 2014: 20). Zamerchenko (2012) understands criterion is the qualitative characteristics of the object of the monitoring studies, the reference characteristic that is the basis for the classification.

As indicated by Reshetnyk (2013), *"the system of international standards ISO defines a criterion as a measure of the integrity of the reflection properties of the object, ensuring its existence; methodological means of management for education quality; the ideal sample, reflecting the higher, perfect level of the phenomenon under study; selection mean or measure alternatives. A measure is a specific measuring criteria, making it accessible to observation, recording and fixation"* (p. 218).

As a consequence, the motivational criterion to measure the formation of professional trainee teacher's readiness to use cloud technologies in the educational process is a measure to assess the degree of awareness that they require in order to embrace and use cloud technologies in both existing and future teaching career. It is worth stressing that the motivational criterion is regarded also as motives, interests, and needs that determine the individual's ability and aspiration to self-regulation, self-determination, self-reflection, self-affirmation. It is therefore characterized by; (1) the desire to acquire cloud services, (ii) the presence of personal interest to apply them in the educational process, (iii) awareness of the importance of mastering skills to use cloud technologies in the educational process, (iv) the presence of a clearly defined self-development program and, (v) the ability to be creative in new knowledge creation.

To assess the motivational criterion, it is necessary to examine the interests of trainee teachers to perform specially selected and developed tasks. This will help to establish how they

carry out self-examination, their ability to engage in self-cognitive and self-educational activities, how to regulate and adjust their actions when performing creative tasks, and the ways of manifesting willpower in difficult situations. Taking into account the degree certain measures of the motivational criterion manifest, it is important to examine the distinguished levels of formation of the motivational-valuable component of trainee teachers' readiness to use cloud technologies in the educational process.

These levels of formation may be high [research], middle [reflexive] and low [reproductive]. High level [research] of formation of the motivational criterion of professional trainee teacher's readiness to use cloud technologies is characterized by their perseverance during the carrying out of proposed tasks. The awareness of the importance of the pedagogical potential of cloud services, and the active aspiration of the students to master the needed information and technology knowledge is instrumental at this level. The trainee teacher has a strong motivation for continuous improvement and self-education activities. There is also the desire to create, implement and expand new ideas on the use cloud technologies in the educational process.

The middle level [reflexive] of formation of the motivational criterion of trainee teachers' readiness to use cloud technologies is also characterized by their understanding of the importance of the pedagogical potential of cloud services. Though trainee teachers at this level share the interest in using cloud services in educational process, they are anxious about the difficulties in organizing the training sessions with their implementation, self-improvement, self-education and the desire to create and expand new ideas on the use cloud technologies.

Finally, the low level [reproductive] of the motivational criterion of trainee teachers' readiness to use cloud technologies is characterized by the understanding of the pedagogical potential of cloud services, but do not by the desire to obtain the needed information and technological skills to work with cloud services. Trainee teachers at this level also lack the desire for self-improvement and are unable to commit to reproductive studying.

Conclusion

In summary, it is remarkable that the understanding of trainee teachers' motives, needs, interests, values, and aspirations regarding the implementation of cloud technologies is crucial for the development of education in any country. Prospects of further studies lie in the presentation of the results of experimental verification of the levels of formation of motivational-valuable component of the professional trainee teacher's readiness to use cloud technologies in the educational process. This paper has implications for research, training of future teachers and the development of global education.

Conflicts of Interest

The author declares no conflicts of interest in relation to this work.

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