



Technology as Mediation Tool for Improving Teaching Profession in Higher Education Practices

Zehra Altınay-Gazi
Near East University, N. CYPRUS

Fahriye Altınay-Aksal
Near East University, N. CYPRUS

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ABSTRACT

Technology became a mediation tool for forming information and developing skills in teacher education programs of higher education institutions because technological tools can be used for self-reflection of prospective teachers' teaching performances. Practical implementation of teacher education programmes is a part of quality indicator in higher education as it is components that determine the quality of the teacher education provided as well as enhances prospective teachers' confidence. Thematic analysis was used employed to reveal qualitative data upon research questions. The research findings revealed that participants enhanced their teaching practices by re-watching their experiences and correcting their flaws. Collaborative peer learning facilitated development of communication skills, self-evaluation, intrinsic motivation, critical thinking and reflection. Furthermore, the study sheds light on how technology enhanced learning environment can be developed for disabled learners with a concrete model for the quality in teaching practice within higher education practices.

Keywords: disability, higher education, quality, peer learning, professional development, teaching practice, technology

INTRODUCTION

Quality in higher education

Higher education institutions continue their attempts in continuous improvement and change in order to increase quality of their educational practices. Continuous questioning of quality within the practice is one of the missions of universities to set and maintain demand within the competitive market. Therefore, performance culture framework becomes significant to determine the road map of those institutions in order to seek expectations and satisfaction of learners (Goodwin, Kosnik, 2013; Rots, Aelterman, 2008).

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Correspondence: *Fahriye Altınay Aksal, Ataturk Education Faculty, Near East University, Nicosia.*

✉ fahriye.altinay@neu.edu.tr

State of the literature

- Technology become mediation for reflection and learning
- Social development and knowledge creation is crucial for the professional development of prospective teachers.
- In the quality of higher education practices, open access of education and equality can be provided through mediated learning.

Contribution of this paper to the literature

- Skills development of prospective teachers can be enriched through merits of technology
- Collaboration and reflection foster professional knowledge
- Peer group learning techniques and reflections are used together for both skills and professional development.

Within the quality framework and standards upon the accreditations in higher education, providing reliable and performance based information become crucial step within all practices. Learning and teaching practice are components of critical indicators which directly touches the expectation and satisfaction of the learners in order to feed the quality in higher education. Within the learning and teaching practice, the following topics are significant indicator to be considered based on collaboration and partnership.

- course planning, design and admissions
- support for teaching and learning demands
- effective and timely assessment and feed forward
- reliable use of examining
- listening to students' views and responding to their needs

Creating better learning environment and assessing the teaching performance in higher education institutions significantly in teacher education programmes are very fundamental process in quality framework (Kissock, Richardson, 2010). Upon the quality framework, 'students' voice' is the critical element to fulfil and proceed with the quality process as part of performance evaluation and assessment. The higher institutions need to give value of learning and teaching environment which needs to foster knowledge management ability and transferable skills of the learners. Behind the learners' cognitive abilities, digitalization pushes the educational system to consider authentic learning environments in order to enhance transferable skills for employment and future work. Considering the students' voices and teaching practice within learning and teaching environment also supports the understanding the quality practices within the same institution (Nolan, Swart, 2015) Astra et al. (2015) underlines how often the students contact devices of mobile communication and use internet as a new trend that have possibility to organize mobile learning. With respect to this there are increasing numbers of learners who have special needs for some reasons. Effective education systems should provide accessible, equal opportunities and environments for those learners. Considering the students' voices means encapsulating the disabled learners within the system and acknowledging the educational practices as a whole. Therefore, video as one type of technology can be thought as medium to create better

learning environment and teaching practice, at the same time providing bridges to create equal standards and opportunities in learning and teaching. Therefore, how video and role-plays enhance learning environment can be used for developing a model of online platform that considers disabled learners is a crucial concern in literature gap.

Social development and knowledge creation relies on theory of social development that focuses on participation to the social development based on skills, knowledge and attitudes. This requires to concentrate on process of conceptualization, implementation and evaluation of social development regarding to new knowledge creation. In this respect, technology and globalization make opportunity to recreation of knowledge in order to reach out skills and development in societies (Biao, 2011).

In education, especially in teacher education, knowledge, skills and professional identity are crucial in order to develop process of learning within practice for the social development and knowledge creation (Grossman & McDonald, 2008). Technology becomes a mediation of knowledge creation, skills development in teacher education programs.

Socio-cultural perspectives shed a light of emphasizing the interventions of learners through contact and developing dialogues. Accordingly, attention of how culturally organized activities make learners to interact others for enhancing their learning as peers has to be taken into consideration. In this respect, learners as peers change their perceptions, relations and they develop inter-subjectivity and reflections (Maskit, Firstater, 2016; Mercer, 2002, Naraian, 2011).

Mediated learning

Teachers become mediators to enable students to continuously challenge themselves in order to facilitate new knowledge based on experiential and collaborative efforts, technology becomes also mediation mechanism. Contextualized and activity-oriented instructions by the support of technology provides learners to learn in action (Harris, Bretag, 2003, Eun, 2010).

Learning through the support of video and role-play fosters skills development to learners within peer learning and group learning context. In addition, learning through peers facilitates high level of thinking and communication skills while sharing knowledge (Delucchi, 2004). Peer learning promotes the learning context as an active learning that successful learning is achieved by positive interdependence, face-to-face interaction, group processing, and technology based instructions. Different studies confirm that peer learning by making group works; learners learn more (Hillyard, Gillespie, Littig, 2010). In this respect, active involvement makes learners understand deeper. The study of Topping (2005) argues for the importance of peer learning that peer learning is an acquisition of knowledge and skill through active helping and supporting. It is a result of positive interdependence between learners and socio-economical and transferable skills are gained. In addition, it is significant to understand the role of mediated learning in peer learning processes and context. In fact, technology is a key mediation of achieving successful peer learning.

As the study of Grossman, Hammerness, McDonald (2009) underlines the need for skill while making synergy of instructional activities within classroom, technology and role playing become mediation tools for stressing how to develop skills within teaching profession.

Role playing is a technique which supports real experience opportunity for teacher training within classroom context. According to Mullin (2008) this enhances reflection in the teaching professional development while observing faults and possibilities to make corrections and adaptation in the teaching practice. In this respect, technology supported instructions like a video-taped instruction is useful in order to acquire role playing in the teaching practice. It supports instruction in order to prepare teachers for their profession, as teachers needs the practice in order to reach out how best to develop skilled practice, video-taped instruction, role playing support pedagogies of reflection and investigation for teaching profession. This argument is also expected related to disabled learners for which technology enhanced learning and teaching practice might merge the inequalities and contradictions within the education system.

In teacher education programs, there is an intensified need to focus on how technology integrated instruction support skills development of prospective teachers and how this learning environment can be enriched for the development of the disabled learners. According to Macdonald, and Twining (2002) participation facilitate learning, hence technology supported learning context becomes important. Thus, this research study focuses on development of skills for prospective teachers in their teaching profession while making role playing and videotaped instruction and proposes a suggestion as a model for disabled learners to increase the quality of learning and teaching within equality principle.

Research questions are indicated as following:

- Q1. *What are the skills and competencies of prospective teachers that peer learning process foster?*
- Q2. *How do pre-service teachers reflect their skills development by both role playing and videotaped instruction?*
- Q3. *How do online learning platform enhance learning and skills development of the disabled learners?*

MATERIALS AND METHODS

This study has qualitative research design nature that it was employed in order to gain experiences and reflection of prospective teachers from their teaching practices by the support of role playing and videotaped instruction. This enhances researchers' and participants' re-interpretations in order to form a unified picture within the research process while prospective teachers develop their teaching profession and researcher develop profession. This research study stances on concepts about drama, role playing, videotaped instruction by the essence of peer learning and facilitation of the course instructor. In this

respect, meanings gained from the experiences reflect the nature of the research as a qualitative research design (Creswell, 2009, Denzin, Lincoln, 2003).

The presented research has interpretive nature that relies on qualitative research. Developing a description of context and practice through analyzing themes and stating and developing lessons learned context become essential methodology to be pursued. This research study explores quality structure of higher education system on behalf of teacher education programmes, technology integration and key learners for the context of higher education within equality and liberty. Therefore, personal lens by personal interpretation make researchers to view on social phenomena holistically.

Research Approach

Case study through action research is chosen as research approach that change and development of prospective teachers have emerged as skills development within course activity (Johnson, 2002). In this respect, case study was employed to explore in-depth individuals' experiences and perceptions within one process and activity (Creswell, 2009, Yin, 1994). The course from teacher education programme has been chosen as a case that course activity which was rooted at drama and role playing and videotaped instruction supported skills development of prospective teachers within the nature of a change and development as an action research. This practice shows how concrete example of the teaching practice influence student voice and expectations.

Research Process and Ethics

Prospective teachers were selected purposively as research participants to the research that they accepted to make drama and role playing and videotaped recording (Johnson, 2002). Further to this, back translation was conducted in order to ensure the reliability of the research. Upon the findings and practice of this action research, and for further elaboration a model might be suggested in order to enhance disabled learners, through the use of mediated learning and with drama and role play.

Data Collection Technique and Analysis

Self-report to the prospective teachers was given in order to explore their skills development. They reflected on their understanding and experiences to dimensions as; communication skills, content knowledge, professional knowledge, collaboration, reflection, time management, motivation, peer support, critical thinking and research skills.

Thematic analysis was employed to analyze reflections of the participants from gained, developed skills through self-report. The participants reported the support of drama and role playing and videotaped instruction in their teaching practice. Matrix strategy helped to categorize themes and meanings coherently. In this way, basic themes as communication skills, content knowledge, professional knowledge, collaboration, reflection, time management, motivation, peer support, critical thinking and research skills draw the roots of the research in order to reach credible research findings (Creswell, 2009; Denzin, Lincoln, 2003).

The report of current situation for learning and teaching environment for disabled learners was analysed and the model of online platform can be suggested for further practice.

RESULTS

Research findings and discussion were based on particular concepts in relation to research questions. These themes are communication skills, content knowledge, professional knowledge, collaboration, reflection, time management, motivation, peer support, critical thinking and research skills. As this research highlights the support of drama and role playing, videotaped instruction for the skills development of prospective teachers, the findings revealed the key themes provides evidence on how drama and role playing, videotaped instruction enhance the skills development of prospective teachers. Regarding the findings of this action research practice, the online model was proposed for ideal learning and teaching environment for disabled learners.

Communication Skill

The qualitative data collected from self-reports as a result of the action learning process in the course provided evidence on how drama and role playing and videotaped instruction increase communication skill of prospective teachers. Prospective teachers provided parity concerning the importance of group discussion, presentation, and simulated discourses through videos for communication skill. Almost all prospective teachers considered that drama and role playing, video simulated practice while approaching and practicing principles of teaching and methods help them develop communication skill.

First, drama and role playing session provided self-awareness of the professional identity for prospective teachers. Almost all of them reported that drama and role playing session increase awareness of teaching practice and develop their communication and presentation skill. ST1 and ST2 underlined that drama and role playing provides how dialogue and discourse happens and how teaching practice occurs. ST3 and ST6 underlined that drama and role playing provides real experience on teaching and presentation thus increases the discourse and communication skill. Further to this, ST4 highlighted that drama and role playing increase the awareness of teaching practice and enhance content understanding. Similar to ST4, ST5 pointed out that this session increases both adaptation and communication skills. ST8 provided evidence that drama and role playing creates enjoy of learning and experience in teaching practice. ST10 and ST11 reported that this session provides dialogue and speech in terms of communication. ST17 and ST22 put emphasis on that this session increase peer support and dialogue for the success.

Secondly, videotaped instruction and simulation during drama and role playing provides a mirror of teaching practice which increases communication and presentation skill. Almost all of the prospective teachers reported that video watching increase awareness of use of language, voice, delivery of course of actions, mistakes. However, minority of the class pointed out that they became excited while videotaping session. Indeed, almost all of them

stressed that video-taping and evaluation on video watching increase communication and internalization.

Content and Professional Knowledge

The data from self-reports highlighted that drama and role playing with video stimulated instruction increase content knowledge, professional knowledge considering teaching practice, teaching context, knowledge management, tools and materials. Almost all of the prospective teachers stressed that drama and role playing and reflection from video watching increase the content knowledge on principles of teaching and methods. They highlighted that drama and role playing with the support of video technology provided mirror to internalize content knowledge and real experience of teaching practice. Further to this, almost all of them pointed out, while preparing teaching context in drama and role playing session, the knowledge management, ability to manage tools and materials have been enriched. Significantly, they stressed that they enhance instructional technology capability as it is significant in nowadays. ST5 underlined 'this session provides a step towards teaching profession'. ST27 and ST29 reported that they internalize content and professional knowledge in process. Further to this, ST17, ST21 and ST28 stressed that they had an opportunity to evaluate content knowledge, knowledge management, use of technology, teaching context and practice.

Collaboration and Reflection

Significantly, the qualitative data from the self-reports provided evidence that drama and role playing session increase peer collaboration and reflection on action during course process. Further to this, the participants emphasized that they internalized the given peer support, as well as the self and peer evaluation during the process. In terms of collaboration, almost all participants underlined that while being prepared for drama and role playing session, dialogue with others increased collaboration skill. Furthermore, peer support was enriched among the groups. While drama and role playing with video technology occurs, all participants reported and reflected on faults and good points of teaching practice that this increased their self and peer evaluation. In addition, this process enhanced reflection skill. Significantly, almost all participants pointed out that group works, preparation to the drama and role playing with video technology increased their intrinsic motivation for teaching practice. Besides collaboration and reflection skills, the participants pointed out that they gained time management ability, and self-control to complete the process. ST16 and ST23 underlined that time management and self-control are the significant features of human being in knowledge society. According to the qualitative data from self-reports, it can be argued that the participants underlined that they develop critical thinking skills during the video recording and viewing the ideas. Further to this, almost all of them referred that this course with its activities enhanced the research skills and awareness of the teaching profession.

In summary, concerning parity of self-reports from the participants highlighted that drama and role playing with the support of video technology enriched the real experience of teaching practice and encouraged awareness of the future professional working life. The qualitative results revealed that action learning within the class with various activities such

as drama and role playing, video supported course of actions provided opportunities to internalize teaching practice, to extend knowledge on content and professional understanding, to develop self-control, adaptation, peer support and evaluation. In addition, the process fosters communication, reflection, critical thinking and research skills.

DISCUSSION AND CONCLUSION

The research underlined and discussed the findings on the support of drama and role playing, video recorded instructions on the skills development of prospective teachers in their professional development. They found opportunities to enhance socially constructed knowledge in their teaching practice through peer learning processes. In this respect, they gained practical and pedagogical knowledge within inductive research processes. This research process remarked that change and development existed within the instructional activities throughout the course on Principles of Teaching and Methods. Within an instructional activity of the course, social development theory formed the basis for the nature of the research. Prospective teachers exchange their perceptions, feelings, and experiences based on the content of the course within their teaching profession. Peer learning facilitated social development and skills development by the support of technology, drama and role playing technique within the period of the course for teaching profession. Within a framework of quality in higher education through considering teaching and learning and student voice, this case study through action research revealed the collaboration, change, and development, and peer support, technology skills in order to facilitate practical and professional knowledge. Pedagogy refers to a process of investigating for knowledge on which teaching approaches rely on by having critical reflection. The art of teaching through drama and role playing is important for holistic knowledge construction and experience individual and collective teaching practice. Drama and role playing in teaching practice is a good evidence of observing real experience within the practice. Therefore, activating reflection can be done through drama and role playing within the teaching practice (Eriksson, 2011). The study of Fleming, Merrell & Tymms (2004) confirmed that drama has impact on the on pupils' language, mathematics, feelings and attitudes. In this respect, drama and role playing is used in teaching practice to socially construct knowledge. Furthermore, technology supported learning environment and drama role playing as part of art and learning strategy may help learning of disabled learners.

Renewing and developing skills and knowledge in the subject area especially teaching profession is essential for gaining practical knowledge for profession. Learning through networking, interaction and collaboration become significant and peer support within the collaboration is essential (Bakah, Voogt & Pieters, 2012). The results reveal, therefore, rethinking the way of instruction and activities in teaching practice is intensified that prospective teachers learn through the support of technology and different teaching learning techniques. Especially peer learning within the instruction activities facilitates socially constructed knowledge and fosters skills development of learners (Kotsopoulos, Mueller & Buzza, 2012). In addition, technology becomes a mediation tool for presenting different ways of looking in the instruction and peer learning (Grossman, Hammerness & McDonald, 2009; Russell, Finger & Russell, 2000). Upon the findings from the successful practice in this course of action, the model of videos and drama role playing sessions may increase the

awareness and learning of disabled learners. As a result of Higher Education Institutions situation analysis, concerning equality and disability in higher education becomes essential quality indicator for the higher education practices. As a review of reports based on web content accessibility guidelines, there are barriers even in web accessibility and usability of higher education institutions. In this respect, curriculum and programme should be revised and enriched based on quality indicators of equal and accessible higher education practices.

The aim of this research is to reveal the skills development of prospective teachers through support of drama and role playing and videotaped instruction and increasing learning of disabled learners. Based on the roots of the social development theory, peer learning process, videotaped instruction and drama and role playing grounded the skills development of prospective teachers in their teaching profession. The collective effort of peer groups in drama and role playing within the videotaped instruction, communication skills, content knowledge, professional knowledge, collaboration, reflection, time management, motivation, peer support, critical thinking and research skills are considered as developed skills for the teaching profession of the prospective teachers.

Further to this, the research enlightens the internalization of social development theory, videotaped instruction, peer learning and drama, role playing for the skills development of the prospective teachers in teacher education and how these conditions may be supported for the disabled learners within online environment. The research sheds a light of videotaped instruction by the socially constructed knowledge in teacher education field (Grossman, Hammerness & McDonald, 2009). For further studies, mixed research approach can be used to gain multiple ways of looking and social development theory can be integrated with interaction model in order to foster more insights for the teaching profession (Tsai & Lei, 2015). In addition, proposed online platform model can be implemented and tested to reveal the performance of the learners with special needs. Considering equality is the compulsory element of the quality in higher education. As Quablan et al. (2015) states that challenges related to school and classroom environments are to be considered as some of the major concerns to be sorted out. In this respect, higher education institutions need to redesign all programme and courses upon considering the disabled learners and show how they are sensitive on student voice and expectations.

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