

Understanding Doctoral Nursing Students' Experiences of Blended Learning: A Qualitative Study

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Abstract- The concept of blended learning in the field of nursing and medicine has been accepted. Blended learning has been extensively used thanks to the development of communication technologies and the availability of Internet services. Meanwhile, experiences-based research, by all accounts, can help the expansion of such a learning modality. Therefore, this study was designed to explain nursing doctoral students' experiences of blended learning. To attain this goal, a descriptive phenomenology method was used to illustrate experiences as they are experienced by the participants in the study. With regard to the nature of the investigated phenomena and the existing methods for the inductive analysis, Colaizzi's method of data analysis was used. The findings of the study led to the discovery of three main themes: "failure", "synergy" and "specific interaction". Each of the themes has been further divided into some sub-themes.

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Introduction

The necessary criterion for the scientific development of a country is recognizing the importance of a good education system. This is one of the most important factors that are helpful to the economic development of many developing countries. Today, the traditional methods did not meet all the demand for education and blended learning is a strategy for the transition to the information society (1).

Different definitions of "blended learning" propose that the common point is the combination of the virtual and physical environment. Stacey and Gerbic (2) believe that it is face to face adjoining situation of the simultaneous human interaction and communications technology. Dziuban and colleagues (3) state that the blended learning is the use of online learning methods along with present methods to reduce face to face contact in a course.

At the beginning of twenty century in many developing countries, blended learning was considered as a suitable solution to solve the problems of traditional methods (1). Doubtless, blended learning effectively solves many of the issues and the problems of

conventional academic training; the most important of these issues including the limited capacity of students admission in the conventional university system, rigidity in the allocation of instructional time and the provision of attendance course is enormous expenditures (4). Applying information technology, especially use of the internet was considered as the best solution to solve problems in education. Survey studies show that a large portion of internet users are using this medium for blended learning (5).

Although, the potential of this technology in countries, due to economic, cultural and social conditions is different, but almost all countries with the assistance of these technologies, have begun the creation of virtual universities or are planning for it. In Iran, this movement has been evident in the past few years (6). Today, blended learning, due to the special characteristics including: ability to use at all hours of day and night, reduce wasted time, reduce costs and increase productivity, student motivation, more contact with students and better control, providing teamwork facilities in multimedia environments and electronic conferences, appropriate temporal and spatial coverage responds to the large number of applicants for training

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and numerous other advantages lead to the elimination of many current problems and its implementation plus academic training, will lead to the improvement of student learning (7,1). In attention to advantages mentioned, fortunately, Iran, as a leading country, felt the necessity of using e-learning in universities and designed it. In this regard, one of the programs in the university of medical sciences is the use of e-learning resources as a teaching aid, and it is being used in some courses in all nursing levels.

Therefore, to pave future move, the strengths and weaknesses of using this system should be identified by research and improve the path and possibility of its application in nursing doctoral level education. Thus this study was designed to "explaining the nursing doctoral students' experiences related to blended learning."

Materials and Methods

The present study is a qualitative phenomenology research. Qualitative issues can not be well-understood through quantitative methods or have not been much studied before, and there is not enough information about them. Qualitative methods can help explore topics such as life experiences (8). Because of the novelty of experience and very little study in this area, research about teaching experiences in blended learning with a qualitative approach is necessary. For this, a descriptive phenomenology approach was chosen. The descriptive phenomenology is to describe the experience of life as it is experienced by participants in the study. Phenomenology is a research method with philosophical roots and focuses on what people do in the daily life or experience, and how they describe this experience. Sampling in qualitative research tends to be low, and samples are chosen using purposive sampling. The researcher selects samples who are supposedly information-rich; that means selected samples should present a strong picture of underlying phenomena (9). In this study, participants selected by purposive sampling were interviewed using the semi-structured and in-depth method. After selecting participants based on inclusion criteria, the necessary explanation was given and after their consent to participate in an interview, the time and place of the interview were mutually organized. Of course, a quiet and private place was provided for participants' comfort to express their views and enhance recording sound quality. Once again before the interview, participants' permission and satisfaction were obtained to record interviews. In addition, participants were assured about the confidentiality of data obtained.

The maximum duration of each interview was 90 minutes to avoid tiredness. Data were analyzed with Colaizzi method.

The main method of data collection was semi-structured interview using a general guide. Before the interview, the researcher attempted to gain participants' confidence through communication methods and then continued asking general and open questions such as "Please tell me about your experiences in blended learning?"; "How was your experience?" and so on. Although researcher had the least interference in the interviewing process but it was guided to cover its objectives by the impeller and illustrative questions. During the interview, according to students' coordination and permission, the entire interview was recorded on a digital recorder (MP3 Player) and audio files converted and transferred to the computer. The interviews that were taken and recorded by digital voice recorder and notes were analyzed according to the principles of phenomenology method. For this purpose, immediately after returning files, word by word of interviews even participants' emotions such as laughter, silence, and tone of words were encoded. Notes and ambiguous items were attended and reviewed again by participants at the next meeting. In this study, due to the nature of the phenomenon, one of the phenomenological inductive analysis methods named Colaizzi method was used.

The study sample included students who had experienced blended learning in at least one complete course. Preferably the first participant was selected considering his ability to well communicate with the researcher. The number of participants was not predictable at the beginning of the study. The sample size was determined by data collection and their analysis and after completion of all categories, a new data that need a new code or expansion of existing code was not informed; therefore through regular review of data and asking questions, finally with eight interviews saturation in categories, adequacy and richness of the data was reached. The research environment was Tehran University of Medical Sciences, faculty of nursing and midwifery.

According to Colaizzi's first stage, at the end of each interview, participants' recorded statements were frequently heard and were written word by word on paper. In order to understand the feelings and experiences of the participants, the interviews were read several times. According to the Colaizzi's second step, after reading all of the participant's descriptions, significant information, and statements related to the

phenomenon in question, were underlined and important clauses were highlighted.

In Colaizzi's third step, the formulated concepts were extracted. After identifying important phrases in each interview which indicated one's main and basic thought was extracted. However, after acquiring the concepts, the relevance of developed meaning and primary statements were assessed and assured the accuracy of the relation between them. After extracting codes, according to Colaizzi's fourth step, researcher carefully studied the developed concepts and clustered them based on the similarity of meaning. In this way, thematic categories of concepts were developed. In the fifth stage, for a comprehensive description of the phenomenon under study, results linked together to create more general categories. In the sixth step, comprehensive description of the underlying phenomenon (as much as possible with clear and unambiguous words) was presented. In the final stage, accreditation was made with reference to each sample and asking about findings. In addition, two criteria of reliability and credibility were used for study strength in a way that the codes extracts were referred to participants to validate findings. Also for results' reliability, the research process was described in detail in order to help other researchers to understand how results were achieved.

Of course, the researcher had the chance of contacting the participants and study environment as a Ph.D. student on the team.

Results

Generally, the main three concepts that emerged include: "Failure", "Synergy" and "specific interaction". Sub-concepts of failure includes "administrative failure" and "substantive failure", sub-concepts of "Synergistic" includes "complementary method", "learning in life", "novelty" and "high-quality learning" and sub-concepts of "specific interaction" contains "disorder in interaction" and "prominence in interaction".

Failure

One of the understood themes in doctoral students' experiences was "failure" and subconcepts of failure including "administrative failure" and "substantive failure". Administrative failure included sub-concepts such as "unfamiliarity", "inappropriate use", "failure in access", "two components not corner", and "software failure".

Of course, each of these had other sub-concepts. Also, sub-concepts of "substantive failure" had sub-

concepts including": gap between existing and desired", "communication Problem" and "are being dependent".

Administrative failure

Unfamiliarity

In students' experiences, both students and teachers have levels of unfamiliarity.

One of the participants said: "A meeting was necessary that explains working with the system. Students need to be oriented; also if we knew that there wasn't going to be a teacher, and this is the way of connection to my master, its importance would be more obvious. You know, I mean that when our students use distance learning system (DLN) even in combination, they should be oriented. Our teacher should be expert in blended, meaning he must be oriented that he is transferring text without context".

Inappropriate use

Another sub-concept of administrative failure that expressed participants' experiences was an inappropriate use. One of a nursing doctoral student who participated says: "It should be used properly and not because it is being used everywhere else then we must apply it as well. It is really used based on our needs and aims. Well, in our experience maybe it was not very tangible that this program was formed according to our goal or need, but we have been going forward in our plans by classic method, and perhaps this was limited to announcing the classes' programs such as type , time and day of class and only that...".

Failure in access

Foundation of electronic aspects of blended learning is availability; failure to access was the experienced failure. Another participant said: "Even if I wanted to ask my teacher, I didn't know how or when to do so. I had to send an email or my content. The system that was designed, master knew he had to check only on specified time to see if answers were given or not, and only that time was for checking."

Two components not corner

Because the blended method has electronic and attendance components, one of the concepts in student's experiences were "components not corner", which means there is an inconsistency between them. A participant talks about his experiences: "it is in a way that we do one assignment from this week until next and then nothing. This is difficult for us. For example, this week's subject was x, and I replied, the next Sunday we

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went to class, nothing was mentioned about the previous subject. It means that I replied and then got a score and that's it".

Software failure

Software failure was among failures participants experienced. In this discussion, the plan itself and planning weren't justified. It was brought in a participant's experience:

"The system was limited to presenting us the program. In the previous lesson by the time they assigned us a password, the term had finished. The capacity of the method is so much higher than what is being implemented. I feel, not only capacity is more but also this is just for the other. Like the rest of our stuff, there is much paradigmatic war. Before we need to this system, ordered to use this system, well this is very different than we are really accepting it. This means if the importance of that was obvious, we feel to do not need just have a physical presence".

Substantive failure:

Gap between existing and desired

This subtheme includes a gap between existing and desired, the communication problem and being dependent. The "gap between existing and desired" was a subcategory of "substantive failures"; this entry indicated the serious gap between what is and what should be. Participants based on their experiences expressed areas, for example, one of them said: "for example, traffic is reduced, no, not in most cases, because it was possible that week, we had another attendance class. Only have one teach on blended, not all, we had come for another course. While this method actually must was creating an education system and was continuing to learning, it did not happen; instead in most cases we feel confusion".

Communication problem

Communication Problem, including substantial failure; that participants differently expressed its representation of their experiences. In this kind that even if all the conditions and requirements provided, blended method has problems than Presence method. A participant such experienced that: "Text will transfer without context while expecting of this system there was whatever in face to face interaction too. So what we do with this system? We have removed Interaction that is the essence of education; well, the feedback goes away; actually, what we have the most maneuvers on, means the feedback and response omitted."

Being dependent

The blended method is dependent on its electronic component based on participants' experiences which are placed on substantive failures category. As follows, this method is dependent on infrastructures, which is not serious harm to the process. In this regard, participants say: "They say, you must read it to certain hours, Then It was interesting that in system which was designed, for example, if we wanted to answer six hours or five hours, even an hour later, was closing and could not give an answer, we should do it in a certain time. The amount of information was high, and we had a time limit, in addition in many cases because of the system slowness, having ambiguity and unavailability of instructor lead to undergoing a lot of stress. Because distance learning's problem was when you could get feedback that both be online."

Synergy

The blended learning that experienced by students have some positive points of any electronic and presence components that combine to reinforce; which lie in theme "synergy"; that its subthemes include a complementary method, learning in life, novelty and high-quality learning; that each has sub-concepts.

Complementary methods

In participant's experiences, two-component of blended learning were felt complement in some way. One of Ph.D. student in nursing says": It is one thing based on what was required to be made, you understand what I mean? Essentially e-learning will be built on these issues; this means that weaknesses which we have in the classical system can fill in the electronic methods. In some cases, For example, I felt, I know continuing of past knowledge, and somehow individualized education. As when the regularly level of man comes up, problems and issues of life make a shadow on; then in this method fatigue of the physical presence and futility are removed."

Learning in life

Participants based on their experiences believed, e-learning aspect of the blended method, helped to learn during daily life. One of the participants said:

Good to see, naturally, it's very good, When you feel can to be in contact with your professor every time you want, at least within a few hours; Especially when you are in adult education; I have another city, I'm in a different situation; So there is no access to my teacher, I can not like an undergraduate student, constantly be in

college and go in the teachers' room. As a postgraduate student, I have life, I'm busy, I have a thousand problems or possible be in another Place, and I can not share what I want with my teacher (opposite of classic method); Blended method easily makes cover; Well it was very nice".

High quality learning

In some cases, participants in the blended method experienced a higher quality of learning than traditional methods. One of the participants said: The training presence as well as electronic was pretty good; A part of things we could do in our homes; Then, for example, send the result to my teacher. This had an impact on terms of speed and accuracy; and because focusing my time on learning unknowns, a contrast to hear the things I know, I feel learning deeper and better."

Novelty

Being new was experienced among the participants; as most of the participants expressed a sense of excitement and interest. For example, one participant said: "Being new was interesting to me; we did not use this method in our university that I am a teacher there. Means that we did not use this way in undergraduate nursing courses or graduate; because there is no time and facility."

Specific interaction

Disorder in interaction

One of the themes that emerged from the students' experiences was a specific interaction that its subthemes include: disorder in interaction and Prominence in interaction. This means the kind of interaction disorder and prominence in this method is particular. One of the important subthemes that emerged from the Participants' experiences was disorder in interaction. This way in this method, interaction has own particular problems. One of the participants stated: "if you have ambiguity, questions, or anything, could not do anything; if have a question, must directly mailing to teacher or communicate with my friends email; This means, the system was not designed like it that at the same time can solve my issue; This means, when I have a question, they must be online simultaneously; or may that rest another three or four people not online.

This requires to interaction, or we should coordinate through otherwise; For example the X go look my question, see, did you found? Explain to me; there was not a possibility that like posed a question

and then two minutes later I got the answer, or by the end of the day be answered."

Prominence in interaction

Another important concept that emerged was prominence in interaction. One of the participants stated: "It made about a continuous relationship, It somehow have greater access to the professor and the resources; Spend lack of physically present there is no problem that is created limits; honestly, even if later never see the professor, themselves can be an alternative for physical presence models. Can tell about can see anything we need to learn".

Discussion

However, using the blended method in various areas such as education of medical sciences was very serious, but still, it is a fledgling, that in each experiment can be more effective if removing previous experience problems. One of the main themes of this study was the administrative failure, one of its subthemes was "unfamiliarity", that many studies have confirmed it; For example, Fichten *et al.*, (10) emphasize on the necessity of involved people's orientation in this type of training; Also, Turner (11) know teacher's readiness is necessity.

Another concept is the inappropriate use; Based on participants comments, this method was an order and not purposeful. While not only the technology must develop and use but also the process should go towards the education method's goals (12).

Failure in access is a concept that emerged from the participants' experiences. This means access teacher and student together is one of the necessities of this method particularly in their electronic aspect. In cases which accessing non-fulfillment, because of its serious impact on the learning process, that was considered as a failure. Etezadi and colleagues in their study recognize that as problems of the method (13).

Another problem in student's experiences is not corners of two parts method, if two parts are non-corner and electronic methods don't solve the problems, conversely blended method's philosophy would be meaningless. Thus each should be set with the look to another. Zolfaghari *et al.*, (14) in their study showed the correct development of the content of two parts were effective in teaching.

Among failure in learning experiences was software failure. Participants seemed the program was not properly developed, and it was necessary to carefully

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consider capacity and the ability of the software which many studies have confirmed.

Another point is that blended method has properties in its nature which end into failure if not well considered. As the experiences of the participants "being dependent" and "communication problem" is the nature of the method that was highlighted and lead to a "gap between existing and desired". So in method what should be and what is, not compatible with each other; Vafae Njjar and colleagues (15) in their study showed the most important limitation of this method be lack of appropriate context, necessary simultaneous use of virtual and attendance training, cost and time-consuming procedure and can mention to the inability to use the teachers experiences in this method. In addition, low-impact virtual training on attitude changes is another limitation of this approach. However, in the experiences of participants, "Synergy" as a theme shows mutual reinforcement of the two components that combined in the blended method; that have the concept of "being complementary" "learn in Life", "high-quality learning" and "novelty". These findings are also consistent with a study by Zolfaghari *et al.*, (14). Vircus (16) recommends the use of web technology in modern society and knows web as the best learning agent with the high potential for information acquisition.

Beigi and Shah-nazari acknowledge (17) significant advantages of e-learning compared to traditional teaching. Flexibility and eliminate unnecessarily, and costly traffic for participate in training is one of the most important advantages that in this study, coordinate with the theme of "learning in life."

The same authors write: Another benefit of this type of training is that learner able to adjust the learning rate according to their own conditions. Many e-learning programs can be used in needed times; furthermore, this is also matched with the themes "life learning" and "high quality learning" (18).

In debate synergistic, the "novelty" gave to participants feeling of being interesting, and participants felt the extra energy, which was a distinction of this study.

One of the main themes of this study is a specific interaction that is the unique feature of a method which leads to prominence if well attended otherwise it becomes a disorder. This debate in several studies and resources were focused and confirmed (18-20).

For example, Azami and Attaran (18) in their studies found lack of interaction between students and faculty can lead to teacher's irresponsibility to the education and in the virtual system may be teacher trivial to the classes

because they do not see requests and don't have eye to eye contacts and not respond to their needs (18). Of course, every item has sub concepts which considering them in subsequent experiences can have a significant impact.

Although the using of blended learning in the educational contexts is advantageous and necessary, the results were showed a combination of presence and electronics component could enhance the learning process. But regardless difficulties and benefits of past experiences may lead to failures in learning. Furthermore, in addition to prominence in interaction in the blended learning, interaction in this can be vulnerable. Thus approach was welcomed with open eyes.

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