

Experiences of Pre-Service Teachers in Case Based Discussion Groups in Blended Learning Environment

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Abstract

Blended learning can facilitate many opportunities about usage of online discussion for different purposes. As a tool in blended learning, online discussions widen the walls of classroom discussions in a virtual manner. Especially, in teacher education programs case based discussions are very helpful for pre-service teachers to practice real-life situations. By this way, the link between theory and practice can be established.

This study aims to examine the pre-service teachers' experiences about three different discussion structures in a case based blended learning environment. This study also explored their thoughts toward the effects of online discussion on their professional development and their suggestions to increase the effectiveness of online discussion. The participants of this study were 14 pre-service teachers from the department of Early Childhood Education (ECE) of a funded university. The six open-ended questions were asked in order to explore the opinions of the pre-service teachers. The qualitative data were analyzed through the matrix displays.

Keywords: *Blended learning; case based online discussion; discussion structure.*

Introduction

Blended learning can facilitate many opportunities about usage of online discussion for different purposes. With the help of different discussion techniques and methods, this online discussion environment becomes more of an issue. Especially, in teacher education programs, case based discussions are very helpful for pre-service teachers to practice real-life situations. By this way, the link between theory and practice can be established.

Blended learning is an effective method for integrating face-to-face classroom based learning experiences with online learning experiences. To address the quality of the learning experience in higher education, blended learning is an attractive way to enable the integration of appropriate and meaningful online experiences (Vaughan & Garrison, 2005). Blended learning, with the combination of online learning experiences, synchronous verbal and asynchronous written communication, provides a

distinct advantage in supporting higher levels of learning through critical discourse and reflective thinking (Garrison & Kanuka, 2004) within the context of a cohesive community of inquiry.

The range and quality of interactive dialogue that could be facilitated through blended learning is matching in with the widely accepted means of facilitating critical thinking and higher-order learning (Garrison & Kanuka, 2004). Moreover, with the growing consciousness about advantages of blended learning to provide high level learning experiences, the challenge shifts to supporting faculty to design blended courses (Vaughan & Garrison, 2005).

Biggs (2006) conducted a study to compare of student perceptions of classroom instruction in three forms: traditional, hybrid, and distance education. The results of the study indicated that Instructor Support was rated highest by the students who were enrolled in the course taught in the traditional manner (4.68 mean) closely followed by the Hybrid course (4.66 mean). Then comes the course taught totally at a distance with an average of 3.62 mean. On the other hand, Student Interaction and Collaboration had the higher scores in the course taught in the Hybrid manner (4.23 mean) followed by the traditional course (3.97 mean) and the distance course (3.12 mean). In one-year exploratory study by Lin (2008), 78 elementary teacher candidates' view of learning in four mixed courses that used Blackboard Learning Management System (LMS) to support face-to-face instruction was investigated. Results indicated that student learning increased, there were high-level interaction between students and instructor and students showed high level of satisfactions. According to the results of the studies in the literature, blended learning is preferred since this environment supports students' success, encourages collaborative learning, communication, and interaction between students, instructors and course materials and students show high-level satisfaction for blended learning.

For meaningful online experiences, computer conferencing is typically used to support online discussions. Among those tools are synchronous chat and asynchronous email, discussion boards and forums. Online communication provides a chance for collaborative, increased participation, peer tutoring, monitoring students' learning and extension of classroom learning (MacKnight, 2000). Moreover, "online asynchronous conversations allow for giving and accepting feedback and for greater reflection" (p. 39).

To support high-level learning as well as to address critical thinking and collaborative learning, there are many structured activities. By addressing these needs of faculty and instructors, case based online discussion can be used as an alternative approach. Case discussion is defined mainly as "using real or simulated complex problems to be analyzed in detail and a solution or decision offered" (MacKnight, 2000, p. 40). Computer conferencing systems can be used as a platform to facilitate cased based discussion. To achieve course objectives and address higher order thinking, cased based discussion should be used in an effective manner. This effectiveness can be provided with the harmonization of discussion rules, tasks, structure and moderators. In a study of Fitzgerald and colleagues (2005), they found that cased based discussion encouraged students' to think, understand different perspectives, learn from each other, work together to solve problems in cases, trust themselves in order to put forward their own ideas and adapt their knowledge to the real classroom cases.

As a discussion structure, there are three types of discussion format; open discussion format, prompted discussion format and structured discussion format (Fitzgerald et al., 2005; Hollingsead et al., 2006; Tsai et al., 2006; Mitchem et al., 2008). In open discussion format, students respond to discussion threads relating to cases with initial prompts provided by the instructor to discuss possible

solutions in an unstructured manner. In the prompted discussion format, the instructor plays an important role in terms of moderating the discussion by opening and guiding discussions related to assigned readings, cases, and use of computer intervention tools. The discussions were partially structured and closely guided by the instructor. In structured discussion format, the instructor assigns roles that would be used while students post their comments to solve the case. The instructor does not prompt or participate in this kind of discussion format.

Peng, Fitzgerald and Semrau (2000) looked at the variation of structure and participations for online conferences. They designed the conferences in four different forms, which were open-ended discussions by expert, scaffolded discussion with facilitated follow-up, scaffolded discussion without facilitated follow-up, and open-ended discussion without facilitated follow-up. According to the results of the study, facilitation of instructor and course requirements effected participation of students in a positive manner. Readings helped students to being prepared for discussion. Finally, structure of discussion and facilitation provide an even level of participation and ongoing discussion. In the study of Hollingsead and others (2006), researchers compared the experiences of students and instructors participating in three different asynchronous online discussion formats as open discussions, prompted discussions, and structured chat discussions in case-based instruction. Results of the study showed that online chats and discussions provide opportunities for the students to share, discuss, and modify their case understanding and to sustain each other in using that knowledge to solve case and classroom problems.

This study aims to examine the pre-service teachers' experiences in three differently structured discussion format in a case based blended learning environment. This study also explored their thoughts toward the effects of online discussion on their professional development and their suggestions to increase the effectiveness of online discussion.

Methodology

Design of the Study

This is a qualitative case study. Yin (1994) reports that case studies are preferable when "how" and "why" questions are being posed; the investigators have little control over events; and focus is on a contemporary phenomenon within some real-life context (p, 1). Berg also (1998) claims that "case study methods involve systematically gathering enough information about a particular person, social settings, event, or group to permit the researcher to effectively understand how it operate or function" (p, 212). Since the aim of this study is to investigate how online discussion groups think and interact within the group, the case study was an appropriate method.

Participants

During the 2009-2010 fall semester, 14 female pre-service teachers who were attending a compulsory undergraduate course, the "Classroom Management" offered by Early Childhood Education department (ECE) at a funded university in Turkey, participated in the study.

Research Context

This two-hour course was offered to third year students of ECE and had lasted in fourteen weeks in fall semester. The course begins with the basic concepts of classroom management, goes on with

communication and interaction in the classroom, the definition of classroom management, the differences and features of classroom management and discipline, variables affecting classroom environment, the models of classroom management, development and implication of classroom rules, organization of classroom physically, management of misbehaviors, time management, organization of classroom having a positive atmosphere and appropriate for learning with the suggestions and examples given by the students. By this course, pre-service teachers will gain the necessary skills to manage the classroom while they were teaching the specific objectives to their students.

This course was offered in a blended learning environment. In two hour-face-to-face sessions theoretical basis of the classroom management was covered. Discussions on the theoretical basis of classroom management course were carried out as online case discussions in blended learning environment.

For blended learning, the learning management system was introduced to the students. A brief explanation was done such as how to sign in the site, how to navigate in the learning management system, how to participate to the discussion platform and how to access to the course materials. All lecture presentations, guidelines for participation to the forum, protocols of sending messages and rubric for evaluating the messages were uploaded to the learning management system. In order to use the learning management system effectively and follow up the discussion events easily, the syllabus of the course was uploaded to the learning management system and weekly discussion topics were assigned to the students.

For the discussion structure, students randomly assigned to the three different discussion groups: open, prompted and structured discussion respectively. Extra materials e.g. extra readings for prompted group and definitions of roles for structured group were also uploaded. The students in each group discussed the same case all the discussion period according to the classroom management model presented in the classroom. The case was composed of misbehaviors of a child in a kindergarten. The students were required to analyze the case by providing solutions in order to prevent misbehaviors according to the given classroom management model that is thought in the face-to face sessions (figure 1).

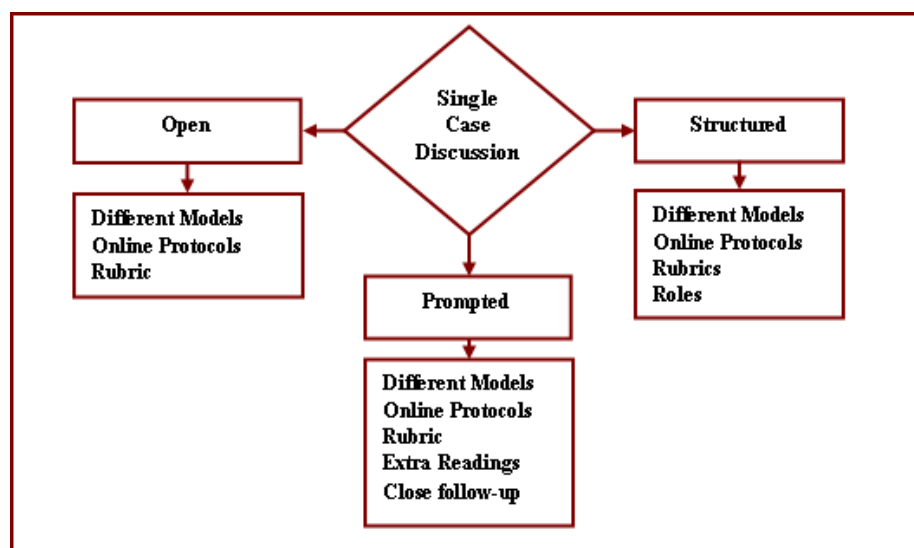


Figure1. The Procedure of the Study

Data Collection

During the semester, students and their discussions were observed by two researchers both in the classroom and in the virtual environment. At the end of the semester, pre-service teachers were interviewed at researchers' offices. Interviews took 25-35 minutes. The following six open-ended questions were directed to the pre-service teachers.

1. You have completed your online discussion in open discussion format. How were you affected by this situation?
 - You have completed your online discussion in a prompted discussion format. Instructor offered you some extra readings and closely moderated your discussion. How were you affected by this situation?
 - You have completed your online discussion in a structured discussion format. You were assigned roles to take side of them in the discussion period. How were you affected by this situation?
2. Did you face any difficulties in your online case discussion process? Please explain.
3. What do you think about supporting your Classroom Management course with online discussion?
4. What do you think about the effects of producing solutions to online cases on your thinking skills?
5. Do you have any suggestions to improve the quality of your discussion?
6. Do you have any preferences instead of online discussion?

After data were gathered and analyzed, follow-up information was needed in order to understand how to increase students' participations to the discussions and increase the quality of discussions. Therefore, in order to understand the opinions of the students deeply, further follow-up questions were posed to the students via e-mail. The data gathered from this process were also included to the data analysis.

Data Analysis

Data analysis is a systematic process to organize the collected data into meaningful segments to discover regularities, patterns to be delineated regarding the purpose of the study (Bogdan and Biklen, 1998). First data were read many times by the researchers and began to analysis. Data analyses were completed in four steps. At first step, all data were written and put in an electronic format. Then, data were analyzed through matrix displays (Miles and Huberman, 1994). Data were read more than once, placed in a matrix; the data in matrix were analyzed according to each question for each group. Then each group was analyzed within itself. Lastly, the common opinions of all groups were emerged and concluded. Finally, the meaning making process started.

Reliability and Validity of the Study

Trustworthiness is the concept used to evaluate the quality of the qualitative research (Yildirim, 2010). In this study, the following techniques were utilized, to some extent, to enhance the trustworthiness of the study (1) triangulation method was used by employing multiple data collection, observation, interviews, and open ended questions; (2) member check were utilized while designing the interview schedules; (3) the researchers kept a reflexive journals; (4) the researchers observed the students'

behavior throughout the semester during the classroom and with their online discussion in virtual environment; (5) the research process was explained vividly and in detail; (6) and finally, peer debriefing were performed.

Findings

Open Discussion

Students' Opinions in open discussion about open discussion

The students in this group expressed that not being interrupted, unless it is necessary, was appropriate for them because they expressed their ideas conveniently with their friends in discussion platform, they took advantage of the views of their friends and detailed what they were thinking and this situation increased their confidence and as a result, they did enjoy of the work. In addition, participants expressed that continuous stimulation by someone were not nice. Here are some of the student opinions.

"Our teacher provided us an appropriate platform to tell our own personal ideas. Although there were mishaps in our discussion platform, in my opinion it was a good idea. Because by the help of the discussion platform, we thought the details that, we could not think. I have benefited from the ideas of my friends where I am insufficient."

"Affected me in a positive way. That is to say to myself, I thought my writings were right, my confidence towards myself were increased, and I got the pleasure to participate in discussions more."

"Not to being intervened in the discussions was good actually. Everyone has been let free to write her own opinions."

Students' Opinions about supporting classroom management course with online discussion

Three of the students in this group found to be important, while other students stated if others had participated effectively, discussion would be more effective. Followings were the gains of students about open discussion for classroom management course.

"I was very happy. By means of supporting [course] with online discussion, we have found an opportunity of reflecting our ideas. We could offer solution by developing different perspectives"

"This happened an important issue for individuals in terms of realizing how much of yourself in what you know while tracking the subject. It has many advantages in terms of measuring of own knowledge and focusing or not focusing on the re-working."

"Supporting this course with discussion in this way was very good in fact. I could comment in the discussion by reading approaches again that I did not understand in the class. Or I could practice by reading topics, covered in class, one more time again. This was positive from my point of view."

According to the above statements, they stated that they freely expressed their feelings, they were aware of what they know or not (meta-cognition), they developed different solutions by developing different perspectives, they used instructional techniques such as brainstorming, they evaluated themselves and they produced thoughts by focusing on the subject again.

The effect of producing solutions to online cases on their thinking skills

All students indicated that producing solutions to online cases affected their thinking skills. These effects were stated as: *"We have developed different perspectives by the help of replies that our friends gave to our comments. It supported our ability of making criticism and we could ask effective question in the face of critiques of our friends"*.

One of the participants expressed that they did not feel that way at the beginning of the course but they felt toward the outcome of the process; this can be seen very clear in students' expression.

"Yes, I think it is useful for me. At first, I was thinking what benefits would provide us. However, at the end of the semester I saw the benefits in my approach [in final homework]. Without awareness, I saw that I gained the ability of thinking in different ways and different perspectives."

"Yes, it provided us to look at the same issue with a view of our friends, helped to produce a solution."

Students' gains from online case discussion

Except the effect of producing solutions to online cases on their thinking skills, overall benefits from this process were also asked to the students. Making comments, problem solving, and critical thinking were re-mentioned. Students declared that they got awareness about some social skills that they had before. Moreover, they stated that their ability of asking and answering questions were developed. Additionally, they added that they followed-up issues on a timely base, concreted the models, thought about applicability of models.

"I developed the ability of critical thinking skills as well as the ability of commenting and asking questions where necessary."

"There are commenting, developing different perspectives, revealing own opinions freely but I did not notice that I have different thoughts and I think I developed myself in time."

"It provided timely follow-ups. It provided us to visualize the models, we have learned, and to think over about the applicability of the models."

The problems of students faced during the process of online case discussion

The problems students faced during the process of online case discussion were similar with the problems that can be seen as problems in-group dynamics. Inability to tolerate criticism of what students write, misunderstanding, not to respond to written comments, being seemed to comment, not to answer questions but to talk about models, just asking questions and doing nothing, and not to focus on main subject because of focusing wrong subjects were experienced as problems. Some of the comments students made on this issue are listed below.

"There happened the situations that misunderstanding of my writings by other friends. This situation made me very upset. Sometimes I was criticized by my friends as I had written more for discussion. Sometimes instead of answering my questions in discussion, my friends posted their own thoughts about the model. This situation also made me very nervous."

"It is required to follow up [online case discussion] continuously. To receive a written response is waited for days. To be more effective, everyone has to especially follow."

"Most of the time, there was the lack of communication. Sometimes we passed over the subject that was required to be discussed by focusing on wrong subjects."

The suggestions of students about making the online case discussion more effective

The suggestions of students about making the online case discussion more effective were not making the discussion group randomly, leaving it to personal preferences, the lack of time, posting comments when wanted, making everyone join the discussion. In addition, these students presented some suggestions to the groups.

"Maybe it would have been better if there were not limited duration. We could create more effective discussion groups if we could choose our friends in discussion group."

"My recommendations are for my friends not for you. As a result, you gave us some issues, and wanted our thoughts. Therefore, my suggestions are for my friends. I think my friends did not participate to the discussion by using thinking skills. They have to participate to learn something really. If they do this, maybe they will post unusual thoughts about issues and this will result in looking over issues in a different way, I think."

"The participation of everyone must be compulsory. Otherwise, the ones who ask questions or answer can receive feedback. Everyone should participate in the discussion that this discussion reaches the goal."

Prompted Discussion

Students' Opinions in prompted discussion about prompted discussion

Most of the students in this group expressed that they wanted to be given additional readings; they gave positive emphasis on teacher's guidance in terms of helping them to see their missing points. Moreover, a student who attended classes late and did not join any classroom activities stated her negative statements by the following expression.

"This situation did not affect me positively because I am against to limit the course or discussions in certain time periods. The important things are what I get from the course and what I know at this moment. Except the time limitations, did not have a negative impact."

A student in this group complained that she did not do assignment every week because of having trouble with computer and she complained about that. Discussion was not good because discussion were not made properly.

Another student complained about some students that made unnecessary comments, wrote constantly by not allowing other to write and stated her opinion that some interventions could be made in order to prevent this.

Students' Opinions about supporting classroom management course with online discussion

Students approved supporting course with online discussion, but one student did not want to have this discussion in the virtual environment as "*support with discussion is a good thing, but I opposed the idea of performing discussion in the virtual environment. More different shapes and models could exist*". Other students expressed that this was a reminder for them, provided them feedback in terms of where to pay attention, where they are inadequate, they could summarize some topics by understanding, and this was a good application because of helping to repeat topic covered that week. These issues were included in the comments below.

"It provided us to remember the points skipped in the class and to redirect us how to think in whereby prompts and to see where we are inadequate."

"It helped us to summarize some topics by understanding better."

"I think this was a good application because it provided us to repeat topic in that week."

The effect of producing solutions to online cases on their thinking skills

Almost all students in this group stated their positive opinions in terms of producing solutions to online cases that affected their thinking skills and they expressed thinking skills as a different way of thinking, finding different answers to problems, improving fast thinking skills and facilitation of finding practical solutions. The opinions of some students listed below.

"Absolutely yes. When preparing individual assignments, we can write just our thoughts but when there happens such a way of discussion, we can also learn different ideas and we think to find a solution to the problem."

"Yes. Just a positive side of the online discussion, discussion performed in the virtual world, is the development of the ability of rapid thinking skills...making to find practical solutions easier..."

"Searching for solutions to the same topic with other approaches every week, enabled me to think with different perspectives. In addition, during these discussions I got abilities such as finding answers to the question asked by my friends and criticizing them."

The gains of students from online case discussion

Except the effect of producing solutions to online cases on their thinking skills, overall gaining from this process were also asked to the students. These gains were different thinking, simulating the future, designing of what to do in future, better self-recognition, better learning of classroom management techniques, re-vision of what we have missed and finding an opportunity to discuss with the people with different views. However, criticism of a student about discussion method in a virtual environment was stated as follows.

"This did not give me very large gains, I did not attend all [discussions] and missed but this must not be reason for failure of the course because I have learned more than people participated to the discussion... Discussion should not be a necessity...In education; the sanctions by force never will be helpful."

"Obviously, there was not a very big contribution. Because online discussion did not fully experienced."

"Through these discussions, I repeated the course on a regular basis. In addition, although I did not have an exact discussion, I had. I think that I have learned critical thinking and properly criticize."

The problems of students faced during the process of online case discussion

The problems emphasized by students as, *"I did not face any problems except no responding of my friends"*, *"I have only scheduling problems because the assignment given in mid-term exam period and Bayram period forced me"*, *"I did not face any problem but as just a single negative, I missed the discussion and did not catch in time"*. These statements of students can be summarized as time constraint, making discussion during exam and Bayram period, and being missed of discussions.

"No one created discussion environment. [Some students] copied-pasted from the [lecture] notes you give. Also I had problems with the PC and I could not add assignments each week."

"Uploading [of discussion topic] was sometimes made late or early. I was looking at the discussion lately because I did not know this time. This caused making other friends write more comments without waiting for other people. This was bothering me after a while because I cannot follow these."

The suggestions of students about making the online case discussion more effective

While the time constraints and ongoing discussions during the examination period often emphasized by students, a student mentioned that she has failed courses in these environments, and processing of lessons in this way was injustice for students like her:

"The time concept should not be in discussion, everybody could participate to the discussion in anytime and share something."

"During discussion, there was always complication in groups. Everyone wrote their own thoughts without reading any comments. This did not create discussion environment. My opinion was that a person could get started the discussion every week by writing a comment to discussion. Later, after everyone made one comment for one time, second comments should be made. Thus, the page would not be full of one person's comments."

"The time of discussion of each topic was not be limited in my opinion, comments should be added back to back, for example we could write comments about other models after the discussion of model in the first week. In addition, we could return and write comments for past weeks."

Structured Discussion

Students' Opinions in structured discussion about structured discussion

Students participated in structured discussion stated that in this manner of discussion would be helpful in terms of finding different solutions to the problems that will be encountered in the future, they learned not only a model but also more models for maintaining the discipline in the classroom, they shared their thoughts with friends in accordance with their roles although impersonation was not very simple.

"It provided me to find more different solutions to problems that will be encountered in the future. I have learned more methods instead of a single method in the provision of classroom discipline techniques."

"After reading the features of given the roles, I have shared my thoughts with my friends in accordance with my role."

"I got the role instead of myself for a moment I thought how to behave when I have in that position. Even we did not have an opportunity to practice, in my mind an idea occurred at least."

Students' Opinions about supporting classroom management course with online discussion

There are different ideas in this group regarding supporting classroom management course with online discussion. While, a student stated her opinion as *"If this kind of discussions had been made in classroom environment, it could be more efficient in my opinion. Because in this way both participation were not provided much and [discussion] were compelled. It could be easily given feedback in the classroom environment"*, another student expressed her positive opinion towards online discussion but this student wanted teachers to arrange time and also day of discussion. In addition, other student stated that internet environment was more comfortable but discussion was inefficient because of strategy of participants in the following statements.

"To discuss in the internet environment is more convenient for us I think. However, just to join the discussion, just to write, there are writers. Thus, discussion is not productive."

The effect of producing solutions to online cases on their thinking skills

All students expressed their positive opinions towards effects of producing solutions to cases on thinking skills. These skills were developing different solutions to the problems and developing critical skills that could be seen as in the following statements.

"Of course, it has positive effects; we have learned to produce different solutions."

"Yes [It] was effective. Discussing on the cases that I may face when I will start working was more useful. I believe when we face we can easily solve."

"In particular, [it] helped me to handle the issue from different perspectives, I think. Because we were wrapped in different roles. In addition to that, due to providing opportunity to criticize the opinions of my friends, I think these of my skills developed."

The gains of students from online case discussion

Overall gaining from online discussion was asked to discussion groups. Students mentioned these benefits as benefits related to how they would use models seen in the lesson, producing different solutions with solutions generated to the problems, developing different perspectives though criticisms of friends and having the opportunity of realizing the positive and negative aspects of their own solutions in the below statements:

"I have learned how to and where to use models that we learned in the classroom. It has helped me to learn to solve a problem in many ways by strengthening."

"I could see positive or negative aspects of my solutions that I produced. With criticisms of my friends, I got different ideas."

In addition, a student stated that this development were understood towards at the end of this process, in the beginning it has been difficult to express herself, and her motivation was related to others' motivation and effort as *"while I had difficulty to express my thoughts in the beginning, when time passed I have began to trust myself but when there was no one to meet to communicate, I have been disinclined"*.

The problems of students faced during the process of online case discussion

Students stated the problems faced during the process of online case discussion as no full participation of others to the discussion because of the environment, having problems while transferring the thoughts to the text, causing problems of having no criticism coming from the opposite side.

"I have experienced the participation problem because of the place I live...because of no full participation of everybody, exact discussion environment could not be provided, I think."

"Because of the intensity of courses, I took a lot of time to put thoughts on text. Also after doing so much works, I have been disinclined when there was no react from the opposite side."

"There did not happen a lot of discussion in our group. We did not discuss by pages and there were few people who had criticized my thoughts."

The suggestions of students about making the online case discussion more effective

The suggestions of this group about discussion process to be effective varied in parallel with individual differences. While a student stated that discussion might be better when performed in the classroom setting, other student declared that students should meet in given time by teacher and another student mentioned that if students had joined more, it would be better. The following were included these views.

"In my opinion, if this had been performed in classroom environment, teacher had given feedback and had warned wrong or missing parts, it would be more effective. Moreover, participation of the majority could be provided."

"It would be better to meet of groups in the time identified by the teacher."

"Students should take into account the more I think. Therefore, it will be more effective. If everyone does what is necessary, it will be a very good discussion platform."

Opinions of students about discussion groups to be efficient and effective

After feedback on their group from students was gathered, the data were analyzed. When the data were being analyzed, it is understood that students had opinions that discussion were not productive. These students were posed five questions via email. These questions were whether students read the instructions during discussion or not, what else could be done in order to have more efficient discussion, whether students discuss better in classroom environment or online environment and what can be done in order to have students discuss in online environment better. After analyzing their answers, the following findings were emerged.

Suggestions for effective discussion in the group

1. Creation discussion rules together with students, that will prevent confusion, would be more effective.
2. Formation of the groups should be decided with students,
3. Having no discussions during examination weeks,
4. Explanation of reasons of making discussions at the beginning of the course and having students realize about benefits of discussion,
5. Show respect for each other's opinions.

Opinions about classroom and online discussion

Some students still in parallel with individual characteristics and in parallel with own reasons, some preferred classroom environment and some preferred online discussion environment. The advantages of online discussion were listed as self-regulation and the benefits of limited time.

The reasons of students, who declared that if discussion would be in classroom environment, it would be more successful, were "*discussion would be in the limits of discussion rules*" and "*discussion would not be outside the boundaries*". Other statements were provided by students as there were gaps in online discussion, there were no coherence in discussion, you have to wait to get answers for a long time, this situation caused students disinclined from discussion and this situation caused students have low motivation.

Opinions about having a chance to choose group members

Students who do not have problems with group of friends and students who worked efficiently with their friends expressed opinions as follows.

"We talked to our friends with respect. I had no problems in selection of group of my friends."

"To me, I did not have any problems with the group of my friends. However, sometimes they were being misunderstood me. Choosing my own friends in this discussion, in my opinion, would not change this situation. As a result, during our life we will not discuss or work with people we want."

"Overall, we were a compatible group. We contributed to each other's opinions."

Students who will be more successful if they choose their group of friends expressed their views as follows.

"It would be more efficient if I choose. My friends were making unnecessary comments."

"I am already on good with Ayşe and if I had chosen, I would choose her again. My friend, Merve has not already made any comments; also, Beril was in and out of the self-styled comments."

Opinions about increasing the participation of students

Students were asked what to be done to increase participation of students and answers are listed below.

1. Set the rules with students,
2. Prepare the case to be discussed by the students and providing guidance about solving the case,
3. Students should direct question to each other rather than criticize each other's opinions. Causes of case should be investigated.
4. Each week, discussion could be summarized in two minutes in class by a group chosen by randomly selected and a randomly selected student who was a spokesman of the group. Thus, process could be evaluated as we started from this point to discussion and we came to this point and as well as other groups learn their views.
5. Freely expressions of students were a cultural event and that are not widespread for us. To achieve this, it is necessary to increase the amount of grades that will be given for discussion.
6. Students themselves can choose their friends in the group.

Weekly Posted Messages for Each Group

Weekly posted messages for open, prompted and structured discussion were also explored to give a quantitative picture for discussion structure. When weekly-posted messages in open discussion were explored, it can be easily seen that five students posted 76 messages through 8 week. At the first week, students began to post 5 messages, 11 for second week, 5 for third week, 19 for fourth week, 13 for fifth week, 6 for sixth week, 14 for seventh week and 3 for last week. Mean of total messages was calculated as 9.5 for each week and mean of total messages was calculated as 15.2 for each student.

For prompted discussion, it can be easily seen that four of five students, actively engaged in the discussion, posted 45 messages through 8 week. At the first week, students began to post 11

messages, 10 for second week, 3 for third week, 2 for fourth week, 13 for fifth week, 4 for sixth week, 1 for seventh week and 1 for last week. Mean of total messages was calculated as 5.6 for each week and mean of total messages was calculated as 11.25 for each student.

For structured discussion, it can be easily seen that four students posted 21 messages through 8 week. At the first week, students began to post 2 messages, 4 for second week, 4 for third week, 6 for fourth week, 4 for fifth week, 1 for sixth week, zero for seventh week and zero for last week. Mean of total messages was calculated as 2.63 for each week and mean of total messages was calculated as 5.25 for each student.

Discussion and Conclusion

Each group mentioned about advantages, disadvantages, problems they experienced and suggestions based on their discussions. The requests of students in different groups can be related about their individual differences.

It can be said that the students in open and prompted discussion group benefited from online case discussion much more than the students in structured discussion benefited. The fact that students in structured discussion group could not achieve taking side of the assigned roles, can be seen as a limiting factor. These results are similar with a comparative study of Moore and Marra (2005). According to results of this study, the less structured section reached the highest phase of knowledge building. Moreover, they concluded that effective design of online discussion might improve the quality of learning.

Online group discussion improved students' higher order thinking skills as problem-solving, critical thinking, generating alternatives, and creative thinking and it is found that these skills were developed within the process. In addition to students' thinking skills, it can be said that students developed social skills as expressing themselves freely, giving appropriate answers to questions, tolerating others' ideas. Similar results were also found in a quasi-experimental study of Yang, Newby and Bill (2008) that a well-designed online discussions enhance students' critical thinking, critics and facilitation of peers' and instructor's enabled them to share own ideas and evaluate their own knowledge constructions.

The problems experienced by groups were similar each other. These problems can be expressed as problems originated from group dynamics, problems related to time management, technical problems, problems originated from individual differences, and problems related to measurement and evaluation.

The lack of students' discussion skills, taking each other under pressure, only making comments and logging out, and not really taking into consideration of group members were experienced as problems related to group dynamics. As a result of these problems, motivation of group members decreased and students was disinclined group discussions. The answers given to the question whether to choose your own group of friends were also different. Some stated that group members were not being a problem for them while others expressed their wish to choose their friends.

The other problems faced commonly were as technical problems. Breaking down of students' PC and unable to enter the internet during the holiday season have become a problem. Another problem for students has become a time management problem. Timely discussions of groups and assignments

with deadlines have been perceived as a problem. Students were required to discuss the model during the week in which that model was taught in class. This situation can be interpreted as a cultural fact.

As a result of applications in the group of students, it can be said that evaluation of online discussions is a serious problem. In this study, it was decided to assess students' discussions with a rubric. One of the criteria in the rubric was "post four or more messages each week" as a quantitative measurement of messages. Yet, it was seen that students just entered the online environment with meaningful or meaningless messages to fill the number of messages. In addition, instructor had difficulties about grading the messages of students. Since students stated that, "I am entering the environment, I contribute and I am directing questions but since nobody replies, I do not enter the environment again. What is my fault?". To conclude, when there will a course with online activities, more than one assessment and evaluation methods are required.

Problems related to individual differences were observed as each individual has different habits and students continue with their habits on their way. It is seen that students' attitudes toward lesson, ability and habits were moved into online environment in the same way. Moreover, it can be said that the abilities such as irresponsibility of students towards lessons, discussions habits, diligence or time management skills, were transferred into online environment.

When all discussion structures were examined in terms of posted messages, it can be said that most messages were posted in the open group. This number was followed by prompted and lastly by structured group. This result was similar to the study of Fitzgerald and colleagues (2005). In their study, students involved less where the discussion group requirements were high; and had short discussion. In open discussion, students were more willing to achieve what they wanted from them and more creative in their responses. Although students in prompted discussion group were closely followed up by one of the researchers and were given extra readings to them, the number of messages was found in middle level. Moreover, the roles given to the students in structured group might limit the opinions of these students; therefore, they might post fewer messages. However, the numbers of the postings have given a picture for discussion formats in quantity; the quality of messages in terms of cognitive level of messages has to be revealed in order to say more about content of messages.

One of the results of this study was that developing students' higher order thinking skills in online environment took time. At first, students resisted because students did not aware of this before. Instructors should make students aware of this and inform them at the beginning what they will acquire at the end of the process. Students' motivation in-group is related to the motivation of others. If the group dynamics in online discussions does not progress well and if the purpose of students is not contributing, learning of students adversely affected. In this regard, instructors can also provide guidance to students and mention about how effective of their motivation and contribution to others' learning.

As a result of this research, it is hard to say with just a research that makes the course more effective; having course based on cases or based on both cases and online. With different research designs and extensive research designs are needed. Moreover, these research designs should include the analysis of content of the messages in terms of cognition.

Students suggested some issues to increase participation of students in online discussion as following:

- Setting up the discussion rules together with students would be more effective and prevent confusion,
- leaving group formations to students,
- Having no discussions during examination weeks,
- Explanation of reasons of making discussions at the beginning of the course and having students realize about benefits of discussion,
- Show respect for each other's opinions,
- Each week, discussion could be summarized in two minutes in class by a group. Thus, process could be evaluated as we started from this point to discussion and we came to this point and as well as other groups learn their views,
- Free expressions were a cultural event and that are not widespread for us. To achieve this, it is necessary to increase the amount of grades that will be given for discussion.

Students' opinions about discussions in classroom and online environment were also included. Students noted advantages and disadvantages of participating in these two different environments. The advantages of online discussion were listed as self-regulation, the benefits of limited time and obligation of discussion. Students indicated disadvantages of online discussion as having gaps in online discussion, having no coherence in discussion, waiting to get answers for a long time caused students disinclined from discussion and caused students have low motivation. At the end of this study, researchers wishing to conduct similar research designs should investigate gender and cultural differences in discussion groups.

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