

# Using Electronic Portfolio to Promote Professional Learning Community for Pre -Service Early Childhood Teachers at AlQuds University

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## Abstract:

The present study aims to explore whether the electronic portfolio can influence pre-service teachers' education and to examine how professional learning communities develop through electronic portfolios. To achieve this, twenty-four student-teachers taking a course in early childhood education at Al-Quds University participated in a study to ascertain their views towards the use of electronic portfolios and the role of e-portfolios in developing and enhancing learning communities. The findings reveal that the use of electronic portfolios allowed participants to work closely together, and enhanced their growth and development in course teaching strategies in early childhood.

**Keywords:** Electronic Portfolio, Learning Community, Professional Development.

## 1. Introduction

The cognitive development, the desire to develop university education and the focus on learning more than on quantity resulted in giving importance to the computer since it allows the teacher to gather, organize and present all his/her works in the form of multimedia like, texts, graphics, sounds and video footage in a cumulative file called portfolio. And the names of this electronic file are many such as multimedia, or electronic paper, paper web, or electronic bag (Sharif & Dasouki, 2010). Khales 2016 states that the portfolio is a file that is used to record and collect outstanding works for the learner from the lessons and lectures, projects and exercises in a course or a group of courses. And it depends for its display on multimedia projected as texts, sounds and video footage, still images, graphics and presentations. And the movement between the different file components is done through links, and it can be published on the internet or on compact CDs, which shows the learner's ability to use knowledge and apply it to real life situations.

According to Jones (2010) a portfolio is a tool that allows student-teachers to test their knowledge and value them in real-life contexts in a way that develops their skills of investigation and teamwork. It also develops pre-service teachers' ability, before getting into the workforce, in reflecting on teaching practices, develops their minds' habits and supports them through the lifelong learning via meditation practice and contemplative reflection.

Lombardi (2008) shows that Portfolio becomes a simple exhibition, an opportunity for self Portfolios permit the tracking of longer episodes of teaching more effectively than single observations do. Portfolios encourage important connections between process and product, through bridging what goes on in teaching with how it is manifested in portfolio products. Portfolios institutionalize norms of collaboration, reflection, and discussion. A portfolio introduces structure to the field experience and can be seen as a "portable residency

A portfolio is a collection of works that a learner has collected, selected, organized, reflected upon, and presented to show his/her understanding and growth over time. Additionally, a critical component of a portfolio is the combination of a learner's reflection on the individual pieces of work, as well as an overall reflection on the story that the portfolio tells (Barrett, 2006). Chien (2013) also indicates that portfolio include all work carried out by teachers, such as worksheets, students' outcomes, projects and writings. Portfolios also contain audio-visual materials, samples of students' tests, reports, and their reflective writings, which reflect their development through the process of education.

Labosky (2000) is of the opinion that the preparation of a portfolio requires teachers to speculate about their teaching philosophy, and link their practices to their educational philosophy. This helps teachers to become more confident and more capable of conducting better models for teaching and assessing consistent with their convictions and interests.

Electronic-portfolios, which are also known as digital portfolios, web-folios, multi-media portfolios or e-folios, in principle, include the same artifacts as traditional portfolios. The fundamental difference, however, is that the contents are shown in a digital format (Kilbane & Milman, 2003). Also electronic portfolio a collection of authentic and diverse evidence, drawn from a larger archive representing what a person or organization has learned over time, on which the person or organization has reflected, and that is designed for presentation to one or more audiences for a particular rhetorical purpose. (Barrett, 2007).

In contrast with traditional paper-based portfolios, there are portfolios that use modern technologies and are described as the next big thing in higher education. Barrett (2006) states that many colleges and

universities are investing in establishing electronic portfolio systems

The benefits and costs of using e-portfolios in pre-service teachers' education were investigated by Wetzel and Strudler (2006) by probing the perceptions of students in six academic programs. They found that students' understanding of the perceptions of their experiences can lead to improved practices and policies. Barrett (2007) research indicate that portfolios support reflection to help students understand their own learning and provide a richer picture of student work to document growth over time. So Electronic portfolios allow students or teachers to collect and organize portfolio artifacts in many media types (audio, video, graphics, text).

Research has also shown that the use of technology can motivate students to use portfolios, especially if teachers make the process engaging for learners. It should give the teachers an opportunity to express their own voice and leave their own mark in their portfolios, and endorse the use of portfolios as a means to document growth and change in the learner over time (Barrett & Wilkerson, 2004) Stansberry and Kymes (2007) believe that e-portfolios are strategies of reflection both in the selection of artifacts and development of the portfolio, and in the statements of reflection embedded with the artifacts and examples of learning.

According to Gomez, et al., (2013) the strength and extent of evidence supporting the educational effectiveness of using portfolios in the undergraduate setting are limited. However, portfolio use was associated with improved knowledge and understanding, increased self-awareness, engagement in reflection, and improved student-teacher relationships. Portfolios encourage students to engage in reflection and to build a learning community.

E-portfolios are a technological innovation which is based on the concept that experience passes by only once and may be lost unless it is recorded for later exploitation. Utilizing e-portfolios can help maintain the continuity of expertise and takes advantage of other's experiences. In addition, it gives the students to develop self-learning skills, which has become one of the main objectives of new types of curriculum (Alwraikat, 2012).

In addition, portfolios have proved to be a valuable tool in continuing professional development, because they support active and peer-supported learning and stimulate self-confidence and professional growth.

Social media (e.g. Facebook, websites, blogs) can be used in education and teaching to achieve meaningful learning because they are an indispensable part of modern learners' everyday lives. In fact, connecting daily experiences with education and learning can foster learning. As a result, social networking for academic purposes, (SNAP), including commenting on blog posts, asking and answering questions, and sharing ideas on the threaded discussion forum, can be really helpful (Kirkwood, 2010).

In sum, portfolios are viewed as a means for teachers to develop themselves and their practices and to influence their beliefs and thoughts. They can also be seen as an instrument for evaluating teachers' performance and achievement.

The portfolio has been shown to help develop teaching and build learning communities. A learning community is a group of individuals who are related to the surrounding world and are united by interaction. According to (Senge, 1990), the members of a learning community share three characteristics: creative thinking, learning for life, and cooperative learning

On the other hand, Hord (1997) describes learning communities in the school context as an interactive endeavor in which the school faculty and support staff members work together within a professional learning community which has five characteristics: an interactive, supportive leadership, shared vision and values, supporting circumstances, exchange of practice results.

Professional learning communities were defined as a team of teachers who collaborate and work together and all having common vision that interact in an organized and continuous way towards the achievement of improvement to respond to the needs of the members of that community.

A professional learning community comprises a group of individuals who work together according to a shared vision and they explore the professional problems that they face. They share the results of the inquiries of other members in the professional community, thus contributing to the development of the collective knowledge and awareness of the professional community.

Fullan (2006) indicates that professional learning communities involve the synergy of collaborative action and describe instances where increased effectiveness and achievement are produced by combined action. Improved student achievement is one instance where research has demonstrated that educators who work collaboratively produce an effect on student results that is greater than the sum of individual teacher's effort.

For pre-service teachers, participating in a professional learning community is like a journey that leads them towards the development in learning and teaching. Professional learning communities can impact university culture and create collaborative inquiry. It is, therefore, necessary to build professional learning communities to allow teachers to share vision, values, knowledge and practices to insure the balance between theory and practice, which can contribute to meaningful professional growth and experience

The various definitions of professional learning communities emphasize continuous cooperation. This means that teachers must frequently cooperate not only with one another but also consult with the administrator.

They should discuss teaching and learning and cooperate, for example, in lesson planning, and shared activities about teaching or through activities of peer observations and exchanging teaching experiences. (Sargent 2009).

Sargent (2009) also maintains that through professional learning communities, teachers can play a significant role in connecting theory and practice and integrate their theoretical knowledge of teaching with their practical knowledge. Professional learning communities also allow teachers to make thinking visible, to understand events, norms and practices in their day-to-day job at schools.

In a similar vein, DuFour (2004) indicates that professional learning communities build relationships among teachers at schools, help teachers use different teaching techniques and make changes in their practice through conducting action research, meetings, collective observations, reflective dialogs and forums on the Facebook, twitter, WhatsApp and online websites. This would increase the teachers' capacities to teach and achieve the school's instructional goals.

Based on the review of the previous literature on electronic portfolios and their relationship with learning communities, the study aims to develop the learning community in early childhood through the electronic portfolio with the following set of elements: shared values and vision, collaborative teamwork, shared personal practice, collective learning and application and collective creativity.

So this study aims to explore the role of the electronic portfolios in building a learning community for the students of an early childhood teaching strategies course, especially in the Palestinian community for its importance in developing learning in Palestine in general and university education in particular.

## **2. Research Problem:**

While teaching a variety of courses in basic and early childhood education, the researcher has observed that portfolios are rarely used in university courses. The researcher also noticed that in the few courses where portfolios are utilized, students never exchange, share or discuss portfolios. In other words, students do not take full advantage of portfolios and still work individually and in isolation from one another.

In addition, it was also noticed that pre-service teachers do not have documents that they can exchange with colleagues which can help them develop professionally and improve their performance. Students mostly work separately and rarely, if ever, exchange reflective writings, assignments, book reviews or the lesson plans they design. This deprives them of the opportunity for interaction, group work and building shared trust and vision among themselves. Consequently, the researcher planned to use the electronic portfolio in a course for pre-service teachers in an attempt to create a learning community.

## **3. The purpose of the study:**

This study sought to investigate the creation of a professional learning community for a group of pre-service teachers enrolled in an early childhood course through the electronic portfolio using facebook as an electronic forum. It aims to answer the following two research questions:

1. What are the pre-service teachers' views toward the use of electronic portfolios in developing and enhancing learning communities?
2. How do electronic portfolios enhance the development of professional learning communities of pre-service teachers?

## **4. Methodology:**

This is a qualitative study was conducted at the department of elementary & kindergarten teaching in Al-Quds University. The department of elementary and kindergarten education is part of the faculty of Educational Sciences.

The study, which lasted six months, was conducted with a group of pre-service teachers enrolled in an undergraduate course on teaching strategies in early childhood education. The researcher was the instructor of the course. It focused on developing pre-service teachers' skills and knowledge and experience in teaching children in kindergarten using a variety of teaching methods, such as cooperative learning, active learning, drama and discovery and learning to play. The course aimed to provide pre- service teachers experience in the annual, weekly and daily planning; in addition, the course aimed at providing the students with positive attitudes toward teaching children and ways to teach them according to the active and constructivist learning. Finally, the course aimed to develop professional learning communities through electronic portfolio.

### **4:1 Participants:**

Twenty-four, third year, pre-service teachers at the Department of Elementary & Kindergarten, at Al-Quds University participated in the present study. The students have already had several courses in the early childhood program, such as psychology of learning, play and creativity, the child's development and philosophy of education. These courses cover major theories about children, early childhood, theories and practice in working with children.

#### **4: 2 Research instruments:**

##### *Reflective journals*

The participant teachers were asked to keep a journal in which they could keep their thoughts and feelings, what they learned, in addition to their reflections about their experience, during the course. The reflections were then uploaded on an electronic portfolio using a Facebook page that only the researcher and participating pre-service teachers could use for that purpose.

##### *Electronic Portfolios:*

Each of the participating students were asked to create an electronic portfolio in which they could upload any materials relating to the course: planning, activities, pictures, video documents, and their reflection journal. The portfolios were uploaded on the course Facebook page.

##### *Focus Group:*

A focus group for the class was formulated in order to allow the participants to exchange views and explore their experience through the course. The focus group met several times during the course. It was led by the researcher, who listened to the participants' experience, what happens with them, the way they apply the activities with children, their views toward using portfolio and the learning communities.

##### *Semi-structured interviews*

During the semi-structured interviews, the pre-service teachers were asked four questions about (1) their views on using electronic portfolio, (2) the challenges they face, (3) their practices during the course related to the electronic portfolio, and (4) how electronic portfolio helped to build a learning community,

#### **4: 3 Triangulations:**

The data was collected using a variety of tools: class observation, reflections, focus group, and portfolios. This gives a higher credibility and harmony to the results.

#### **4:4 Research ethics**

Research ethics required keeping the participants anonymous, so each participant was given a different code.

#### **4:5 Data Analysis:**

This study adopted the analytical qualitative approach, which is based upon text reading, reflecting on and classifying data, and then studying and analyzing it. Data analysis involved the thematic analysis and qualitative analytic methods for identifying, analyzing and reporting patterns (themes) within the data the participants' reflective writings, portfolio and discussion sessions were analyzed by reading the texts, extracting sentences and words and classifying similar behaviors in categories.

The following steps demonstrate the process of data analysis:

- Data gathering
- Codification and categorization
- Classification
- Review of literature about the topic

The methods of the analysis

- Determining the goal of the analysis, which investigate the creation of a professional learning community for a group of pre-service teachers enrolled in an early childhood course through the electronic portfolio using facebook as an electronic forum
- Using the sentence and word as units of analysis
- The comprehensiveness of analysis of everything that occurred in the reflective journals and electronic portfolio and the discussion groups.

The reliability of the analysis of reflective journal, electronic portfolio and group discussions:

In order to establish the reliability of the data analysis, the following procedures were followed:

**Inter-rater reliability:** A random sample of the reflective journals, portfolios and discussion groups was first analyzed by the researcher and then that sample was analyzed by a colleague after agreeing on a close definition of the word and utterance as units of analysis.

**Intra-rater reliability** (i.e. Reliability over time)

N2: the number of categories analyzed in the first round

N1: the number of categories analyzed in the first round

2M: the number of categories agreed on in the first and second rounds

The inter-rater reliability was 85%, while the intra-rater reliability was 86%, which is deemed and acceptable result.

## 5. Results

In this section the results of the data analysis are presented according to the two research questions.

### Research Question 1:

- *What are the pre-service teachers' views toward the use of electronic portfolios in developing and enhancing learning communities?*

After their first experience, pre-service teachers did not like the use of electronic portfolios as they had anticipated that using the electronic portfolio ~~imposes~~ encompasses many difficulties such as using e-class on the university webpage, and the lack of experience in using electronic technology. Instead they suggested using Facebook, as they were all familiar with it and used it daily. They asked to create a page to break the barrier of using the e-portfolio, , the possibility of using e-portfolios in different disciplines, and in their future career as teachers.

It is important to note that the pre-service teachers in this study identified themselves as the main stakeholders in the process; this consequently fostered the candidates' positive attitude toward e-portfolio. The findings suggests that pre-service teachers identified the e-portfolio as a link between learning in the classroom and real life in teaching children, because the e-portfolio enabled the participant teachers to combine reflections, notes on the electronic forum and uploading files.

Table (1) Teacher's views toward electronic portfolio

Item	Number of teachers
Electronic portfolio is effective for constructive criticism	16
Electronic portfolio opposes everything new	22
Electronic portfolio helps self- evaluation	24
Electronic portfolio provides us opportunities to be creative	17
Electronic portfolio enhances learning at university	19
Electronic portfolio helps us to be more active	21
Electronic portfolio links between learning at university and real life	9
Electronic portfolio encourages us to read more about teaching children	23
Electronic portfolio helps us to discuss topics through forum	22
Electronic portfolio helps us understand each other	14
Electronic portfolio through Facebook is a good way for working with each other	18
Electronic portfolio encourages us to search for knowledge	23
Electronic portfolio helps us to express freely	19
Electronic portfolio has increased knowledge	18
Electronic portfolio enhances skills in technology	
Electronic portfolio encourages student to communicate with each other	22
Electronic portfolio helps students face problems	16
Electronic portfolio helps us to be partners	19
Electronic portfolio enhances reflection	20
Electronic portfolio empowers teachers	21

Table (1) above shows that there was almost full agreement/consensus among participating teachers about the impact of e-portfolios on helping teachers to evaluate themselves (N=24)–encouraging them to search for knowledge and read more about teaching children (N=23), to discuss topics through the forum (N=22), to communicate with one another (N=21), to be more active and feel empowered them (N=21). However, very few teachers think that electronic portfolio links between learning at university and real life; this indicates that the students' attitudes and perceptions toward the portfolio have been generally positive; and that they encourage and support the employment of portfolios in university courses and they recognize its value and importance for their learning and development.

The following quotations are from the student interviews, reflections when they were asked about their views toward using electronic portfolio:

Student 5: I never heard about electronic portfolio before this course, but now I have a good idea about e-portfolios.

Student 19: The electronic portfolio is useful for us, as it gives us the opportunity to understand the concept of teaching children, types of methods and the philosophy of teaching according to children-centered learning.

Student 11: Using electronic portfolio is an excellent method of teaching at university. It opens our minds to be critical without feeling threatened and also guides us to be more interactive.

### Research Question 2:

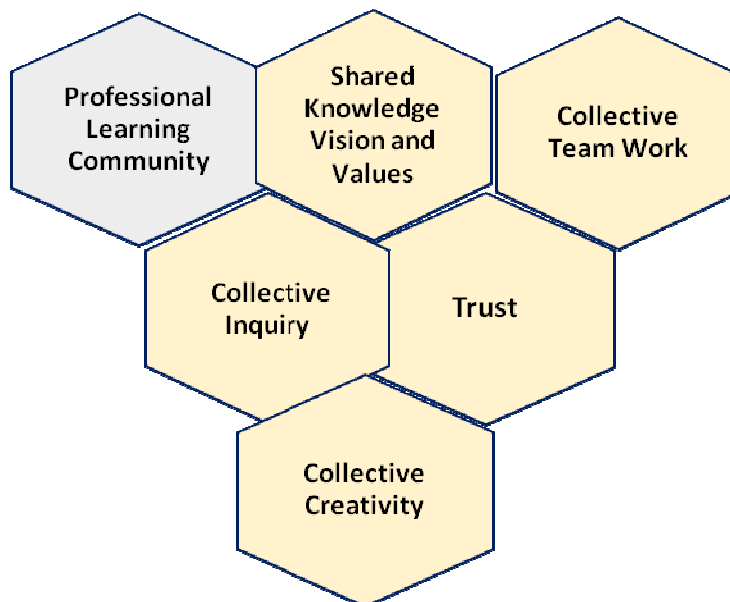
*How do electronic portfolios enhance professional learning communities of pre-service teachers?*

The data collected through the portfolio and students' reflective writing, interviews and discussion sessions was

analyzed. The results show that the electronic portfolio has helped create the professional learning community at Al-Quds University. Moreover, the results also show the components and characteristics of a learning community, represented in shared knowledge, vision and values, collective teamwork, collective inquiry, trust and collective result (creation).

Figure (1) below illustrates the components of a learning community model which was created in the Strategies of Instruction in Early Childhood course at Al-Quds University through the employment of the portfolio.

Figure (1) Components of a learning community



The analysis of the portfolio, student interviews, and reflective writings showed how each of the components of the professional learning community appeared.

#### **Shared knowledge, vision and values**

During the teaching strategies course and through the use of the electronic portfolio, the students were able to read articles published in educational periodicals, and books and discussed the new information and ideas they gained about children's education and their way of thinking. They also shared the concepts representing the focus of the course; namely, education and learning, child-centered learning, instruction strategies, learning by project, learning by playing and reflective instruction. It is worth noting that the discussions, conducted through the portfolio and educational forum helped the participants to find shared understanding and vision for plenty of concepts and topics pertinent to children's education. In addition, they were involved in discussions on how to write the daily, weekly and yearly plan used in kindergartens, and how to select instruction methods that are compatible with the child-centered learning approach. This in turn established a learning culture among them and what learning meant.

When students discuss ideas, perceptions, suggestions and information on children instruction strategies, they are said to be in continuous learning. Thus, they share information among themselves, and in such case, the course instructor and the pre-service teachers are in a shared learning setting, where the conventional instruction pattern, which requires the teacher to teach and students to listen disappeared. Moreover, all people involved in this study have contributed to the dissemination and exchange of knowledge and promoting the learning culture.

In addition, pre-service teachers took the initiative to suggest serious ideas and discuss them; this encouraged them to adopt exploration, initiative, participation in the study, reading, writing, posing questions, discussing and solving problem. Accordingly, the course became a convenient forum for discussion, encouraging dialog and debate among pre-service teachers and it also created an atmosphere of cooperation and collaboration, consequently removing the subjectivity and individuality of the learners.

The following quotations are extracted from the student interviews; discussion sessions and reflective writing provide good evidence of that:

Student 1: *The best thing in this course is that we have exchanged ideas with one another and I was so glad when I suggested discussing the principles of child-centered learning in the forum, and it was of much help to me to search for more information in order to be prepared for discussion and answering my classmates' questions.*

Student 2: *During this course and through the electronic portfolio, I felt that we have common grounds for thinking and understanding plenty of topics related to the course. For instance, we needed to find a clear definition of the term "Instructional Strategies in Childhood." After discussing several definitions, we managed,*

*as a team, to build a clear definition and explored ways to develop this definition; and it remained with us until the end of the course. We felt proud that we were able to build knowledge that we all shared as a class.*

*Student 3: It's very important to work and think together. Our subjectivity was greatly diminished in this course and we stopped using the first person "I" and began to use "We." We also began to think about how to develop our understanding of children education, and how to come up with a plan for a children education project in the end. Honestly, this is the first time I had such a wonderful feeling at the university.*

*Student 4: The exchange of ideas among us, through the electronic portfolio, was a great thing; it made us think critically, constructively and positively. Competition between us became positive and it enhanced our capacity to search for knowledge. We began to exchange readings and articles from periodicals and when my classmates needed a book about "Learning by Project", I borrowed the book for them and I shared my thoughts and ideas about that topic with them on the forum.*

*Student 5: Sharing information is very important for the learning process at university; and this experience made me see that we all, my instructor, my classmates and I became one team and learned from one another. This greatly developed my knowledge and helped to do a lot of research. And at the same time, we acquired many values such as cooperation, tolerance and respect for each others' thoughts.*

The pre-service teachers in this study discussed the advantages of electronic portfolios in sharing ideas, comments and reflections; and how it helped them develop new ways of teaching and learning by investing teaching strategies in early childhood education to create a community learning-based electronic portfolio.

In the present study, the use of the electronic portfolio developed the individual participants' professional practice by providing opportunities for in-depth discussion and reflection. This enabled the participants to write a personal critique of the summarized books and articles and posted them on the Facebook page.

However, the process requires pre-service teachers to open their minds in order to recognize their new role and to bridge the gap between theory and practice in teaching children. The electronic portfolio encouraged the educational discussions and dialogs between the pre-service teachers and researcher in an attempt to understand ideas and get clarification on them.

Through the use of the e-portfolio, the participant students were able to share learning to increase their professional effectiveness. They tested their ideas and challenged one another's assumptions and processed new information together. Professional learning communities were opportunities for powerful professional development for them because they supported each other, shared reflections and discussed topics about reflection through portfolio and they gave themselves a chance to criticize one another.

#### **Collective Teamwork:**

The results of the current study showed that the electronic portfolio led to the creation of a positive relationship among the participant students, who began to ask one another, discuss issues, give advice and guidance, and offer constructive criticism as well. In fact, they considered this course as an opportunity for better and fruitful cooperation without making any single individual feel threatened or intimidated; moreover, a feeling of collective teamwork and collaboration prevailed among them all.

This is illustrated by the comments made by some of the participant students:

*Student 1: The most difficult thing a student encounters in his/her learning is to work in a small team, and it was even harder for us to work in an integrated group. Since we agreed to use the e-portfolio platform, we were required to exchange readings and video clips about children's learning; and to cooperate with one another as we exchanged video clips on children's learning and held discussions about the topic. We also exchanged academic articles about children's learning and education strategies and exchanged reflections, as each of us had to write ten reflections during the course. We learned how to be critical of each other without having any fear or intimidation. This experience was an excellent opportunity for learning.*

*Student 2: It was a good opportunity for me to work with my classmates by reading each others' reflections. I wrote my reflections and waited for my classmates' comments on them in order to be able develop my work.*

The results of the study also reveal that the students' work shifted from being individual and isolated into collaborative and collective. They exchanged plans and conducted critical and reflective dialogs on and how to develop these plans to enhance and improve children's learning. They also conducted reflective dialogs about how to apply the activities with children. Each student downloaded a film depicting children's learning in kindergarten through art and merging it in integrated education for science, math and language; then, they engaged in a discussion on the film and presented their criticism of the way instruction strategies were employed in kindergarten, and exchanged ideas with one another. They even exchanged tasks. This in fact changed the students' attitude toward not only children's learning but also toward their own learning, and how students can, through the learning community, develop their collective teamwork capability, communicating with others, acquiring communication and interaction skills and giving up subjectivity and individuality in order to establish a collaborative learning.

### **Collective Inquiry:**

Collective inquiry occurs when individuals share experiences, ideas, conceptions and works in an open atmosphere that allows them to conduct research, criticism and discovery. When students practice collective reflection and deliberate reflective dialog, they will work together to develop their thinking and practices. In the current study the students worked together within a critical and reflective dialog and employed the electronic forum as they posed questions to one another about the possibility of developing children's instruction and child-centered instruction strategies. This helped some students apply practical activities and use of pastes (baked, newspapers paste and normal wheat paste) in teaching concepts of geometrical shapes.

The extract that follows illustrates this clearly.

Student 14: *It was a unique experience to employ paste in my instruction to children, and my classmates helped me do that. I read about employing art in children's instruction in "Techniques for Teaching Children" and when I watched the film on the use of art, I conducted a dialog with my classmates about employing art in teaching and my classmate suggested using paste and I liked the idea. I read more about the methods of making different types of paste and I devised a plan for teaching the geometrical shapes by using paste, and I felt happy when I applied the activity.* **Trust**

Trust is usually built when students feel comfortable, safe and unthreatened, and can consequently express their fears, strengths and weaknesses in front of others. This is exactly what happened during the study as the students were able to talk about their strengths and weaknesses without feeling intimidated or threatened by their course instructor or fellow students. In addition, this experience helped the participating pre-service teachers to work together as a group and to abandon individual work. As a researcher, I built trust with the students through the opportunity I had before during my observation of student discussion, thinking, criticism and reflection, in addition to collective participation in planning and application of activities and work. In their reflective writings, the students indicated that they could build trust amongst themselves, and now they can present their ideas and benefit from each others' ideas.

### **Collective Creativity:**

The results of the present study show that once the participants got the opportunity to exchange ideas, information, readings, films, plans and activities, they were able to evaluate the outcomes of their actions and their collective creativity. They were able to develop ideas for creative activities and apply them with children over the next two weeks of the course. They also wrote their reflections about that. Each student was required to work on two activities and to exchange the activity plan with colleagues before applying them in class. Each student then posted his/her activity plans on the portfolio page and waited for his/her classmates' comments and their recommendations for modification and improvements. After that, each student applied the activity in class and wrote his/her reflections about that experience. At the same time, each student asked his/her classmates to provide him/her with feedback.

The study indicates that students encouraged one another to choose creative activities that allowed children to practice experimentation, questioning and innovation, etc. Some students gave notes to their classmates to better organize the environment of the kindergarten classroom to fit the selected activity such as seating children on the floor and holding the activity outside the classroom. This experience allowed students to think in a different way than before, i.e. As each student used to writing down the plan and going straight to apply it at school. In contrast, now they wrote down their plans and waited for colleagues' comments, and then developing the plan and waiting for the feedback. B This experience indeed helped them develop and enhance their capabilities and skills.

Using electronic portfolios in a teaching strategies course allowed the students to discover their capabilities, skills and innovations and also maximized their self-confidence and trust in their classmate, particularly as individuality and competitiveness had been greatly reduced and each student expressed himself/herself in their own way.

Student 19: *I wrote my plan and activity about the citrus fruit unit, and my goal was to help children distinguish the taste of different kinds of citrus fruit such as lemons and oranges. I developed a plan and posted it and then received support from my classmates and instructor on the steps of the activity. However, one of my classmates suggested that I should start the activity by asking the children to try to distinguish the taste of different citrus fruit with other eyes closed. Another recommended placing the citrus in front of the children and gives them the chance to discover it. I chose the second recommendation and then I recorded my reflections on it. In addition, I wrote down all that happened with me in the classroom, and I received great support from my classmates. This greatly boosted my self-confidence as a children teacher.*

Student 17: *One unique thing about this course is that we had a very shy classmate, and her confidence in herself was quite weak, especially, in her ability to teach children. My classmates and I felt responsible toward her, and always believed that the success of anyone of us meant our success as a team. Then, I developed an activity on instructing children about animals and their shadows. I wrote the plan and objectives for this activity and posted it on the portfolio page. Consequently, she managed to write a good plan with the help of*



*everyone and the whole class was happy. Then we asked her to tell us about her experience with instructing children.*

*Student 11: Together with another classmate, we were the only male students in the class, but we didn't have any problems because of that; in fact, we received a lot of support from our female colleagues and felt proud about our plans. We also managed to go to a kindergarten and teach children; particularly that it is not acceptable in our Palestinian society for men to work as kindergarten teachers. However, our female classmates were able to get permission for me from a nearby kindergarten's principal and we went together and applied our activities. I also received support from my instructor through the notes that she used to post on the website for us.*

## **6: 1 Discussion:**

Discussing learning communities at the university means that students and their academic instructors should engage in research, planning, shared learning and mission accomplishment. In other words, it involves developing a new culture--the learning university culture. Eventually, that would lead to developing shared culture and vision as well as values and knowledge.

The provision of the components of a learning community at the university is based upon persistent reflection, learning and collective inquiry for developing a university education.

The electronic portfolio was a real opportunity for learning and developing a learning community. The results show that the electronic portfolio has contributed to the development of a learning community, characterized by sharing vision, information, values and shared cooperation, as well as achieving a collective outcome; and this is in agreement with one perspective of the characteristics of a learning community, which is characterized by: shared values and vision, collaborative teamwork, shared personal practice, collective learning and application, and collective creativity according to Hord (1997).

This is in agreement with Barrett (2006), who indicated that a critical component of the portfolio is the combination of a learner's reflection on the individual pieces of work. This also agrees with Labosky (2000) who stated that the portfolio helps teachers to become more confident and more capable of conducting better models for teaching and assessing consistent with their convictions and interests.

One of the examples of improved student achievement is where research has illustrated that educators who collaborate at work can produce a strong effect on student results in a way that is greater than the total of individual teacher's effort (Fullan, 2006).

Professional learning communities establish relationships between teachers at schools; as they help teachers to employ different techniques and to make changes in their practice through developing action research, meetings, collective observations, reflective dialogs and forums, this would increase the teachers' capability to teach and achieve the school's instructional objectives (DuFour, 2004).

The present study shows that the electronic portfolio has contributed to the development of a learning community, through the openness of students to knowledge and trust building among them using debate and negotiation. This in turn has provided a foundation for a teamwork that is based upon inquiry, cooperation and capabilities development. In addition, this has contributed to the development of students' capabilities concerning activities planning and children's instruction.

The present research has not covered all the characteristics of learning communities; for instance, these elements have not appeared within the research: Shared personal practice and collective application.

This outcome can be ascribed to the relatively short duration of the study (five months which was not enough for all the components of the learning community to be achieved. The students have worked intensively and constantly throughout the course, but personal practice and collective application for instruction has not appeared at all. The researcher also ascribes the reasons behind that to the fact that students did not engage permanently and constantly in the instruction process as they started to apply their activities with children only during the last two weeks of the semester. This period is not enough for students to apply what they have learned in the course, and for the components of learning community to come to surface.

Another challenge that the researcher encountered related to the employment of portfolios in education particularly that students have encountered a number of challenges and difficulties during their work on the electronic portfolio, most importantly, the internet connection outage, which created a lot of confusion. Other difficulties included uploading the reflections and pictures of teaching aids and games they produced and the material they used, and the lack of interest in collective work. However, it was necessary to overcome all these issues, and the students managed to do that through their class discussion, use of internet connection at the university and getting enough encouragement to employ the electronic portfolio to build a learning community. It was also necessary to convince the students about the importance of the portfolio for work, and the need to develop it.

The students recommended utilizing electronic portfolios in all courses and not only in particular courses. They also recommended the need to share reflections, not only with their classmates, but also with their professors in order to see how professors view the instruction process through the electronic portfolio, and how

educators can develop their own portfolio. Finally, they recommended that school and kindergarten teachers should be trained in how to employ the electronic portfolio in their activities due to its practical value in the education process.

## 6: 2 Recommendations

The study recommends the following:

1. The inclusion of the Electronic Portfolio in all college courses at the Faculty of Education and train students
2. Provide training to students in order for them to use it.
3. Further studies about learning communities at the university and how to create and develop them should be conducted.

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