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INVESTIGATING EFL STUDENT TEACHERS' LEARNING PERFORMANCE, ATTITUDES AND PEER INTERACTION IN FLIPPED CLASSROOM

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ABSTRACT: *This mixed–method research design examined the influence of Flipped Classroom Intervention (FCI) on the learning performance of pre-service EFL female teachers, along with their related attitudes and peer interaction. The study sample consisted of thirty-eight pre-service EFL females in Saudi Arabia. The research design was a one-group pre-posttest, with data collected by means of twenty items gathered pre- and post-test to measure learning performance. In addition, the attitudes and peer interaction of the participants were explored through the use of two Likert-scale questionnaires and their reflections were examined by means of semi-structured focus-group interviews. The results of the paired-samples t-test revealed a statistically significant improvement in participants' learning performance (t=-7.459, p<.0005) in favor of the post-test. The results also revealed that the participants held positive attitudes towards FCI for all items within the three dimensions, giving highly confident responses regarding their views on peer interaction during FCI. Similarly, the findings of the semi-structured focus-group interviews revealed that FCI proved effective in raising the levels of: (1) the teacher's performance; (2) the classroom environment; (3) teamwork; and (4) the students' learning skills.*

KEYWORDS: Flipped classroom, pre-service EFL teachers, learning performance, attitudes, peer-interaction

INTRODUCTION

Since 2000, there have been a number of dramatic changes to the nature of higher education (Biggs & Tang, 2011, 3), resulting in global improvements in the standard of teaching within higher education institutions. Brenton (2015) summarized the essential principles for effective twenty-first century learning as follows: (a) maximizing opportunities for constructive alignment between learning outcomes, activities and assessments; (b) integrating various activities for practicing knowledge; and (c) establishing a learning environment focused on deepening learners' engagement, collaboration, interaction and self-regulated learning. Likewise, Kingsbury (2015) stated that learning outcomes tend to be improved in response to a learning environment that is active, constructive, self-directed, self-regulated, and controlled. Over previous decades, this has resulted in a gradual move from a teacher-centered to learner-centered paradigm (Bergmann & Sams, 2012). Westwood (2008, 26) described a learner-centered approach as the best practice that enhances the autonomy of learners, improves their basic academic skills, and provides opportunities for learners to work collaboratively and effectively to construct knowledge.

In line with the above patterns, faculty members in higher education institutions have begun to adopt a number of new pedagogical methods into their classrooms, which have

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now become a source of alternative ideas, along with the development of evaluative and critical thinking skills (Jordan, Carlile & Stack, 2008). The Flipped Classroom (FC) strategy is one of the most recent methods aimed at enhancing the learning experience and academic performance of university students, as well as their motivation, attitude, perception, and interaction. Bergmann and Sams (2012) defined FC as a setting "which is traditionally done in class is now done at home, and that which is traditionally done as homework is now completed in class" (p.13).

As an innovative learner-centered approach, FC is grounded in the constructivist theory of learning (Kurt, 2017). In particular, constructivism holds that learners actively acquire information and understanding by "synthesizing the knowledge they already possess with new information" (Jordan et al., 2008, 55). Research concerning the characteristics of FC has indicated that these act in a parallel manner with parts of the foundations of constructivism theory, i.e. the fostering of interaction, collaboration, and scaffolding during the learning process (Caudill, 2014; Chen Hsieh, Wu & Marek, 2017). Moreover, experiential learning and reflection are key outcomes in FC, resulting from a learner's total engagement in the learning process (Johnson & Misterek, 2017; Yang, 2017). In addition, FC places responsibility on teachers to create and customize authorized and authentic teaching-learning materials as an available source for the construction of knowledge and information (Chilingaryan & Zvereva, 2017).

As a contemporary pedagogical method, FC has recently been studied by a number of researchers in certain general subject areas, including: (1) Science (MacKinnon, 2015); (2) Biology (O'Malley, 2015); (3) Mathematics (Lee, 2017); (4) Information and Communication Technologies (ICT) (Newhouse, 2016); and Nursing (Park & Park, 2018). In addition, various studies have also explored the use of FC in EFL middle, secondary, and high school classrooms, i.e. the EFL reading comprehension skills investigated by Abaeian and Samadi (2016) and Huang and Hong (2016). Furthermore, Yang (2017) explored students perceptions of the benefits of flipping EFL classrooms.

A considerable amount of research has been undertaken to investigate the use of FC in university EFL classrooms, covering various different language skills, including: (1) oral performance (Al-Ghamdi & Al-Bargi, 2017); (2) writing skills (Ekmekci, 2017; Jehma, 2016); and (3) listening comprehension (Ahmad, 2016). A number of further factors were also explored in EFL university FCs, including: (1) attitude (Alnuhayt, 2018; Doman & Webb, 2017; Hung, 2015); (2) perception (Chen Hsieh et al., 2017); (3) motivation (Oraif, 2018); and (4) satisfaction (Alsowat, 2016; Jehma, 2016).

There has recently been a rapid growth in the body of literature examining the effectiveness of FC. An example of these studies is the work of Bishop and Verleger (2013), who reported that participants experienced mixed feelings when watching videos in place of attending lectures, while at the same time expressing positive feelings towards in-class group activities. The results of a study conducted by Hung (2015) suggest that FC can augment students' academic performance, participation, and attitudes. Sung (2015) indicated the potential for FC to promote positive change in current EFL classrooms, while Huang and Hong (2016) found that the participants in FC made substantial progress in EFL reading comprehension. In his empirical study, Leis (2016) found that the FC approach was highly effective for improving the linguistic

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proficiency of EFL students. The results of a study carried out by Mehring (2016) indicated that FC has an impact on learning practice, supporting the move towards a more communicative classroom setting. In their experimental study, Chen Hsieh et al. (2017) found that FC enhanced the motivation of their participants, including making them more active in class. A further seminal study conducted by Ekmekci (2017) reported the significant positive impact of FC on both the writing performance and attitudes of participants.

However, despite this previous research into FC, there have only been a small number of insights into the impact of Flipped Classroom Intervention (FCI) on teacher education.

Statement of the Problem

Teacher training programs tend to focus on developing the required knowledge, skills, attitudes and teaching strategies of pre-service teachers to prepare them for their future profession. This includes equipping them with practical insights into recent and effective pedagogical methods. The observation of Saudi pre-service EFL female teachers during their Educational Diploma Program (EDP) revealed that the method of instruction tended to take the form of traditional lectures, i.e. in other higher education institutions, the university teacher provides knowledge by means of direct instruction (Hung, 2017). Caudill (2014) reported that lectures tended to be given during class time, with students expected to complete any aspects that were not covered as homework. Thus, teachers generally explained the materials at the beginning of the class, which ended with the giving out of home assignments. This was also the case in the Practicum (1), an obligatory course in the postgraduate EDP in the College of Education at Taibah University. During the Practicum course, the pre-service EFL female teachers are exposed to course topics heavily reliant on practice, discussion, reflection and the giving of further examples. However, due to various issues (i.e. time constraints, length of teaching-learning materials, lack of technical support and high levels of teacher control), it is vital to provide pre-service teachers with a more dynamic teaching approach, in order to increase their academic performance, self-confidence, attitude, self-learning, and in-class interaction.

The current study, therefore, argues that FCI forms a promising pedagogical approach for EFL pre-service teachers. As a form of blended learning, FC reverses a traditional, lecture-based teaching model and so improves the quality and productivity of the teaching and learning process (Yang, 2017). In FC, learners are able to view online videos, PowerPoint slides and reading materials prior to attending class, thus enabling class time to be devoted to small group discussions, interactive activities and assessment (Bishop & Verleger, 2013). Furthermore, FC pays careful attention to the design of pre-class materials, thus enabling online and face-to-face activities to be tailored towards individual needs and interests.

The literature review established FC as a relatively new pedagogical approach to teacher training. Despite its significance (and recent rapid rise in popularity), the related literature was found to still be in its early stages and insufficient. In addition, additional research is required to contribute to the knowledge base of this approach across all areas of teacher training. Consequently, the purpose of this mixed–method research design is

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to investigate the impact of FCI on the learning performance and attitudes of Saudi pre-service EFL female teachers. Moreover, it focuses on establishing students' views of the use of FCI to foster peer interaction, as well as to gain additional insights and reflections of EFL pre-service female teachers regarding FCI.

Questions of the Study

1. To what extent does FCI influence the learning performance of pre-service EFL female teachers?
2. What is the attitude of pre-service EFL female teachers towards the use of FCI?
3. What are the views of pre-service EFL female teachers concerning the use of FCI to foster peer interaction?
4. What are the reflections of pre-service EFL female teachers regarding the use of FCI?

Statements of Hypotheses

1. H_{01}. There is no significant difference at a 0.05 level of significance between the pre-test and posttest mean scores of Saudi pre-service EFL female teachers taught by means of FCI.

LITERATURE REVIEW

Three areas of research underpinned the research questions and informed this paper: (1) a brief history of FC; (2) the advantages and challenges of FC; and (3) the implementation of FC during teacher training.

A Brief History of the Flipped Classroom

FC forms a type of blended learning in which the traditional learning environment is reversed, i.e. flipped. It has been used pedagogically for several decades, but was initially supplemented as a strategy by Mazur (1997), who developed a peer instruction strategy. Mazur (1997) found that, as an interactive teaching style, peer instruction facilitated the absorption of information both inside and out of the classroom, and resulted in students demonstrating a higher active understanding of the course content (ibid). Lage, Platt, and Treglia (2000) also discussed FC as a pedagogical terminology at the college level, including the transferring of lectures and presentations onto a various type of media (i.e. computers and videocassette recorders (VCRs)) to be watched by students in their own time.

As stated by Thompson (2011), Salman Khan, an American educator, undertook the most notable effort to establish FC in 2004, by offering teachers vital insights into how students can learn effectively both outside and inside classrooms. As a result of his success, Khan created a not-for-profit educational organization (i.e. the Khan Academy) in 2006 to establish a free and accessible digitized learning library to provide content resources for different subject areas (ibid).

A practical movement in this area was led by two high school chemistry teachers, Jonathan Bergmann and Aaron Sams in 2007, who recorded a number of their lectures in the form of videos to be watched by any of their students who had missed classes.

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These students were also given the opportunity to share one question in the class. The teachers noted a significant improvement in the test scores of students using the flipped method (Bergmann & Sams, 2013, 3-4). This led both teachers to prerecord their lectures to be watched by all their students as homework, prior to the class itself. In addition, the teachers devoted time outside the classroom for interactive activities, discussions, as well as further explanations of the topic concepts (ibid). Based on the historical background and initial practices of FC, Bishop and Verleger (2013) defined it as "a new pedagogical method, which employs asynchronous video lectures and practice problems as homework, and active, group-based problem-solving activities in the classroom" (p.1).

In conclusion: FC has been established as an innovative, learner-centered approach, capable of transforming the traditional roles of teachers and students. Although teachers have no need to deliver long lectures with students acting as passive learners, they are required to work in a more intensive fashion, both during their classroom teaching and outside of the classroom itself (Ahmad, 2016; Jehma, 2016; Mehring, 2016).

Advantages and Challenges of FC

Previous research has revealed three main phases of FCI implementation: (1) prior to a class; (2) during class; and (3) outside of class. The current study categorized the advantages of FC in accordance with these three phases.

Before a Class

The first advantage of FC in the "before the class phase" is the creation of authentic and customized content, i.e. the teacher needs to create and/or find related videos, PowerPoint slides, and reading materials, and direct their students towards these prior to the class taking place. At the same time, the teacher is required to consider a number of specific factors, including the needs of learners, as well as their age and ability (Chilingaryan & Zvereva, 2017). Moreover, the length of the videos is a crucial factor, particularly as lengthy videos may increase students' workload without contributing any additional value (Bergmann & Sams, 2012).

The second advantage is the ability to increase both the individualization of the lessons and the learner's level of responsibility. Thus, after receiving the pre-prepared content, each learner works according to his/her own personal pace, as well as fostering his/her autonomy and reflective abilities (Caudill, 2014; Jehma, 2016; Yang, 2017).

The third advantage is the improvement of self-regulated learning. Lee (2017) considered the first phase of FC to be merely 'self-directed learning', as, during this phase, learners are oriented to preview the content before the class, as well as interacting with learning materials, and regulating their learning to be actively prepared for the inside class phase.

During Class

A number of advantages appear during the "inside class phase". The first concerns the ability to establish a flexible and engaging learning environment. MacKinnon (2015) described FC as a dynamic and interactive environment, in which the teacher guides and supports students to participate in an active manner with the content, their peers,

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and the course teacher.
The second is the effective management of class time. Ahmad (2016) and Basal (2015) pointed out that, in FC, the teacher acts as a facilitator, supporter, and guide of learning, with class time being devoted to engagement activities, interactive discussions, completion of tasks, or 'in-put oriented tasks' (Hung, 2017, 17).

The third advantage is the promotion of active learning, which forms the key principle of FC in the inside class phase. Westwood (2008) described active learners as those playing an "active and major role in acquiring information and developing concepts and skills while interacting with their social and physical environment" (p. 4). Bergmann and Sams (2012) added that one of the primary purposes of FC is "to empower students to learn more content more deeply in an interactive, relationship-rich environment that helps them succeed" (p. 112).

The fourth advantage is the ability to engage learners in collaborative learning. FC promotes more opportunities for collaborative activities, i.e. group-based tasks. In cooperative group work, students tend to interact with their peers, and the teacher, to construct knowledge and develop the required skills. Baines et al. (2009, 21) identified the important skills learners can acquire by means of effective group work as including: (1) positive self-esteem; (2) self-confidence; (3) active listening; (4) motivation; (5) the ability to express opinions; (6) confidence in offering suggestions during brainstorming; (7) the ability to handle conflict; and (8) increased classroom interaction. Bergmann and Sams (2012) and Findlay-Thompson and Mombourquette (2014) reported that, due to the changing roles of both parties in the new setting, FC accords considerable potential for the promotion of learner-teacher and learner-learner interaction. Both Chen Hsieh et al. (2017) and Fraga and Harmon (2014) emphasized the importance of FC for all types of classroom interaction. In addition, the findings of Hung (2017) further suggested that FC motivates learners to interact with both their teacher and their peers. Moreover, Oraif (2018) and Traxler and Agnes (2005) indicated that the use of digitized materials enables learners to interact with learning materials.

Outside of the Classroom
There are a number of advantages during the "at the end of the class" phase. Firstly, there is an improvement in learning performance. Bergmann and Sams (2012) stated that, during FCI, teachers noted that their students appeared to be more engaged. Furthermore, various studies (Abaeian & Samadi, 2016; Ahmad, 2016; Al-Ghamdi & Al-Bargi, 2017; Ekmekci, 2017; Leis, 2016; Zainuddin, 2017) have reported similar results, providing significant evidence that implementing FCI improves learning performance in different language skills. Likewise, further studies in the field of teacher education (Fraga & Harmon, 2014; Köroğlu & Çakir, 2017; Kurt, 2017; Newhouse, 2016) have reported a similarly positive effect of FC on learning performance.

A second advantage is the improvement in the attitude of learners in FC, as a result of teachers' indirect instructions or learners' gained experiences. The results of a great number of studies (Adedoja, 2016; Alnuhayt, 2018; Doman & Webb, 2017; Ekmekci, 2017; Hung, 2015; Kist & Pytash, 2015; Lou & Li, 2018) have demonstrated that students tended to develop positive and favorable attitudes, views, and beliefs towards learning through FC.

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A third advantage in this phase is the promotion of reflection. Thus, FC pedagogy encourages students to reflect on their learning, to ensure they remain on the appropriate path. Furthermore, reflection enables students to express their views concerning the use of video lectures, FCI procedures (i.e. pre-, in- and after class), as well as further suggestions for improving future FCI. Despite its importance, only a limited number of studies were found to focus on learning reflection (Heo & Chun, 2016; Ryan, Young & Kraglund-Gauthier, 2017). This indicates a need for future studies to examine students' reflections concerning the implementation of FCI in learning.

FCI has only been adopted for a relatively short period of time. However, recently published research (Johnson & Misterek, 2017; Oraif, 2018) has reported the existence of major challenges for teachers and/or students. One of the main limitations concerns difficulties in creating or finding appropriate and high-quality online videos. As noted above, the successful implementation of FC relies heavily on learners' self-control, self-motivation, and skills of self-regulation. However, not all students are capable of assuming responsibility for their own learning. Furthermore, the use of technology can lead to potential issues in accessing online videos or digitized materials. Finally, the instructional values of practical interactive activities, group tasks, and adequate teacher feedback may be compromised when used in a large class.

Implementing the FC during Teacher Training

As noted above, one of the purposes of teacher education training programs is to equip pre-service teachers with further knowledge and information regarding teaching and learning, prior to embarking on their practical teaching experience. Perry (2004) emphasized the need for pre-service teachers to challenge themselves, stating: "challenging or extending your teaching knowledge requires you to search continually for new meanings and understanding, to consider them in the light of your existing knowledge and, perhaps, be prepared to change your views" (p.131). This requires university teachers in teacher education programs to become aware of the benefits of using innovative trends and approaches while instructing pre-service teachers to deepen their insights concerning the operative various methods capable of being applied in their classrooms.

One such focus concerns the implementation of FC as a dynamic and learner-centered approach. Most studies regarding the use of FCI have focused on teaching students in schools and undergraduates, with far less attention being paid to the exploration of the use of FC in teacher education programs. An example is a study by Caudill (2014), which employed three interviews to analyze pre-service teachers' perceptions of implementing FC. The results suggest that students' perception of the efficiency of FC were influenced by their commitment to the course. In his qualitative research, Basal (2015) explored the perceptions of pre-service English teachers of learning in FC. The findings indicated the positive perceptions of participants towards the use of FCI. The pre-service English teachers determined that FCI is beneficial in terms of learning at one's own pace, encouraging student preparation, saving class time, and increasing in-class participation. A study conducted by Kist and Pytash (2015) to investigate the views of preservice English language teachers towards implementing FC in learning,

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used interviews, blog posts, and survey responses to establish that FC was viewed as the most effective method in enhancing motivation.

Adedoja (2016) examined the attitudes of pre-service teachers towards flipped learning. The results of questionnaires and a focus group discussion indicated that preservice teachers held positive attitudes towards the new intervention. Limbong (2016) investigated eight pre-service EFL teachers' views of the implementation of the FC combined with Facebook. The results of semi-structured interviews and document e-portfolio projects revealed that the participants found this combination both effective and efficient. Moreover, Newhouse (2016) confirmed that pre-service teachers improved in their course assignments, particularly when it came to constructive knowledge, greater confidence, and awareness on how to flip their classrooms.

In their experimental study, Köroğlu and Çakir (2017) investigated the effectiveness of FCI for improving the speaking skills of pre-service English language teachers. The findings of pre- and post-tests demonstrated a statistically significant difference in speaking sub-skills in favor of the experimental group. Kurt (2017) conducted a quasi-experimental study investigating the effectiveness of FC. The findings indicated that the pre-service teachers attending the experimental group improved their self-efficacy learning outcomes, while also demonstrating positive perceptions of FC. Moreover, Lee, Cho and Lee (2017) explored the impact of FC on pre-service ESL teachers when it came to issues of self-efficacy. By analyzing microteaching videos, reflection papers, and individual interviews, the results revealed that pre-service teachers enhanced their self-efficacy.

RESEARCH METHODOLOGY

This current study adopted a mixed methods research design, in which data is gathered by means of quantitative (i.e. pre- and post-tests and questionnaires) and qualitative (i.e. semi-structured focus-group interviews) methods, to investigate the impact of FCI on the learning performance of pre-service EFL female teachers, as well as exploring their related attitudes and peer interaction.

Research Instruments

An achievement test was designed as a quasi-experimental approach to examine the impact of FCI on students' performance. This consisted of twenty items covering six domains of Bloom's taxonomy, as follows: knowledge= 1 item (5%); comprehension= 2 items (10%); application= 3 items (15%); analysis= 4 items (20%); synthesis= 2 items (10%); and evaluation= 8 items (40%). As one-group research design, the pre-test was administered to the participants to measure their learning performance before the intervention, with the identical test subsequently administered as a post-test at the close of the study period.

The study also employed a descriptive approach. A questionnaire was designed by the researcher to measure the attitudes of pre-service EFL female teachers towards FCI, in response to the research objectives and based on a number of previously reviewed studies (Alnuhayt, 2018; Doman & Webb, 2017). The questionnaire consisted of thirty

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items divided into three dimensions: (1) active learning skills; (2) the quality of the teaching-learning process; and (3) peer conflicts during FCI. Each dimension consisted of ten 5-point Likert scale items, ranging from 'Strongly agree' to 'Strongly disagree'.

In addition, the researcher devised a second questionnaire to determine the participants' views on the impact of FCI on peer interaction. This was developed in response to the related literature (O'Malley, 2015; Oraif, 2018) and was divided into two dimensions: firstly, personal development and secondly, social skills. Each dimension consisted of ten 3-point Likert scale items, ranging between 'Extremely', 'Moderately' and 'Not at all'.

To ensure their construct and content validity, these research instruments were sent to two experts in the Curricula and Teaching Methods Department in the College of Education, resulting in changes in accordance with their suggestions. Finally, both questionnaires were administered to ten students without further modification, due to the students confirming the clarity of all items. In addition, Cronbach's alpha was employed to measure the internal consistency of all items contained in both questionnaires. The results indicated high levels of internal consistency and reliability between the thirty items covering the attitudes (α=0.738), and the twenty items covering peer interaction (α=0.775). These achieved higher values than the minimum accepted value of 0.70.
The participants' opinions and reflections were investigated in semi-structured focus-group interviews, within focus groups. This enabled the researcher to gain in-depth information by posing questions concerning FCI and enabling the members of the focus group to share their opinions and reflections.

Subjects

The population of this study consisted of all pre-service EFL female teachers (n=89) attending the College of Education at Taibah University in Saudi Arabia. Thirty-eight pre-service EFL female teachers who enrolled in the Practicum (1) Course in the EDP were considered as forming the study's purposive sample. As part of one-group research design, the participants were taught using FCI during the first semester in the 2018 academic year.

Procedures

The participants were initially divided into seven groups of between five and six students. Each group was required to work cooperatively and interactively during classroom activities. In order to familiarize pre-service EFL female teachers with FCI, a single topic was presented one week before the treatment period via FCI, covering the constructive alignment between learning outcomes and teaching strategies. The teacher had previously sent all the teaching-learning materials to the students, with the FCI procedures being introduced in the classroom, followed by the activities. The class was followed by a question-and-answer session lasting approximately thirty minutes, to allow for further clarification regarding FCI procedures. Following this, the achievement pre-test was administered to the participants, in order to measure their learning performance prior to the intervention.

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Four out of the nine subjects covered in the course were taught through the medium of FCI: (1) questioning techniques; (2) classroom management and discipline; (3) giving feedback; and (4) praising and rewarding students in an appropriate manner. As demonstrated in Figure 1 (below), the implementation of FCI consisted of three phases, commencing with the "before-class phase" procedures, moving on to the "inside-class phase", and finally the "at the end of a class phase".

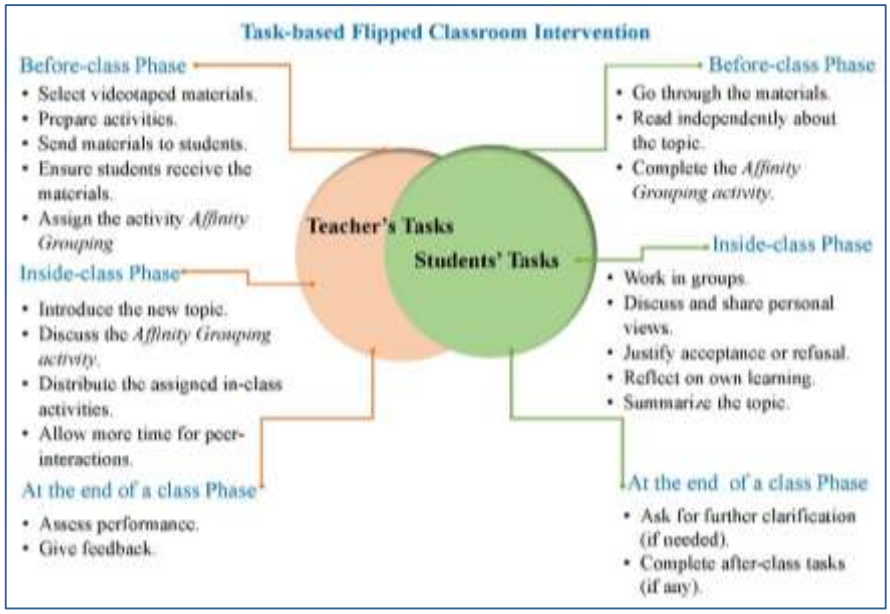

Figure 1: Phases of FCI Implementation.

The Before-Class Phase

The instructor selected fifteen videos reflecting the four topics and covering most of the sub-headings in each topic (see figure 2). In addition, the researcher prepared a number of PowerPoint presentations and reading materials.

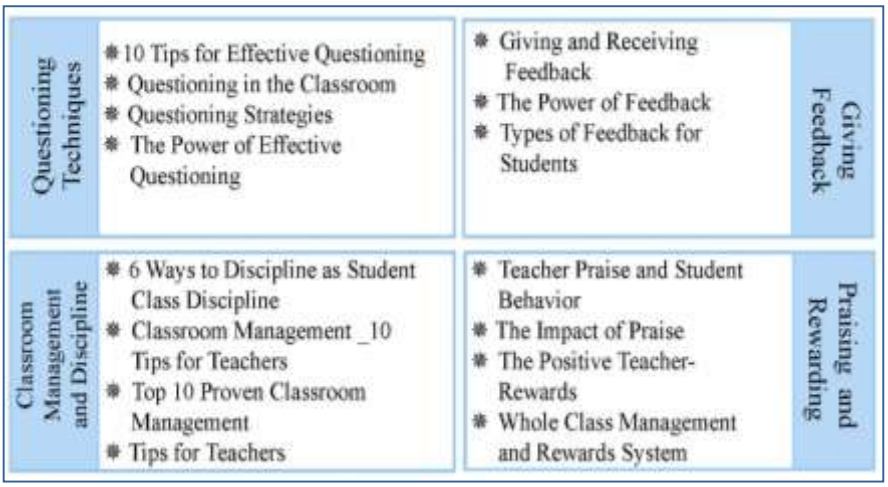

Figure 2: Topic-based selected the videos.

Furthermore, the instructor designed various classroom activities, ranging from four to

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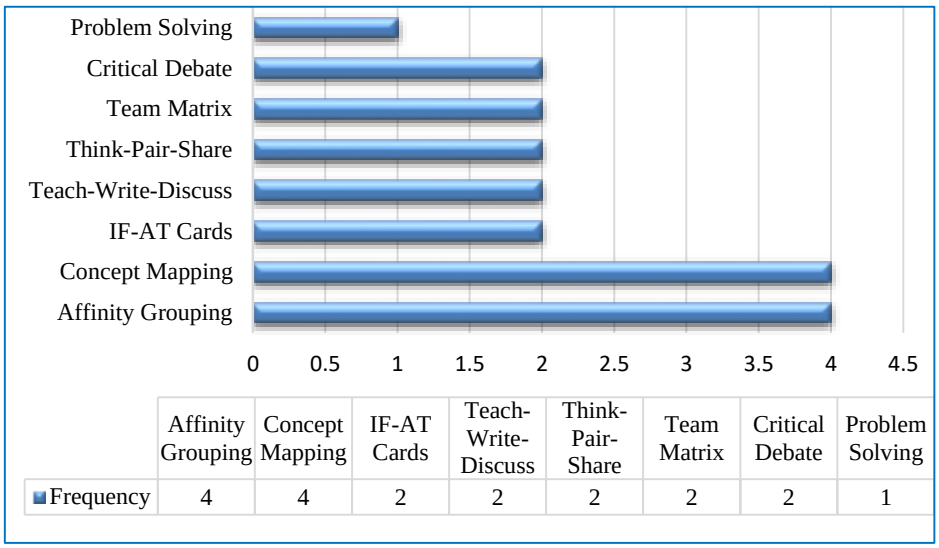
five in each FC, based on their suitability to the topic content. The 'Affinity Grouping' activity was assigned in all classes as a pre-activity, i.e. pre-service EFL female teachers were requested to give a brief description of the video tutorials of each topic to be later discussed with the members of their group. Figure 3 (below) outlines the selected classroom activities and illustrates their frequency during FCI.



	Affinity Grouping	Concept Mapping	IF-AT Cards	Teach-Write-Discuss	Think-Pair-Share	Team Matrix	Critical Debate	Problem Solving
Frequency	4	4	2	2	2	2	2	1

Figure 3: Distribution of designed in-class activities.

Following this, the prepared teaching resources for each topic were sent to the students, enabling them to access all materials (including videos) through their mobile smartphones. In addition, the students were asked to go through the materials before attending class, as well as undertaking their own reading about the subject and completing the Affinity Grouping activity.

The Inside-Class Phase

The instructor commenced each class by introducing the new topic, followed by posing warm-up questions to stimulate the groups to discuss the 'Affinity Grouping' activity. This was followed by engaging the students in different in-class activities, including group work, in order to encourage peer interaction and communication. The time spent in the classroom was devoted to learner-centered activities, enabling students to: (1) share personal views and knowledge; (2) justify acceptance or refusal; (3) reflect on their own learning; and (4) give a meaningful summary of the topic. The instructor's role was to facilitate, support, monitor, guide, and encourage learners to participate during this phase.

At the End of a Class Phase

During this phase, the instructor assessed the students' performance and gave feedback on their presentations, assignments and in-class activities, in order to ensure that the required learning outcomes were achieved. In addition, the instructor awarded the students an opportunity to request any further clarification required to complete

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assigned after-class tasks.

Data Collection

Following the completion of the treatment period, the posttest was administered, to measure the differences between the pre- and post-performance of the study group. Both attitude and peer interaction questionnaires were submitted, and the semi-structured focus-group interviews were conducted at the end of the intervention.

Data Analysis

In order to answer the research questions, the collected data were analyzed by means of SPSS Version 23, using the Paired-samples t-test as an inferential statistical technique to compare groups and the descriptive statistical methods, including frequency, percentage, means, and standard deviations.

RESULTS

In order to investigate the effect of FCI on Saudi pre-service EFL female teachers' learning performance, the researcher compared the scores of the participants taken at the beginning and end of the study. Moreover, both students' attitudes and views regarding peer interaction were explored and an analysis made of the responses to the individual semi-structured focus-group interviews.

Results of Participants' Learning Performance

In order to answer the first research question and test the hypothesis, a paired-samples t-test was used to compare the mean scores for the same group of participants, followed by a comparison of the results of the one-group pre- and post-achievement test.

Table 1: Learning performance of Saudi pre-service EFL female teachers.

Learning performance	N	Mean	Std. Deviation	t	df	Sig. (2-tailed)	Eta squared
Pre-treatment	38	10.29	2.75	-7.459	37	.000	2.98
Post-treatment	38	14.13	2.87				

Table 1 demonstrates a statistically significant increase in the learning performance scores from the pre-treatment (M=10.29, SD=2.75) to the post-treatment [M=14.13, SD=2.87, t(37)= -7.459, p<.0005]. The eta-squared statistic (2.98) indicates a considerable impact.

Results of Participants' Attitudes towards FCI

The researcher calculated the frequencies, means, and standard deviations to answer the second research question. The weighted means for the 5-point Likert scale items were: SA= (4.20-5); A= (3.40-4.19); N= (2.60-3.39); D= (1-1.79); SD= (1.80-2.59). The participants were asked to rate their responses towards FCI in relation to the three dimensions (see tables 2, 3 & 4).

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Table 2: Attitudes towards FCI regarding increasing active learning skills.

Attitudes towards increasing active learning skills in FCI	The Scale					Mean	S.D.	Level
	SA	A	N	D	SD			
1. Helped me to track the given instructions of in-class activities.	15 (39.5)	18 (47.4)	4 (10.5)	1 (2.6)	0	4.24	0.75	Strongly Agree
2. Helped me to organize the time productively to complete the task-at-hand.	13 (34.2)	21 (55.3)	3 (7.9)	1 (2.6)	0	4.21	0.70	Strongly Agree
3. Encouraged me to share my expertise during the discussion.	17 (44.7)	18 (47.4)	2 (5.3)	1 (2.6)	0	4.34	0.71	Strongly Agree
4. Allowed me to construct knowledge through healthy competition between groups.	18 (47.4)	16 (42.1)	3 (7.9)	1 (2.6)	0	4.34	0.75	Strongly Agree
5. Supported self-improvement to reinforce academic success.	17 (44.7)	20 (52.6)	1 (2.6)	0	0	4.42	0.55	Strongly Agree
6. Allowed for greater understanding of the course topics.	18 (47.4)	17 (44.7)	1 (2.6)	2 (5.3)	0	4.34	0.78	Strongly Agree
7. Helped me to value my learning.	15 (39.5)	19 (50)	3 (7.9)	1 (2.6)	0	4.26	0.72	Strongly Agree
8. Helped me to set higher expectations for my learning performance.	12 (31.6)	19 (50)	5 (13.2)	0	2 (5.3)	4.03	0.97	Agree

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9. Enhanced my learning performance through beneficial feedback from my instructor and peers.	12 (31.6)	24 (63.2)	1 (2.6)	1 (2.6)	0	4.24	0.63	Strongly Agree
10. Supported my learning using differentiated instructional activities.	19 (50)	15 (39.5)	2 (5.3)	2 (5.3)	0	4.34	0.81	Strongly Agree

The results shown in Table 2 reveal that the Saudi pre-service EFL female teachers in the current study held positive attitudes and set higher expectations for increasing active learning skills in FC. The results demonstrate the participants' strong agreement with the nine items with mean scores ranging from 4.21 to 4.42, apart from item 8, which revealed a moderate agreement among 50.0% of the participants, with a mean score of M=4.03.

Table 3: Attitudes towards FCI regarding enhancing the quality of the teaching-learning process.

Attitudes towards the quality of the teaching-learning process in FCI	The Scale					Mean	S.D.	Level
	SA	A	N	D	SD			
1. Encouraged me to raise appropriate questions to meet my learning needs.	17 (44.7)	15 (39.5)	6 (15.8)	0	0	4.29	0.73	Strongly Agree
2. Provided me with an appropriate level of challenge via the per-topic activities.	13 (34.2)	18 (47.4)	6 (15.8)	1 (2.6)	0	4.13	0.78	Agree
3. Introduced me to varieties of assessment techniques related to the	14 (36.8)	17 (44.7)	5 (13.2)	1 (2.6)	1 (2.6)	4.11	0.92	Agree

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presented topics.								
4. Allowed me to seek assistance from my instructor or peers when facing problems.	15 (39.5)	16 (42.1)	7 (8.4)	0	0	4.21	0.74	Strongly Agree
5. Enhanced my understanding of presented topics through the video-based worksheets.	17 (44.7)	17 (44.7)	2 (5.3)	2 (5.3)	0	4.29	0.80	Strongly Agree
6. Encouraged me to actively engage with classroom activities.	20 (52.6)	14 (36.8)	3 (7.9)	1 (2.6)	0	4.39	0.75	Strongly Agree
7. Adjusted the interaction level among group members.	16 (42.1)	15 (39.5)	4 (10.5)	2 (5.3)	1 (2.6)	4.13	0.99	Agree
8. Related the instructional materials to my learning needs.	10 (26.3)	25 (65.8)	2 (5.3)	1 (2.6)	0	4.16	0.64	Agree
9. Allowed me to express myself comfortably in English through class activities and discussions.	20 (52.6)	14 (36.8)	3 (7.9)	0	1 (2.6)	4.37	0.85	Strongly Agree
10. Was flexible, giving me enough time to prepare before class.	20 (52.6)	13 (34.2)	5 (13.2)	0	0	4.39	0.72	Strongly Agree

Table 3 demonstrates the results of the participants' attitudes towards FCI in relation to enhancing the quality of the teaching-learning process. The results reveal that the Saudi pre-service EFL female teachers in this study had a positive response to all items. They indicated a high level of agreement to six items (1, 4, 5, 6, 9, 10), with mean scores ranging between 4.21 and 4.39, and moderate agreement to four items (2, 3, 7, 8), with mean scores ranging between 4.11 and 4.16.

Table 4: Attitudes towards FCI regarding increasing peer conflicts.

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Attitudes towards controlling peer conflicts in FCI	The Scale					Mean	S.D.	Level
	SA	A	N	D	SD			
1. Decreasing the positive atmosphere in the class.	10 (26.3)	6 (15.8)	3 (7.9)	11 (28.9)	8 (21.1)	2.97	1.55	Neutral
2. Developing unhealthy mechanisms in class.	1 (2.6)	5 (13.2)	1 (2.6)	15 (39.5)	16 (42.1)	1.95	1.11	Disagree
3. Resulting in an unacceptable level of aggressive behaviors between peers.	2 (5.3)	6 (15.8)	1 (2.6)	15 (39.5)	14 (36.8)	2.13	1.23	Disagree
4. Increasing the arguments between peers.	3 (7.9)	4 (10.5)	4 (10.5)	15 (39.5)	12 (31.6)	2.24	1.24	Disagree
5. Impeding the negotiation skills of suggested solutions.	2 (5.3)	8 (21.1)	9 (23.7)	11 (28.9)	8 (21.1)	2.61	1.20	Neutral
6. Increased aggressive behavior towards peers.	2 (5.3)	4 (10.5)	2 (5.3)	11 (28.9)	19 (50)	1.92	1.22	Disagree
7. Led to difficulties in dealing appropriately with classmates.	2 (5.3)	3 (7.9)	5 (13.2)	15 (39.5)	13 (34.2)	2.11	1.13	Disagree
8. Encouraged misbehavior among group members.	1 (2.6)	4 (10.5)	1 (2.6)	14 (36.8)	18 (47.4)	1.84	1.08	Disagree
9. Resulted in disruptive	2 (5.3)	4 (10.5)	2 (5.3)	15 (39.5)	15 (39.5)	2.03	1.17	Disagree

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behavior in the classroom during group work.								
10. Created an unhealthy competitive environment between group members.	1 (2.6)	3 (7.9)	2 (5.3)	12 (31.6)	20 (52.6)	1.76	1.05	Strongly Disagree

The values of the negative items were reversed to score the third dimension of the attitudes questionnaire. Table 4 demonstrates the pre-service EFL female teachers' attitudes towards FCI regarding the increasing of peer conflict, and that these tend to be positive in eight items. The results reveal that participants responded neutrally to two items (1 and 5, M=2.97, 2.61). The result reveals that the participants were unable to decide whether FCI compromised the positive atmosphere in the class or impeded negotiation skills. While the results of the other eight items show moderate to high levels of disagreement towards the concept that FCI increases peer conflict.

Results of Participants' Views on Using FCI to Foster Peer Interaction

Frequencies, means, and standard deviations were calculated to answer the third research question. The weighted means for the 3-point Likert scale items: are Extremely= (2.34-3); Moderately= (1.67-2.33); and Not at all= (1-1.66). The EFL student teachers were asked to rate their views of FCI regarding two dimensions (see tables 5 and 6).

Table 5: Peer interaction: Participants' views on personal development during FCI.

Peer interaction: Personal development during FCI	The Scale			Mean	S.D.
	Extremely	Moderately	Not at all		
1. Stimulated me to share my decision-making skills.	35 (92.1)	3 (7.9)	0	2.92	0.27
2. Boosted my motivation levels by exchanging personal experiences.	36 (94.7)	1 (2.6)	1 (2.6)	2.92	0.36
3. Promoted my creativity by providing unique responses.	37 (97.4)	1 (2.6)	0	2.97	0.16
4. Promoted my high-level thinking skills when working on instructional activities.	36 (94.7)	1 (2.6)	1 (2.6)	2.92	0.36

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5. Enabled me to respond to comments or counseling where appropriate.	33 (86.8)	5 (13.2)	0	2.87	0.34
6. Helped me to actively engage with the materials, in order to participate in classroom activities.	35 (92.1)	3 (7.9)	0	2.92	0.27
7. Encouraged me to demonstrate personal responsibility through a good performance of required tasks.	33 (86.8)	4 (10.5)	1 (2.6)	2.84	0.44
8. Encouraged me to maintain in-depth conversations related to the task-at-hand.	33 (86.8)	4 (10.5)	1 (2.6)	2.84	0.44
9. Improved my ability to read the body language of my companions.	26 (68.4)	9 (23.7)	3 (7.9)	2.61	0.64
10. Provided me with further opportunities for delivering criticism with complete respect for other's views.	32 (84.2)	5 (13.2)	1 (2.6)	2.82	0.46

Table 5 reveals that the participants responded positively to all items. The weighted mean scores ranged from 2.61 to 2.97, reflecting the highest level of extremely confident responses.

Table 6: Peer interaction: Participants' views on social skills during FCI.

Peer interaction: Social skills during FCI	**The Scale**			**Mean**	**S.D.**
	Extremely	**Moderately**	**Not at all**		
1. Trained me to listen attentively to members of the group.	36 (94.7)	2 (5.3)	0	2.95	0.23
2. Provided me with opportunities to take an active role by completing the assigned worksheets in a timely fashion.	33 (86.8)	4 (10.5)	1 (2.6)	2.84	0.44
3. Helped me to volunteer to express the group's point of view with confidence.	32 (84.2)	5 (13.2)	1 (2.6)	2.82	0.46
4. Equipped me with much-needed skills to actively participate in the whole-class discussion.	35 (92.1)	3 (7.9)	0	2.92	0.27

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5. Developed my ability to accept the diverse criticism of peers.	34 (89.5)	3 (7.9)	1 (2.6)	2.87	0.41
6. Inspired me to summarize group decisions during discussion and negotiation.	36 (94.7)	1 (2.6)	1 (2.6)	2.92	0.36
7. Deepened my desire to help the group to stay on track.	37 (97.4)	0	1 (2.6)	2.95	0.32
8. Increased my frequency in interacting with others in a cooperative manner.	35 (92.1)	2 (5.3)	1 (2.6)	2.89	0.39
9. Enabled me to form respectful peer relationships when acknowledging the views of other group members.	35 (92.1)	1 (2.6)	2 (5.3)	2.87	0.47
10. Ensured the classroom environment was more welcoming and comfortable.	37 (97.4)	1 (2.6)	0	2.97	0.16

Participants' views, shown in Table 6, of the use of FCI to foster social skills as an aspect of peer interaction, reveal that Saudi pre-service EFL female teachers responded positively to all items. The weighted mean scores ranged from 2.82 to 2.97, reflecting the highest level of confident responses.

Results of the Semi-Structured Focus-Group Interviews

The semi-structured focus-group interviews were held to (a) elicit students' opinions and reflections regarding the effect of FCs on four closely related dimensions: (1) the teacher's performance; (2) the classroom environment; (3) teamwork; and (4) student' learning skills and (b) explore their preferred classroom activities. In order to answer the fourth question, the collected qualitative data of all the groups was analyzed and categorized.

Table 7: Participants' opinions and reflections regarding the effect of FCI on various factors.

Teacher's performance	Ƒ (%)	Classroom environment	Ƒ (%)	Teamwork	Ƒ (%)	Student' learning skills	Ƒ (%)
Giving constructive feedback	13 (34.21)	Very active and attractive classroom	27 (71.05)	Augmenting cooperative learning	13 (34.21)	Gaining self-confidence	23 (60.53)
Changing in teacher's roles	5 (13.16)	Evoking learner' critical thinking	12 (31.58)	Exchanging ideas and experiences	13 (34.21)	Sharing experiences freely	18 (47.37)

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Changes in teacher's concerns	5 (13.16)	Challenging, motivating, and communicative	8 (21.05)	Engaging learners in activities	7 (18.42)	Increasing independence learning	14 (36.84)
Managing classes effectively	4 (10.53)	Smooth discussions	7 (18.42)	Accepting peers' views	5 (13.16)	Improving responsibility and professionalism	7 (18.42)
		Reversal of traditional class	6 (15.79)	Making new friends	2 (5.26)	Developing aural skills	6 (15.79)

Results Regarding the Teacher's Performance

As indicated in Table 7, the participants identified changes to their teacher's performance during FCI. Thirteen participants (34.21%) found that FCI allowed the teacher to give frequent constructive feedback, while five participants (13.16%) indicated that the teacher's role changed, and a further five believed that there was also a transformation in the teacher's concerns. Moreover, four learners (10.53%) believed that FCI assisted the teacher to manage the classroom effectively.

Results Regarding the Classroom Environment

The data analysis revealed that twenty-seven participants (71.05%) found that FCI made the class more active and attractive, twelve participants (31.58%) found that FCI reinforces critical thinking, and eight participants (21.05%) stated that FCI results in improved challenges, communication, and motivation. Additionally, seven of the participants (18.42%) pointed out that lectures in FC go smoothly through discussions and activities, and six participants (15.79%) reported that intervention is a reversal method of traditional teaching.

Results Regarding Teamwork

The analysis in Table 7 shows that: (1) thirteen participants (34.21%) reported FCI as enhancing cooperative learning; (2) thirteen respondents stated that it helped group members to exchange ideas, thoughts, and experiences; (3) seven participants (18.42%) indicated that this method assists group members to engage effectively with different activities; (4) five participants (13.16%) found that FCI facilitates peer acceptance of another's opinions; and (5) two participants (5.26%) indicated that this intervention helped them to make friends.

Results Regarding Students' Learning Skills

The results in Table 7 also reveal that: (1) twenty-three participants (60.53%) found FCI helpful for gaining self-confidence; (2) eighteen participants (47.37%) stated that it gave them the opportunity to share ideas, feedback, and experiences; (3) fourteen participants (36.84%) reported that FCI increased independent learning; (4) seven participants

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(18.42%) reported a significant improvement in their sense of responsibility and professionalism towards their own learning; and (5) six participants (15.79%) noted an increase in their listening and speaking skills during discussions in the flipped classes.

Results Regarding Preferences for In-Class Activities

The results of participants' preferences of in-class activities are shown in Figure 4.

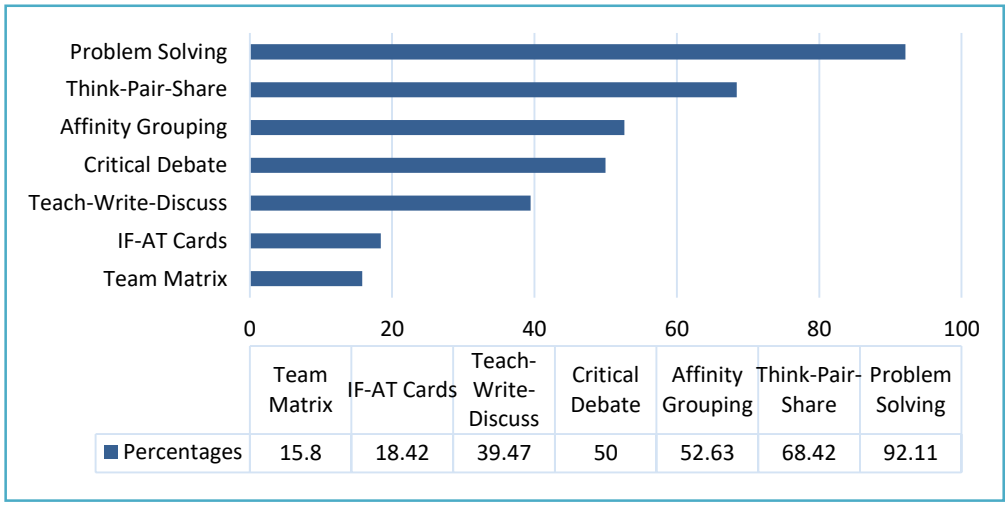

Figure 4: Participants' preferences for classroom activities during FCI

The results shown in Figure 4 demonstrate that, of the eight types of classroom activities provided during FCI, the pre-service EFL female teachers showed a greater preference for the following types: (1) Problem Solving (92.11%); (2) Think-Pair-Share (68.42%); (3) Affinity Grouping (52.63%); (4) Critical Debate (50.00%); and (5) Teach-Write-Discuss (39.47%). The lowest level of preferences was registered for IF-AT Cards (18.42%) and Team Matrix (15.80%). However, the participants demonstrated no preference for concept-mapping activities.

DISCUSSION OF THE FINDINGS

The findings revealed that FCI significantly improved the post-performance scores of pre-service EFL female teachers. This could be due to: (1) continual revising of the learning materials by replaying, rewinding, pausing and summarizing certain materials; (2) multiple in-class activities facilitating the more efficient and creative use of classroom time; and (3) activities allowing learners to express opinions, ask questions, obtain assistance, and/or discuss contradictory views with peers.

The observation of the participants revealed that they demonstrated maximum collaboration, motivation, engagement, and responsibilities during FCI, potentially due to: (1) the complete control over their learning; (2) minimum interference from their teacher; and (3) the use of technology essential for twenty-first century learning. This significant influence of FCI on learning performance is consistent with the findings of a

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number of previous studies that the use of FC leads to a significant improvement in learning, including Ekmekci (2017); Fraga and Harmon (2014); Köroğlu and Çakir (2017); Kurt (2017); Leis (2016), Newhouse (2016); Oraif (2018); and Zainuddin (2017).

The findings concerning attitudes towards the implementation of FCI revealed that the participants displayed higher levels of learning efficacy, as well as being more comfortable and confident in using this intervention to: firstly, improve their active learning skills; secondly, enhance the quality of the teaching-learning process; and (3) lessen peer conflict. In general, these results are in accord with the findings of recent studies demonstrating learners' positive attitudes towards this type of instruction (Adedoja, 2016; Alnuhayt, 2018; Doman & Webb, 2017; Hung, 2015; Kist & Pytash, 2015; Lou & Li, 2018).

The observations made by the researcher during the treatment period indicated that the general classroom atmosphere supported active learning by being more enjoyable, interactive, and productive. As indicated by Ahmad (2016) and Basal (2015), the implementation of FCI ensures greater interactivity and creativity than the traditional classroom.

The positive attitudes towards the quality of the teaching-learning process may arise from the clarity of learning outcomes during the three phases, with students being well aware of all the tasks to be accomplished prior to class. Moreover, it could arise from the participants regarding FCI as a self-directed and cooperative learning environment. Students were guided to take responsibility for their own learning and work at their own pace, while being encouraged to share experiences, knowledge, and thoughts with their peers. This interpretation accords with the findings of Lee (2017) and Baines et al. (2009), who reported that an important aspect of FC is its ability to improve learners' responsibility, self-regulation, engagement, and collaboration.

On the other hand, Kingsbury (2015) highlighted that the reduction of conflict during FCI was due to the creation of an active, constructive and self-regulated environment. Thus, the relaxed and comfortable academic setting enabled the pre-service EFL female teachers to be respectful towards each other, while dispelling any disruptive or aggressive behaviors, even in a competitive setting.

The results, therefore, revealed high levels of peer interaction between pre-service EFL female teachers, including an exchange of views regarding the development of personal and social skills development during FCI.

The participants demonstrated highly confident responses that reflected the effectiveness of FCI in the creation of peer interaction. When it came to the issue of personal development during FCI, it appeared that the participants gained a number of necessary skills, including: (1) creativity; (2) decision-making; (3) motivation; (4) thinking skills; (5) acceptance of peers' advice; and (6) respecting others. One suggested interpretation for this result is that in-class activities tended to be well-organized, using individual activities such as 'Affinity Grouping' allowing students reflective time to learn, as well as highlighting any difficulties experienced with the content out of class. In addition,

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group activities such as 'Problem Solving', 'Concept Mapping' and 'IF-AT Cards' stimulated students to express their own individual understanding of the content, and, during group work, examine each other's knowledge of the material, in order to reach a comprehensive understanding. This interpretation accords with Bishop and Verleger (2013), who noted that students tend to demonstrate positive feelings and interests towards well-planned classroom activities.

When it came to the development of social skills as a part of peer interaction during FCI, it was clear that pre-service EFL female teachers acquired skills including: (1) listening attentively; (2) discussing logically; (3) accepting other's views; (4) respecting conflicting ideas; and (5) actively participating in any task-at-hand. In addition, their responses to the questionnaire and classroom observation reveal that this may arrive from the use of planned cooperative group work. The classroom phase gives participants opportunities to discuss their thoughts and express and exchange views. This accords with Baines et al. (2009), who indicated that group work can foster: (1) positive self-esteem; (2) self-confidence; (3) active listening; (4) motivation; (5) the expression of opinions; (6) brainstorming suggestions; and (7) handling conflicts. This may also be influenced by changing the role of the teacher in the FC setting. Ahmad (2016) noted that, in FC, teachers are no longer the provider of knowledge or the main source of information, but rather act as monitors, guides, and supporters of the learning process.

Overall, the improvement of peer interaction appears consistent with the findings from other research that, in general, FC awards additional time for peer interaction, particularly when students engage in discussions independent of their teacher (Bergmann & Sams, 2012; Chen Hsieh et al., 2017; Findlay-Thompson & Mombourquette, 2014; Fraga & Harmon, 2014; Oraif, 2018).

The data obtained from the semi-structured focus-group interviews revealed that FCI proved effective for improving the performance of teachers, along with the classroom environment, teamwork, and students' learning skills. These results may arise from the participants' extended acquired advantages, as well as their increased levels of satisfaction throughout the learning process. The findings of some previous studies have confirmed the same interpretation as Ahmad (2016) and Alsowat (2016), who found that learners expressed a higher level of satisfaction with FC, including a willingness to learn through this intervention.

In the present study, the pre-service EFL female teachers stated that they favored FC due to it allowing them to: (1) share experiences; (2) take responsibility for their learning; (3) develop aural language skills; (4) use technology; (5) have frequent access to the learning materials; (6) receive a teacher's immediate feedback; (7) be engaged in different cooperative and interactive activities; and (8) improve their thinking skills. Hence, it can be confirmed that the use of FC pedagogy improves a teacher's performance, creates an interactive environment, augments learners' engagement and collaboration, and offers opportunities to gain different personal and social skills.

Additionally, the participants ranked their preferences for the in-class activities. Their desire to practice higher thinking skills in a creative setting was indicated by the

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preference expressed for problem-solving activities, despite this being applied only once during the FCI. Likewise, the other ranked preferences accentuate that the learners sought to be engaged in activities that challenged, motivated, and promoted critical thinking skills.

CONCLUSION AND RECOMMENDATIONS

This paper firstly, investigated the impact of FCI on Saudi pre-service EFL female teachers' learning performance; secondly, it explored their attitudes; and thirdly, established their opinions concerning the use of FCI in order to foster peer interaction. The data for this study were gathered from thirty-eight Saudi pre-service EFL female teachers studying at EDP in the College of Education at Taibah University, in Saudi Arabia. The study employed pre- and post-tests of twenty items to measure their learning performance. In addition, it used a 5-point Likert scale attitudes questionnaire and 3-point Likert scale peer interaction questionnaire. Furthermore, participants' reflections were explored by means of semi-structured focus-group interviews in order to gain valuable and deep insights.

The results revealed that the pre-service EFL female teachers taught by means of FCI demonstrated a statistically significant improvement in their learning performance scores during the post-treatment achievement test. Furthermore, the results indicated highly positive and confident responses to the effectiveness of FCI for improving attitudes and interaction with peers. The data obtained from the semi-structured focus-group interviews revealed that FC pedagogy improved the performance of their teachers, as well as the environment of the classroom, levels of teamwork, and students' learning skills. The participants expressed satisfaction with, and recognized the benefits of, learning by means of FCI. In addition, their learning performance, attitudes, and views on peer interaction were considerably improved, while they demonstrated maximum collaboration, motivation, engagement, and responsibility. Moreover, they gained a number of necessary skills, including: (1) creativity; (2) decision-making; (3) thinking skills; (4) the ability to accept peers' advice; and (5) respecting others.

The following academic advantages can, therefore, be proposed, based on the relatively positive results of both the quantitative and qualitative data, for learners, teachers, and the teaching-learning process.

Firstly, the implementation of FCI encourages learners to: (1) achieve improved academic performance; (2) evoke high order thinking skills; (3) transfer their role from passive to active learners; (4) develop a sense of responsibility and professionalism; and (5) improve their attitudes towards, and perceptions of teaching-learning efficacy.

Secondly, FC is an innovative approach that assists teachers to: (1) customize authentic content and in-class activities to fit learners' preferences; (2) play the role of a guide, acting from the sidelines; (3) provide in-depth monitoring for students' performance; (4) gain better insights into learners' different learning styles; and (5) maximize the use of the most significant learning resource, i.e. time.

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Thirdly, this effective practical pedagogy: (1) creates an effective and interactive classroom environment; (2) transfers the teaching-learning process from a teacher-centered to a learner-centered approach; (3) addresses multiple learning and teaching styles; and (4) matches the expectations, interests, and needs of twenty-first century learners.

In light of the above, the current study has the potential to lay the foundation for future work on FC pedagogy, in order to promote its implementation. For example, similar studies could: (1) explore students' experiences in EFL FC in Saudi Arabia; (2) investigate the impact of flipping the EFL classroom to achieve active learning; and (3) undertake further exploration into the implications of factors such as a student's gender and grade on this pedagogical intervention.

LIMITATIONS OF THE STUDY

This study has resulted in a number of significant findings. However, the relatively small number of participants implies a need to exert caution when it comes to their potential generalizability. Moreover, the participants consisted exclusively of female students and therefore the potential impact of gender is beyond the scope of this current study.

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