

Efficiency of SCL Via Google Classroom on Female Pre-service Teachers' Teaching Readiness

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Abstract:

This study intends to examine the efficiency of student-centered learning (SCL) through Google classroom in enhancing the readiness of fourth stage females' pre-service teachers. The research employs a quasi-experimental design with a control and experimental group to compare the teaching readiness of participants before and after the intervention. The participants were 30 of fourth stage students at the University of Baghdad - College of Education for Women/the department of English and data were collected through observation checklist to assess their teaching experience and questionnaires to assess their perceptions towards using Google Classroom. Two sections were selected, C as a control group and D as the experimental one each with (15) participants. At the beginning of the experiment, both groups have been equalized in some variables, then all students have been tested by using observation checklist to measure their readiness. The researcher applied the students-centered learning in the class and electronically through google classroom on the experimental group. At the end of the experiment, the researcher retested students by observation checklist to measure their readiness to teach through structured visits at their schools observing their teaching with their real students. Then the researcher collected the students' perceptions towards using Google Classroom. The findings elucidated the positive impact of student-centered learning that can be obtained on Google classroom in comparison with the traditional methods being used. The results showed that students are highly motivated through the student-centered approach and it enriches their knowledge, autonomy, collaboration, engagement and experiences for future teaching as well as their readiness is highly advantageous with student centered learning than with the previous methods used.

Key words: efficiency, Google classroom, perceptions, pre-service teachers, student-centered learning, teaching readiness.

Introduction

One of the primary challenges that is presently being confronted is the pervasiveness of conventional approaches and methodologies that depend on memorization-based learning. Rather than employing traditional teacher-centered educational methods and strategies, it is advisable to prioritize engaging teaching methods that place students at the center, thereby activating their involvement in the learning process. Therefore, it is crucial to instruct students in these strategies (Şenol, et al., 2007). Student-centered learning (SCL) entails a pedagogical approach that redirects the instructional emphasis from the teacher to the student. The primary objective of this approach is to cultivate learner autonomy by entrusting the student with the task of acquiring knowledge and skills in a specific subject, while also assessing their performance against predetermined criteria (Jones, L. 2007). The pedagogical approach known as student-centered education prioritizes the cultivation of skills and practices that foster self-reliance and the pursuit of knowledge throughout one's lifetime (Young, et al., 2007:5). Student-centered learning places a high emphasis on addressing the needs of students and valuing their feedback. According to Hannafin and Hannafin (2010), in a student-centered classroom, students possess autonomy in their educational pursuits and are responsible for determining the what, when, where, and how of their study activities. Research suggests that students are more likely to acquire knowledge and retain it over an extended period when they actively participate in the learning process. As a result, the researcher implemented a student-centered learning (SCL) approach in order to motivate and empower students to actively engage in their educational pursuits (Scott, et al., 1997). It is anticipated that through enrollment in this course, individuals will acquire enhanced skills and knowledge necessary for successful engagement in educational settings.

The problem of the study

Students who study English as a foreign language for three years at English departments seem to have certain problems as follows:

- 1- Lack the motivation to teach due to lack of their autonomy, collaboration, engagement in learning English and continue to make same elementary mistakes in pronunciation, spelling, morphology, and syntax.
- 2- Despite the increasing adoption of digital tools in educational settings there is limited empirical evidence regarding their effectiveness in preparing pre-service teachers. They continue to be unable to express themselves

fluently and effectively when discussing either academic or everyday topics (Mukattash, 1983:169). Students and after three years of study, are not confident enough to go schools for teaching. According to Wahba, English learners have challenges as well, the majority of which stem from linguistic disparities between English and Arabic, namely in terms of pronunciation (1998: 32). In addition, the incapacity to freely converse in the target language is identified by Rababah (2001) as a key obstacle for Arab learners of English as a foreign language. This could be a result of the methods of language instruction, or the learning environment. The researcher with her own experience in teaching fourth stage EFL female students found that they are still hesitant and unconfident in themselves. They show their fears and lack readiness to teach.

Significance of the study

It provides insights into the effectiveness of digital learning tools and students centered learning in teacher education. The researcher believes that applying the students'-centered learning as a teaching method will helps them to facilitate every aspect of the class, improving their motivation to learn and providing them with the necessary skills, courage, and self-confidence to run their own classrooms successfully through involving them with appropriate activities and engaging them throughout the whole process of teaching through Google Classroom. It highlights the importance of SCL in enhancing future educators' readiness.

Also, the findings may guide educational institutions in implementing best practices for integrating technology into teacher training programme.

Objectives

The present study aims to:

- 1- Evaluate the efficiency of student-centered learning via Google Classroom in improving the readiness of female pre-service teachers.
- 2- Understand participants' perceptions of using Google Classroom as a learning tool.

Hypotheses

The present study hypothesized that:

- 1- SCL via Google Classroom significantly enhances the readiness of female pre-service teachers compared to traditional teaching methods.
- 2- Female pre-service teachers who engage in student-centered learning through Google Classroom will report higher levels of autonomy and collaboration than those who do not.

Questions

The present study will try to answer the following question:

- How does the use of student-centered learning through Google Classroom affect female pre-service teachers' readiness for teaching?
- To what extent does SCL through Google Classroom enhance engagement, autonomy and collaboration among female pre-service teachers?

Limits

The present study is limited to:

- 1- Using Student-centered learning approach through Google Classroom.
- 2- Fourth year EFL female pre-service teachers in English department in the college of Education for Women at Baghdad University.
- 2- Practicum course.
- 3- The first and second terms from academic year 2021-2022.

Literature Review

Student Centered Learning SCL

The shift towards student-centered learning has been influenced by the work of theorists such as John Dewey, Jean Piaget, and Lev Vygotsky, whose collective research focuses on how students learn. Carl Rogers' beliefs on how an individual develops also made a mark on the direction that "student-centered" education eventually took. It was Rogers who stated, "Self-discovery is the only learning that significantly changes behavior [and education]." In addition to her contributions to the field of education, Maria Montessori was an early proponent of the student-centered approach, which emphasizes the importance of learners' active participation in their own education from the earliest ages (Kraft, R.1994:41). Self-determination theory examines how much an individual's actions are driven by internal forces. Learners are more likely to put in the effort required to learn when they can evaluate their progress (Ryan & Deci,2017).

Distinction between Teacher-Centered and Student-Centered Learning

The distinction between a teacher-centered classroom and a student-centered classroom is further exemplified by the teacher's function as a facilitator rather than an instructor. In accordance with Rogers' assertion that significant learning is attained by active engagement, the primary responsibility of an educator within the educational setting is to facilitate students in developing their individualized understandings of the subject matter (Kraft, 1994:41). The engagement of peers in collaborative thinking can result in a substantial amount of data due to the wide range of viewpoints and experiences that are

contributed. Enhanced knowledge acquisition and learning outcomes are facilitated when an educator adeptly aligns their instructional approach with the cognitive and developmental level of individual students, so benefiting not just the targeted student but also the broader class cohort. According to Lev Vygotsky's theory of the zone of proximal development (ZPD), the incorporation of imitation plays a crucial role in the process of learning. Scaffolding, as proposed by Vygotsky (1980;89), plays a crucial role in the development of autonomous thinking skills.

Challenges of Implementing Student Centered Strategies

Kumar (2016) conducts research that centers on the primary challenges encountered by educators and learners in the adoption of a student-centered pedagogical approach inside English language classrooms. The findings of this study indicate that a significant proportion of students exhibited a lack of engagement towards student-centered learning, which can be attributed to several factors. These factors encompassed feelings of apprehension, limited interest and confidence, the impact of mother tongue, insufficient enthusiasm from both teachers and students, the size of the class, and students' unease when collaborating with peers. Furthermore, the examination of interviews conducted with teachers unveiled those students' demonstrated deficiencies in their proficiency to articulate their thoughts in the English language. Additionally, they displayed disciplinary challenges when participating in diverse student-centered instructional approaches.

The success of both educators and their students depends on administrators' commitment to student-centered management and the provision of appropriate resources for this purpose. Given the wide variety of students' backgrounds, interests, and abilities, teachers must employ differentiated, student-centered classroom management tactics to help every student succeed. Management strategies that are concentrated on the teacher, such as classroom-wide behavior management systems or scripted classes, fail to cater to students' individual requirements.

The Importance of Student-Centered Learning in Motivation

Effective teaching is beneficial for all students, no matter their specific requirements for success (Stuart, 1992:26-56). Learners' motivation and retention improve when they have a voice in the curriculum development and are treated as equal partners (McCombs & Whistler, 1997). Furthermore, when students take on new duties and succeed at them, they build confidence and a positive sense of themselves, and they are more motivated to continue

working toward their goals (Aaronsohn,1996). Student-centered learning (SCL) has been shown to enhance self-confidence since students have the opportunity to teach others the knowledge they have acquired. This active engagement in teaching reinforces their own learning, resulting in a more comprehensive understanding compared to passive methods such as listening or reading alone.

Implementation of Student-Centered Approach

Using student-centered learning strategies never eliminates the need for instruction. Therefore, the most sustainable shifts in pedagogy are likely to occur through gradual, deliberate, and reflective shifts toward student-centered learning practices.

Faculty members must be willing to emphasize learning through sharing. This can be accomplished methodically through planning and the application of gradual steps (Barr & Tagg ,1995:12-25).

Start with think-pair-share (Lynam, 1981), quick-thinks (Johnston & Cooper 1997:27), and minute papers for informal cooperative learning among students and teachers (Angelo & Cross, 1993; Stead, 2005). Here are some potential routes to take:

They might consider implementing a few informal cooperative learning structures Cooper & Robinson (2000:17-24) to engage their students. The following steps were adopted to implement the student-centered learning in this study.

- Think-Pair-Share: Make students ponder about a question on their own for a minute, then have them talk to a colleague about their thoughts, and finally a few students will present their combined thoughts (Lynam,1981).
- Problem solving: pose a question to the students. To solve a problem, the first student writes down and discusses the solution with the next, and so on.
- Minute Papers: At the conclusion of a lecture segment, have students respond to two questions. The first question focuses on what the respondent deemed to be the clearest or most significant. The second question concerns what they continue to have concerns about? (Stead,2005:118-131).
- Student Presentations and Projects: Teachers can get their students more involved in learning by having them conduct research and write up their findings as part of assigned projects and reports.
- Learning Cycle Instructional Models: Teachers can employ several learning cycles to guide students through a sequence of inquiries into the course material (such as "Why," "what," "how," and "what if?"). Students

follow this model as it takes them through active participation, discovery, explanation, elaboration, and assessment (Harb, et al.1991:11-23).

- According to Allen and Tanner (2005:262-268), Peer-Led Team Learning (PLTL) involves the utilization of undergraduate students as facilitators in cooperative learning groups within a particular course. The primary objective of this approach is to enhance problem-solving abilities, foster inquiry, and promote discovery among the participating students.
- Project-based learning (PBL) involves the use of a limited number of methodologies, which subsequently necessitates the implementation of a more comprehensive project, such as PBL. The pedagogical approach under consideration is one that prioritizes student-centered learning, with an emphasis on collaborative activities and discourse aimed at enhancing their comprehension of the subject matter being instructed. Students acquire knowledge in a particular field by the process of exploring and addressing intricate inquiries, challenges, or problems over a prolonged duration. Problem-based learning (PBL) is a pedagogical approach that encompasses active learning and is characterized by the integration of knowing and doing, as defined by inquiry-based learning. Proponents of project-based learning point to a wide range of advantages associated with using PBL in the classroom, such as higher leadership and teamwork abilities, more effective communication, and a more creative learning environment (Blumenfeld et al., 1991:369-398).

The Role of Students in Student Centered Approach

Cannon & Newble (2000) highlight two key roles for students in SCL: responsibility and activity. In addition, there are some abilities that students should execute and certain opportunities that they should have in a student-centered learning process (Lemelle, 1995). Learners are expected to be able to:

- Make connections between different parts of a lesson's material.
- Create a strategy for self-directed study.
- Evaluate their progress and the outcomes of their learning.
- Relate what they already know to the material being taught and discovered.
- Construct the lesson material in order to learn on their own.
- Decide which pieces of information are crucial and which ones aren't.

- Learn how they learn best in a student-centered environment through Google Classroom. However, it's worth noting that in a student-centered classroom, students may learn the aforementioned abilities.

Application of Student-Centered Learning to Higher Education

Evidence supports the usefulness of student-centered classrooms in the academic setting (Wright, G. B., 2011:93-94). In the context of higher education, they have been defined as an attitude toward learning and a way of life at a specific school, informed by and based on constructivist theories of education. These schools emphasize the development of transferable skills like problem-solving, critical-thinking, and reflective-thinking through the use of innovative teaching methods that encourage learning through communication with teachers and other students (Hoidn, 2017). It emphasizes the significance of aligning student evaluation methods with this participatory approach.

To promote student-centered learning throughout the entire university, the following strategies will be implemented (Kember, 2009:10):

- 1- Analysis of good practice by award-winning teachers across all faculties to demonstrate how they utilized good practice.
- 2- New junior teachers are required to complete a training program that promotes student-centered learning.
- 3- An effort to enhance the quality of the program as a whole by polling its participants to determine what aspects worked well and what could be tweaked.
- 4- As a method of quality control, program evaluations are being put into place (Ibid:12)

Student-Centered Assessment

Assessment is a key area where student-centered and teacher-centered approaches to education diverge (Crumly, 2014:26). In contrast to traditional approaches to education, which place more emphasis on summative evaluations, student-centered approaches emphasize formative evaluations. Participatory assessment is important to student-centered learning (Jahnke, 2012:182). This means that students have agency about the kind of assessment they do. The effectiveness of student-centered approaches depends on the development of assessment that encourages and facilitates learning. Students, hone their skills in areas like problem-solving, critical thinking, and design in order to enhance their transfer of learning to new contexts and application of learning to open-ended tasks. McCombs and

Whistler (1997) write that in a student-centered classroom, "students are viewed as co-creators in the learning process, as unique individuals whose ideas and challenges need attention and treatment." Learning settings that put students at the center of the process acknowledge the importance of students' existing knowledge and make efforts to construct on that foundation. Evaluation and judgment at the end of a learning process that has been centered on the student includes possibilities for feedback and improvement at multiple points in the process. Summative assessment is used to get a final evaluation and judgment, while formative assessment is used for continuous feedback and improvement. According to Nicol and Macfarlane-Dick (2006:199-218), formative assessment can foster growth in skills and dispositions that are fundamental to lifelong learning.

Google Classroom in teaching

Research indicates that platforms like Google Classroom facilitate effective communication and collaboration, essential for creating an engaging learning environment (ERIC, 2021). Google Classroom is a learning management system created by Google to facilitate academic activities and provide a platform for blended learning. This program is highly user-friendly, occupies minimal storage space on the smartphone's memory, and facilitates effective lesson management for both teachers and students. Users have the ability to establish a virtual classroom where they can operate in a manner similar to a traditional classroom, but also saving time, money, and physical space. According to Iftakhar (2016: 12-13), Google Classroom enables teachers to allocate more time to their students and reduce the amount of time spent on administrative tasks. Furthermore, it has undergone improvements to enhance its functionality.

According to Janzen (2017: 20), Google Classroom is a user-friendly application that is designed to simplify the instructional interface and options for delivering and tracking assignments. It also simplifies communication with the entire course or individuals through announcements, email, and push notifications. Moreover, studies have shown that pre-service teachers benefit from interactive digital platforms that enhance their pedagogical skills and readiness for teaching (McCombs & Whistler, 1997).

Methodology

Research Design

A quasi-experimental design was employed, involving two groups: an experimental group using Google Classroom for SCL and a control group receiving traditional instruction.

Population

It was already established that a population consists of any set of people sharing the trait under investigation (Fraenkel and Wallen 2008:10). Students in their fourth year of college at the English Department/College of Education for Women/University of Baghdad make up the study's population. There is a total of (180) female students, split among six groups.

Sample

A research sample represents a subset of the entire population. Two subsets of the population were chosen at random to serve as the study's sample. Thirty different students make up the sample. There is a total of (30) students split between groups C and D. As can be seen in table (1), groups C and D represent the control and experimental groups, respectively.

TABLE 1. Sample of the Study

Sample's group	Student's Number
Control (C)	15
Experimental (D)	15

Equivalence of the Sample Subjects

Age of Students :

Comparing the experimental and control groups in terms of age is shown in Table 2.

TABLE 2. Groups' statistics in Age Variable

The group	N	Mean	Std. Deviation	Calculated T-Value	tabulated T-value	Degree of Freedom	Level of Significance at 0.05
Control	15	1.7148	4.83138	0.354	1.97	1.95	Not Significant
Experimental	15	1.7062	11.0120				

There were no statistically significant differences in age variable between the experimental and control groups, indicating that they are comparable.

The Parents' Level of Education

Mother's Academic Achievement :

Students in both groups have mothers with similar levels of education, as shown in Table 3.

TABLE 3. Equivalence of Mothers' Academic Level of Education

Groups	Primary/ Secondary	Intermediate/ Diploma	Bachelor/ postgraduate	Total	The Value of Chi-square			
					Calculated	Tabulated	Level at 0.05	Degree of Freedom
Control: count Expected count	3 3.4	7 6.5	5 5.1	15 15.0	0.276	5.99	Not significant	2
Experimental: count Expected count	2 2.8	8 8.1	5 4.1	15 15.0				
Total: count Expected count	5 6.2	15 14.6	10 9.2	30 30.0				

The researcher utilized the chi-square test to assess the presence of statistically significant differences in the academic success of mothers between the treatment and control groups. Given that the computed chi-square value of 0.276 is lower than the critical value of 5.99 at a significance level of 0.05 and with 2 degrees of freedom, it can be concluded that there is no statistically significant disparity between the experimental and control groups in terms of mothers' academic achievement.

Father's Academic Achievement :

Both groups of students have fathers with similar levels of education, as shown in Table 4.

TABLE 4. Equivalence of Fathers' Academic Level of Education

Groups	Primary/ Secondary	Intermediate/ Diploma	Bachelor/ postgraduate	Total	The Value of Chi-square			
					Calculated	Tabulated	Level at 0.05	Degree of Freedom
Control: count Expected count	2 2.6	4 4.3	9 8.1	15 15.0	2.119	6.52	Not significant	2
Experimental: count Expected count	3 2.9	6 5.5	6 6.6	15 15.0				
Total: count Expected count	5 5.5	10 9.8	15 14.7	30 30.0				

The chi-square test was conducted to ascertain the presence of statistically significant differences in the academic achievement of fathers between the treatment and control groups. Based on the obtained chi-square value of 2.119, which is lower than the critical chi-square value of 6.52 at a significance level of 0.05 and with 2 degrees of freedom, it can be concluded that there is no statistically significant disparity in the educational achievement of fathers between the experimental and control groups.

Instruments

This study involved a semester-long implementation of Google Classroom as a primary learning platform for female pre-service teachers enrolled in a teacher education program. The researcher used the student-centered learning in teaching through Google Classroom. Data were collected using both an evaluation checklist adopted to measure various dimensions of teaching readiness, including: knowledge, instructional planning, instructional assessment, ...etc. and a questionnaire about perceptions towards technology integration.

The teaching readiness evaluation checklist was used in this study and applied twice before and after the experiment for the control as well as the experiential group. The Georgia TKES TAPS Standards and Rubrics which consists of 10 performance standards adopted from Georgia's Teacher Keys Effectiveness System (2016) is used as a model evaluation checklist for this study to investigate the teaching readiness of fourth female students. Also, a

questionnaire consisting of 15 questions was constructed and validated by experts and given to the 30 female pre-service teachers. Fifteen Likert scale items in the questionnaire were adopted from (Ong et al., 2021) to obtain post-intervention perceptions among female pre-service teachers towards using Google Classroom in the learning process. For each item, the possible responses were 1 (Strongly Disagree), 2 (Disagree), 3 (Neutral), 4 (Agree), and 5 (Strongly Agree). Responses to each item in the questionnaire were analyzed to obtain the mean and standard deviation. It is used after the experiment. 30 students constructing two groups of fourth stage pre-service female students at the English Department- College of Education for Women, University of Baghdad participated in this evaluation process.

Experiment

At the beginning of the experiment which starts on October, 2022 both groups have been equalized in such variables such as: their ages and the parents' level of education. All students have been engaged in pre-evaluation observation checklist to measure their readiness to teach through observing their teaching physically in their college classes in front of their peers during the first course of study at fourth level. The researcher practiced the student-centered learning method through Google Classroom as well as inside their physical classes to the experimental group for three months of the first course during 2022-2023 while she practiced the traditional teaching methods on the control group. The researcher reapplied the teaching readiness observation checklist by observing students' actual teaching in their classes at schools during the application period which lasted for 45 days on March, 2023. Then the researcher credited an electronic questionnaire form of perceptions assessment to investigate students' perceptions towards using Google Classroom in the learning.

Data Analysis

The obtained data as a result of the practice were analyzed through the statistical SPSS Package program. The content validity is measured through the Cronbach's Alpha factor in the SPSS Statistical program. The below tables indicate the score of validity and reliability for both (control and experimental) groups.

TABLE 5. Reliability Statistics for the checklist applied on the Control Group

Cronbach's Alpha	Number of items
.810	10

TABLE 6. Reliability Statistics for the checklist applied on the Experimental Group

Cronbach's Alpha	Number of items
.587	10

The content validity of the experiential group scored .587 which shows an acceptable level of reliability.

The edTPA model was used by the researcher with the two groups (the control and experimental ones). The edTPA is shorthand for the Educator Professional Practices Assessment, which is given to aspiring educators before they enter the profession. There has been a recent shift in emphasis on this in academic curriculum development at the university level. As part of their final requirements for teacher certification, future educators produce edTPA during their student teaching semester. The edTPA consists of 10 performance standards with four levels for each standard. Scores of participants are statistically recorded in Table-7 and Table-8.

TABLE 7. Illustrates the Responses of Control Group to edTPA checklist (Readiness Tool)

Performance Standard Number	Specifications	Level	Frequency	Percentage
1- Professional Knowledge	The educator exhibits a comprehensive grasp of the curriculum, subject matter, pedagogical expertise, and student requirements through the provision of pertinent learning opportunities.	1	6	40
		2	9	60
2- Instructional Planning	The instructor employs state and local school system curricula and standards, as well as effective tactics, resources, and data, in order to cater to the diverse requirements of all pupils.	1	2	13.3
		2	8	53.3
		3	4	26.7
		4	1	6.7
3- Instructional Strategies	The instructor facilitates student learning by employing evidence-based teaching	1	3	20
		2	9	60
		3	3	

	techniques that are pertinent to the subject matter, thereby encouraging active participation and enabling students to acquire essential knowledge and skills.			20
4- Differentiated Instruction	The instructor effectively engages in both challenging and supporting each student's learning process by offering suitable educational material and fostering the development of abilities that cater to individual learning variations.	1	1	6.7
		2	9	60
		3	4	26.7
		4	1	6.7
5- Assessment Strategies	The educator employs a methodical approach in selecting a diverse range of assessment procedures and instruments, including diagnostic, formative, and summative assessments, which are both valid and suitable for the specific topic being taught and the student demographic being served.	1	5	33.3
		2	5	33.3
		3	3	20
		4	2	13.3
6- Assessment Uses	The educator employs a systematic approach to collect, analyse, and utilise pertinent data in order to assess the advancement of students. This information is then utilised to drive the selection of instructional content and delivery techniques, as well as to offer timely and constructive feedback to both students and parents.	1	3	20
		2	9	60
		3	2	13.3
		4	1	6.7
7- Positive Learning Environment	The educator establishes a meticulously organised, secure, and disciplined setting that fosters an optimal learning atmosphere and promotes reverence for all individuals.	1	1	6.7
		2	9	60
		3	5	33.3
8- Academically Challenging Environment	The instructor establishes an educational setting that prioritises student-centeredness and fosters a scholarly atmosphere, facilitating the	1	4	26.7
		2	6	40
		3	4	26.7
		4	1	6.7

	attainment of advanced levels of teaching and learning, while encouraging students to become self-directed in their pursuit of knowledge.			
9- Professionalism	The teacher demonstrates a strong dedication to upholding professional ethics and aligning with the mission of the schools. Additionally, they actively engage in professional development opportunities to enhance their ability to facilitate student learning. Furthermore, the teacher actively contributes to the field of education, thereby making valuable contributions to the profession.	1	6	40
		2	5	33.3
		3	4	26.7
10- Communication	The teacher demonstrates strong communication skills with learners, parents or guardians, district and school administrators, and other stakeholders, thereby contributing to the improvement of student learning outcomes.	1	4	26.7
		2	5	33.3
		3	4	26.7
		4	2	13.3

In the performance standard 1, the highest score is 60 for level 2 as this level indicates that “the teacher inconsistently demonstrates understanding of curriculum, subject content, pedagogical knowledge, and students’ needs”. This reveals that the fourth-year students lack the sufficient experiences to be teachers.

Table-7 showed that the highest score of participants’ responses goes to level 2 with an average of percentage from 33.3% to 60% of the answers to the 10 items of the test. Level 2 of each performance standard states the teacher’s inconsistently dealing with the content, plans, strategies and methodology of teaching. The high score of students which have been put in level 2 reveals that the control group who are taught with the traditional methods on Google classroom lack the consistency of demonstrating the classroom management which on the other hand expresses their attitude toward being ready to teach. With the experimental group, the scores are quietly different. The researcher practiced the student-centered method on the experimental group through

Google Classroom. In table-8, responses of participants explain the impact of student-centered Learning.

TABLE 8. Illustrates the Responses of Experimental Group to edTPA checklist (Readiness Tool)

Performance Standard Number	Level	Frequency	Percentage
1- Professional Knowledge	3	1	6.7
	4	14	93.3
2- Instructional Planning	3	7	45
	4	8	55
3- Instructional Strategies	2	1	6.7
	3	5	33.3
	4	9	60
4- Differentiated Instruction	1	2	13.3
	3	6	40
	4	7	46.7
5- Assessment Strategies	2	1	6.7
	4	14	93.3
6- Assessment Uses	1	1	6.7
	3	5	33.3
	4	9	60
7- Positive Learning Environment	1	1	6.7
	3	4	26.7
	4	10	66.6
8- Academically Challenging Environment	3	5	33.3
	4	10	66.7
9- Professionalism	2	1	6.7
	3	7	46.7
	4	7	46.7
10- Communication	2	2	13.3
	3	3	20
	4	10	66.7

A great difference can be observed with the scores of the experimental group through their responses to the readiness test. It can be noticed that the high score recorded is between 46.7% to 93.3 % to level 4 out of the total answers. In level 4, the teacher serves as a role model for teacher leaders and always seeks to use multiple data and resources and concerned with the metacognitive skills of his learners. So forth, the participants responses that

are majorly went to level 4 show how influential the student-centered learning is in creating better educational technique and enhancing students' readiness to be teachers. This finding answers the first question positively in this research which says: How does the use of student-centered learning through Google Classroom affect female pre-service teachers' readiness for teaching? And the first hypothesis which states: "SCL via Google Classroom significantly enhances the readiness of female pre-service teachers compared to traditional teaching methods" is accepted.

A questionnaire consisting of 15 questions was constructed and validated by experts and given to the experimental group. Fifteen Likert scale items in the questionnaire were applied to obtain post-intervention perceptions towards using Google Classroom in the learning process. For each item, the possible responses were 1 (Strongly Disagree), 2 (Disagree), 3 (Neutral), 4 (Agree), and 5 (Strongly Agree). Responses to each item in the questionnaire were analysed to obtain the mean and standard deviation.

TABLE 9. Perceptions' Questionnaire

No.	Item	Strongly disagree	Disagree	Neutral	agree	Strongly agree
1	I can enter the Google Classroom easily to attend the learning process.					
2	I am fully engaged in the learning process when using Google Classroom.					
3	Google Classroom enhances collaboration.					
4	I possess sufficient computer skills to attend Google Classroom in my process of learning.					
5	I feel comfortable to interact with my friends and teacher in the Google Classroom.					
6	Autonomy is supported when using Google Classroom.					
7	Teachers give full attention to me when attending Google Classroom.					
8	Discussion is clearly heard and understood in the Google Classroom.					
9	There is no interruption when Google Classroom is used during the learning process.					
10	Google Classroom allows me to submit my assignments easily and conveniently.					
11	References and learning materials posted can easily be accessed by me in the Google					

	Classroom					
12	In the Google Classroom, I do not need to print or photocopy my learning material. It is paperless.					
13	Time and cost are more required through Google Classroom.					
14	Google Classroom provides efficiency and effectiveness in the process of teaching and learning.					
15	Google Classroom can be held anywhere and anytime.					

The students strongly agreed that they are fully engaged in the learning process when using Google Classroom (Mean score=4.48). They strongly agreed that autonomy is supported when using Google Classroom except two students, who strongly disagreed (Mean score=4.26). They agreed that Google Classroom enhances collaboration when interacting with their friends and teacher in the Google Classroom (Mean score=4.17). They agree that they can enter Google Classroom easily to attend the learning process, except for two students, who disagreed with this statement (Mean score=4.10). Finally, all the pre-service teachers strongly disagreed that they possess sufficient computer skills to attend Google Classroom in their process of learning (Mean score=3.14). These findings answered the second question of this study: To what extent does SCL through Google Classroom enhance engagement, autonomy and collaboration among female pre-service teachers? And the second hypothesis which states: “Female pre-service teachers who practiced student-centered learning through Google Classroom will report higher levels of autonomy, engagement and collaboration than those who do not” is accepted.

Conclusion

Student-centered learning is an instructional approach that redirects the emphasis of teaching from the teacher to the learner. It necessitates that students actively engage and take responsibility for their own learning. This approach prioritizes the unique interests, abilities, and learning styles of each student, with the teacher assuming the role of a facilitator who guides individual learning rather than instructing the entire class collectively. Consequently, when students are provided with opportunities to assess their own learning, it serves as a motivating factor. Meaningful learning is achieved through practical application. Student-centered learning is an

educational approach that prioritizes the development of skills and practices necessary for lifelong learning and independence. This approach has been found to significantly enhance students' self-confidence, personal growth, it enriches their knowledge, autonomy, collaboration, engagement which are crucial attributes for their future roles as educators. It is imperative that aspiring teachers possess a high level of confidence, strength, skillfulness, and competence in order to effectively teach and embark on their professional journey. Throughout the three months application of student-centered method on the experimental group and using the readiness test, edTPA, it can be concluded that students are highly motivated through the student-centered approach through Google Classroom and it enriches their knowledge and experiences in future teaching. The readiness to teach of fourth stage students is highly advantageous with student centered approach than with the traditional methods. Google Classroom improves the pre-service teacher's ability to use technology wisely, especially for the learning process, saving time, being environmentally friendly, overcoming the distance, increasing cooperation among students and secure document storage. It is suggested that this survey can be conducted among the primary as well as secondary school students in learning in the future. Besides, this survey can also be conducted at the private secondary schools and the international primary and secondary schools in Iraq. Based on the findings and discussion, pre-service teachers seem to have positive perception towards using Google Classroom in their learning process. They do agree that Google Classroom can help them in their learning process.

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كفاءة التعلم المتمركز حول الطالب عبر كوكل كلاسروم على جاهزية المدرسات قبل الخدمة للتدريس

المستخلص:

تهدف هذه الدراسة إلى اختبار كفاءة التعلم المتمركز حول الطالب (SCL) من خلال كوكل كلاسروم على تحسين الاستعداد للتدريس لدى طالبات المرحلة الرابعة. يستلزم التعلم المتمركز حول الطالب (SCL) منهجاً تربوياً يعيد توجيه التركيز التعليمي من المعلم إلى الطالب. الهدف الأساسي من هذا النهج هو تعزيز استقلالية المتعلم من خلال تكليف الطالب بمهمة اكتساب المعرفة والمهارات في موضوع معين، مع تقييم أدائه أيضاً وفقاً لمعايير محددة مسبقاً (Jones, L. 2007). يستخدم البحث تصميم شبه تجريبي مع مجموعة ضابطة وتجريبية لمقارنة الاستعداد التدريسي للمشاركين قبل وبعد التجربة. بلغ عدد المشاركين 30 طالبة من طالبات المرحلة الرابعة في جامعة بغداد – كلية التربية للبنات / قسم اللغة الإنجليزية وتم جمع البيانات من خلال قائمة الملاحظة لتقييم خبراتهم التعليمية والاستبيانات لتقييم تصوراتهم نحو استخدام Google Classroom. تم اختيار مجموعتين: (C) كمجموعة ضابطة و (D) كمجموعة تجريبية لكل منهما (15) مشاركاً. في بداية التجربة تم تكافؤ المجموعتين في بعض المتغيرات، ثم تم إشراك جميع الطلاب في مقياس الملاحظة القبلي لقياس مدى استعدادهم للتدريس. وقد طبقت الباحثة التعلم المتمركز حول الطالب في الصف والكترونياً من خلال Google Classroom على المجموعة التجريبية. وفي نهاية التجربة أعادت الباحثة تطبيق مقياس الملاحظة البعدي لقياس مدى استعدادهم للتدريس من خلال زيارتهم في مدارسهم ومراقبة تدريسهم مع طلابهم الحقيقيين. وقد أوضحت النتائج الأثر الإيجابي للتعلم المتمركز حول الطالب الذي يمكن الحصول عليه من خلال Google Classroom مقارنة بالطرق التقليدية المستخدمة. أظهرت النتائج أن الطلاب لديهم تحفيز كبير من خلال النهج المتمركز حول الطالب ويثري معارفهم والاستقلالية والتعاون والمشاركة وخبراتهم للتدريس المستقبلي، كما أن استعدادهم مفيد للغاية مع التعلم المتمركز حول الطالب مقارنة بالطرق السابقة المستخدمة.

الكلمات المفتاحية: الكفاءة، كوكل كلاسروم، التصورات، معلمي ما قبل الخدمة، التعلم المتمركز حول الطالب، الاستعداد للتدريس.