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Evaluating the Effectiveness of a Palestinian Teacher Training Program through the Stalling Classroom Observation Method

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Abstract: Objective: This study aimed at evaluating the impact of training Palestinian teachers who teach in the early basic stage (Grades from 1 to 4) through Teacher Education Improvement - After Funding (TEIP-AF) project. Methodology: he studies followed a descriptive and experimental methodology. It utilized the Stalling Observation system to study various types of classroom interactions and the Palestinian Teacher Professional Development Index (PTPDI) to assess the competences teachers gained after training on the TEIP-AF project. The study population consisted of all teachers who were qualified in accordance with the teacher education strategy in Palestine and. The study sample was randomly selected from the study population and consisted of 31 male and female teachers who were participated in (TEIP-AF) in the academic year (2018/2019), and 31 teachers who were not involved in (TEIP-AF) training. Result: The results showed that teachers' teaching practices were not affected by (TEIP-AF) training activities except for one practice which was using the assessment outcomes to inform instructional planning. Recommendations: 1) Acknowledging that each teacher possesses a distinct teaching philosophy influencing their instructional methods, it is imperative that upcoming in-service training initiatives incorporate elements aimed at evolving teaching philosophies and styles within their training exercises. 2) It is important to perform follow-up evaluation studies to learn more about the viability of in-service teacher preparation programs' impacts. Future initiatives for in-service teacher training should be better informed by evaluation results. 3) Linking the evaluation results with an advanced program of teacher incentives in order to reinforce teachers delivering their teaching in accordance with the requirements of the in-service teacher training programs.

Keywords: Stalling Classroom Observation System, Teacher Education, Assessing Professional Training Programs, TEIP-AF.

تقييم فعالية برنامج تدريب المعلمين الفلسطيني من خلال نظام ستولينج للملاحظة الصفية

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الملخص: الهدف: هدفت هذه الدراسة إلى تقييم تأثير تدريب المعلمين الفلسطينيين الذين يدرّسون في المرحلة الأساسية المبكرة (من الصف الأول إلى الصف الرابع) من خلال مشروع تحسين التعليم للمعلمين - بعد التمويل(TEIP-AF) . المنهجية: اتبعت الدراسة منهجية وصفية وتجريبية، واستخدمت نظام ملاحظة ستالينج لدراسة أنواع مختلفة من التفاعلات الصفية ومؤشر تطوير المهني للمعلمين الفلسطينيين (PTPDI) لتقييم الكفاءات التي اكتسبها المعلمون بعد التدريب على مشروع TEIP-AF، وتكونت عينة الدراسة من جميع المعلمين المؤهلين وفقًا لاستراتيجية تعليم المعلمين في فلسطين، وتم اختيار العينة عشوائيًا من هذه المجموعة، وشملت 31 معلمًا ومعلمة شاركوا في مشروع TEIP-AF في العام الدراسي (2019/2018)، و31 معلمًا لم يشاركوا في تدريب. النتائج: أظهرت النتائج أن ممارسات التدريس لدى المعلمين لم تتأثر بأنشطة تدريب TEIP-AF باستثناء ممارسة واحدة وهي استخدام نتائج التقييم في توجيه التخطيط التعليمي. التوصيات: 1) مع الاعتراف بأن كل معلم يمتلك فلسفة تعليمية مميزة تؤثر على طرقه في التدريس، من الضروري أن تشمل المبادرات القادمة للتدريب أثناء الخدمة عناصر تهدف إلى تطوير الفلسفات والأساليب التعليمية ضمن تمارين التدريب الخاصة بها. 2) من المهم إجراء دراسات تقييم متابعة للتعرف على مدى فعالية تأثير برامج إعداد المعلمين أثناء الخدمة. يجب أن تكون المبادرات المستقبلية لتدريب المعلمين أثناء الخدمة مستندة بشكل أفضل إلى نتائج التقييم. 3) ربط نتائج التقييم ببرنامج متقدم لتحفيز المعلمين من أجل تعزيز تقديمهم للتدريس بما يتماشى مع متطلبات برامج تدريب المعلمين أثناء الخدمة.

الكلمات المفتاحية: نظام ملاحظة ستالينج، تعليم المعلمين، تقييم برامج التدريب المهني،.TEIP-AF

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Introduction

Educational systems play a key role in the development of the society (Yuliani & Hartanto, 2017). In order for these educational systems to be able to introduce those positive changes in its society; they should be best designed in a way that meets the society's contemporary needs (Jarvis, 2006). Teachers who are at the heart of any educational system must be enabled to maintain continuous professional development, therefor; educational systems should provide opportunities and avenues for teachers to advance their knowledge and skills throughout their career taking in to account recent advances and trends in education (Ayvaz-Tuncel & Çobanoğlu, 2018).

In-service teacher training programs are considered as a vehicle that should help teachers in advancing their knowledge and skills. In-service teacher training programs are considered as "the process by which teachers engage in further education or training to refresh or upgrade their professional knowledge, skills and practices during the course of their employment" (UNESCO International Institute for Educational Planning, n.d.)

Research emphasizes the importance of in-service teacher training in preparing teachers to use inquiry teaching and helping them reflect continuously on their teaching practice (Lund, 2018). Ayvaz-Tuncel and Çobanoğlu (2018), argue that in-service teacher training programs provide teachers with the competencies of lifelong learning, help them develop personally and socially, and help increase their knowledge and skills to deliver good instruction and hence increase school productivity. Omer (2014), insisted that in-service teacher training programs allow teachers to create flexible teaching environment, enable adaptation with their work situations, create teaching motivation that maximizes teachers' creativity, and help them develop new instructional skills making them more effective in the classroom.

As research asserts the positive effects of in-service teacher training programs on the quality of education (Hambacher & Ginn 2021; Casa, Cardetti & Gilson, 2020; van Katwijk, Jansen & van Veen, 2021; Nápoles & Silveira, 2019). Many in-service teacher training programs have emerged and have been introduced such as the Model Schools Network (MSN) which was launched in 2007 and funded by USAID (Ramahi, 2018), and substantial resources have been allocated for teachers' development (World Bank Group, n.d.).

Notwithstanding the importance of designing and introducing in-service teacher training programs, it is also of paramount importance to monitor and evaluate those programs on a regular basis by professional experts (Quilapio & Callo, 2022). Evaluating in-service teacher training programs will help improve current programs and the design of future programs that meet teachers' needs (Uysal, 2012), and maximize teachers' interactions qualities (Rouhani et al., 2021).

Although evaluating in-service training programs can shed light on their weaknesses and strengths, those evaluations together with long term assessments of their effects have rarely been conducted, and confronts many limitations such as the use of survey evaluations which is thought to be nonresponsive and lacks data dimensionality on one hand, whereas, on the other hand it is quiet challenging to assess the effectiveness of those programs' activities, as a consequence, evaluations of in-service teacher training programs may fall short of the rhetoric. (Uysal, 2012; Popova et al., 2016; Yolcu & Kartal, 2017; Thomas & Loadman, 2001).

Direct observation of teachers' practices provides more reliable measures and gives more perception of the quality of these practices (Schleicher, 2011). For the purpose of ongoing advancements to improve student outcomes, and to generate information that will inform teacher improvement plans, it is necessary to evaluate teachers' performance based on direct observation (Kane & Staiger, 2012; Cohen & Goldhaber, 2016). Evaluating teachers' practices through direct observation gains a lot of interest in in-service teacher evaluation (Putnam & Borko, 2000). Thus, this study is intended to evaluate the effectiveness of a Palestinian Teacher Training Program through the Stalling Classroom Observation Method.

In-service Teacher training in Palestine from 2013-2019

In 2008, the Ministry of Education in Palestine supported by UNESCO, had developed the Teacher Education Strategy in Palestine (TESP). Improving the quality of education was one objective of the TESP among other objectives that were identified to meet the need for developing the educational system in Palestine. According to the Palestinian MoEHE (2009), developing education in Palestine requires different approaches to teaching that shift it toward a student-centered learning, enabling students to confront future challenges. TESP described standards for training teachers both pre-service and in-service such as love and respect children and care for their well-being, value inclusive practice and the learning of all students, TESP also calls for adopting new approaches based on sociocultural constructivist theory to design in-service teacher training programs for teachers who are identified as "educationally unqualified or under-qualified in their academic and/or professional teaching qualifications" (MoEHE 2008: 31).

As part of the (TESP) the World Bank funded a Palestinian Teacher Education Improvement Project (TEIP) that targets educationally unqualified or under-qualified teachers and train them to become more competent of delivering an integrated curriculum in grades 1-4 (World Bank, 2019).

The TEIP-AF training methodology

The training methodology of TEIP-AF required that targeted teachers train 320 training hours to complete six training modules, these modules were: the Introductory Module, Cross - Curricular Learning and Teaching Module, Special Education Needs and Inclusion Module, Science Module, Mathematics Module, Arabic Module. These modules cover content knowledge and pedagogical content knowledge that are essential for teaching grades from 1-4. These modules were designed to enhance teaching and learning in a student-centered environment. To bridge theory with practice three forms of training along the full training program were used. The first form of training was face to face meetings in which workshops were designed and delivered by university professors who work at the participating universities responsible of delivering the training, during these workshops teachers were introduced to the subject matter included in the modules. After attending the workshop, teachers were given tasks to be accomplished in their classes and their experiences on implementing the tasks were discussed in the learning cycles which were the second form of training. The third form of training offers teachers an electronic platform to continuously discuss their experience with their peers and university professors. To evaluate their training progress, teachers were asked to accomplish certain tasks such as creating and carrying out a lesson plan aimed at teaching a scientific concept through a learner-centered approach and all teachers were asked to conduct action research as a graduation project (MoEHE, 2019).

The Palestinian Teacher Professional Development Index

The Palestinian Ministry of Education adopted the concept of competence proposed by Hoskins and Crick (2010), which refers to effective action's individuals produced due to a complex interaction between knowledge, skills, understanding, values,

attitudes and desire. This concept of competence encapsulates the evolution of the Palestinian Teacher Professional Development Index (PTPDI) which provides a competency scheme that all teachers in Palestine should resemble and demonstrate during the course of their career (MoEHE, 2018).

Burke et al. (2020), articulate that the design of the training modules used to train teachers through TEIP was focused on the competences described in the PTPDI. Three core competencies and sixteen sub-competencies were described in the PTPDI. The core competencies are: “Planning for teaching and learning, teaching to facilitate learning, Assessing and reporting learning progress and outcomes, each core competence has its related sub-competencies. The table below shows these core competencies and sub-competencies as describes in (MoEHE, 2018).

Table (1): Core competencies and sub-competencies as describes.

core competences	**Planning for teaching and learning**	**teaching to facilitate learning**	**Assessing and reporting learning progress and outcomes**
sub-competencies	Apply subject content knowledge (CK) and subject pedagogical content knowledge (PCK) to planning for learning and teaching	Establish and maintain safe, motivating, interactive learning environments.	Use assessment for learning strategies to monitor pupils’ progress, provide constructive feedback, which supports pupils to reflect upon and improve their learning outcomes.
	Apply knowledge and understanding of the Palestinian curriculum to planning for learning and teaching.	Apply knowledge and understanding of teaching strategies and resources to enable effective learning	Use the outcomes of formative and summative assessment to inform planning and target setting and improve the effectiveness of teaching and learning.
	Apply knowledge and understanding of pupils› characteristics and factors that promote effective learning when planning for learning and teaching.	. Apply knowledge and understanding of ICT and technology enhanced learning and teaching (TELT) approaches to facilitate pupils’ learning and support teachers’ professional roles.	Provide oral and written reports to parents, carers and other stakeholders on children’s performance, progress and achievements.
	Apply knowledge and understanding of factors that hinder effective learning when planning for learning and teaching.	Use a range of strategies to promote and maintain positive behaviour.	
	Apply knowledge of the relationship between planning, teaching, and assessment of learning experiences.	Apply knowledge and understanding of approaches to inclusive practice; common and less common additional and special needs; and differentiate learning to motivate and engage all pupils; and cater for their diverse needs.	
		Use appropriate strategies to provide opportunities for pupils to make meaningful connections among learning across the curriculum and to their daily lives.	
		Communicate clearly and effectively to facilitate teaching and pupils’ learning.	
		Engage in the process of lifelong learning through continuing professional development	

Literature review

In-service teacher training programs take the form of courses taught and activities carried out by working teachers in order to upgrade and deepen their pedagogical knowledge, teaching skills and practices, and professional competences (Wang et al., 2019). Therefore, in-service teacher training programs are considered as forms of adult education and training mainly targeting teachers who are already engaged in the tasks of teaching (White & Jarvis, 2012; Marshood & Masheikh, 2017).

In-service teacher training programs should be embraced as an ongoing process by which teachers’ needs are addressed and met in order to maximize their capacity in supporting their students and fulfilling schools’ vision as well, for this purpose to be achieved, in-service teacher training programs are designed to address the professional shortcomings of recruited teachers (Anggraini, 2019).

Campbell and Malkus (2011) argue that having a competent teacher impacts the educational outcomes of every phase of the curriculum they instruct, thus, effective in-service teacher training programs are considered cost-effective tools for professional development since they equip numerous teachers with good pedagogical practices, however, the sustained impact of in-service teacher training programs depends on teachers’ ability to continuously implement skills acquired through these programs.

Yolcu and Kartal (2017) indicated that it is important to evaluate in-service teacher training programs since -when it is well designed- it positively impacts students’ learning. Bouguen (2016) asserts that while short term evaluation of in-service teacher training programs provides valuable insights about the effectiveness of skills and competencies teachers acquired throughout the training, long-term evaluations provide insights into whether the effects of in-service teacher training programs persist over time.

Despite the importance of in-service teacher training programs in supporting teachers’ professional development and students’ learning, evidence from the educational literature shows that the effectiveness of such programs is till limited (Hall et al., 2020; Alagha, 2019). Ul Amin (2017) argues that there is strong evidence showing that evaluations of in-service teacher training programs failed to provide actual details about the effectiveness of these programs, therefore, new approaches of program evaluation need to be adopted. Fullan (2013) points out teachers usually resist educational reforms suggested by such programs, as they have grown familiar with their traditional instructional practices that form part of their everyday routine

because it necessitates extra work from teachers, a commitment they are typically not prepared to make.

In general, evaluating programs in education can be carried out using different approaches according to Stufflebeam and Shinkfield (2012). Stufflebeam and Shinkfield classified twenty-two approaches of program evaluation in three main categories; these categories are pseudo-evaluations, quasi-evaluation studies, and true evaluations. Based on these approaches different evaluation models were emerged, among them the CIPP model, the experimental and quasi-experimental model, Robert Stake's countenance model. Roese et al., (2015) argued that all of these models have equal significance, none being less important than the other models; however, their optimal use depends on the specific needs and criteria of the researchers.

Nonetheless, adopting one of these models to evaluate in-service teacher training programs does not solely guarantee reliable evidence regarding their effectiveness (Martinez et. al., 2016). The absence of tools specifically designed to assess the impact of in-service teacher training programs is a significant factor in yielding unreliable results (Ibrahim, 2015). However, there is substantial evidence, and reports indicate that utilizing instruments like the Stallings Classroom Observation Tool can come up with reliable measures of classroom activities conducted by teachers (World Bank 2013).

This study adopts the true evaluation model articulated by Stufflebeam and Shinkfield (2012) and employed the Stallings Classroom Observation Tool to investigate the impact of impact of training Palestinian teachers through Teacher Education Improvement Project - After Funding on their educational practices and their teaching competencies

Many empirical studies have been conducted to evaluate in-service teacher training programs, for example, stalling et al. (2014) used the Stallings Classroom Observation Tool evaluate the impact of in-service teacher training programs on teacher's time on task activities in four countries, particularly, Tunisia, Morocco, Ghana, and Brazil. The study objectives were to discover how instructional time is used at different levels in certain countries, particularly in rural and low-income areas, to identify obstacles to optimal use of instructional time, to encourage governments to take the necessary measures to provide students with optimal time for learning. the study showed that passive instruction was 10% indicating the education is shifting toward a student-centered approach. The study also provides evidence supporting the critical role of teacher behavior and instructional time management in student achievement. It emphasizes the need for policies and training programs that focus on maximizing effective teaching practices, especially in active instruction, to enhance educational outcomes globally

Martinez et al., (2016) conducted a comprehensive study to investigate the application of classroom observation techniques in six different countries, at the local, regional, and national levels, across a wide range of educational environments. The main goal of their study was to investigate how different international systems use classroom observations to improve teacher evaluations and professional development. The study used a variety of techniques to collect data from a large range of sources. Results show that classroom observation is becoming more and more important in a variety of frameworks for teacher evaluation and development. This emphasizes the need for a more structured conversation about important issues like the nature of the observation, the observers, timing, techniques, and, most importantly, how the data is applied for both formative and summative purposes.

Meanwhile, Uysal (2012) conducted a study to evaluate the long-term impact of a one-week INSET program offered by the Turkish Ministry of Education on the attitudes, knowledge, and classroom practices of language teachers. The program's efficacy is assessed using predetermined standards from earlier studies. Data collected by interviewing trainers and teachers, and by using a questionnaire on 72 teachers eighteen months after the course ended. The findings imply that although most teachers have favorable opinions of the course, there are clear shortcomings in the phases of preparing and evaluating it as well as in how it affects real teaching techniques.

Mishra (2016) conducted a study aimed at comparing an in-service teacher training program. The sample of the study consisted of 31 science teachers and 31 social science teachers, all worked in Ganjam, Bhadrak, and Koraput secondary schools and had in-service training in 2014–2015. The study sample also consisted of 30 teachers who did not have the same experience. Data was collected using a classroom observation and a students' rating scale. The study concluded that while the in-service teacher training program had no impact on the social science teachers' ability to manage their classrooms, it did have a significant impact on their teaching methods, use of audiovisual aids, and evaluation strategies.

Ikhlef and Knight (2013) undertook research to examine the effects of educational reform in Qatar, particularly on the practices of student-centered teaching and engagement in classroom activities within elementary science and math education. This investigation gathered data during the autumn of 2008 from 17 schools, which were among 46 schools having applied Qatar's educational standards for a minimum of three years. From these schools, 3 to 5 classrooms from grades three and four in math and science were chosen for the study, involving 67 teachers and around 1150 students. The research utilized two main tools for data collection: the Stallings Observation System and the Teacher Attributes Observation Protocol. Findings from this study highlighted a predominant focus on teacher-centered methods, with more than 70% of teaching conducted in large group formats by teachers, while approximately 25% of activities involved smaller groups or individual student interactions. The research also indicated that there was minimal support for the utilization of materials by students that would facilitate learning through projects or cooperative learning activities.

In their study Piwowar et al. (2013) aimed to evaluate the effectiveness of the KODEK training program developed to enhance classroom management competencies among in-service secondary school teachers. The study employed a quasi-experimental pre-post design on 37 secondary school teachers from Berlin and Brandenburg, Germany. These participants were divided into an experimental group (19 teachers) and a control group (18 teachers). The experimental group underwent the full KODEK program, while the control group participated only in the initial module. Data were collected using teacher and student surveys, as well as observer ratings before and after the intervention. Results indicated significant improvements in the intervention group's classroom management competencies compared to the control group. These improvements included better teacher knowledge on classroom management, increased student engagement, and enhanced teacher competencies in managing classroom behaviors as reported by students.

Problem statement

In Palestine, the ministry of education and Higher Education is concerned about training in-service teachers, for this purpose the Ministry of Education and Higher Education holds the National Institute for Educational Training (NIET) which is responsible of planning and designing training programs that invest in human resources who work at the Ministry of Education.

NIET played a central role in designing and implementing the TEIP project alongside with the participating universities. The Ministry of Education and Higher Education also holds the educational measurement and evaluation department which its main responsibility is to conduct evaluation studies to evaluate different aspects of the teaching and learning process. The Ministry of Education and Higher Education started to implement the TEIP during the period from 2014-2016. The ministry of education and higher education gets additional funding to continue implementing the TEIP program during the period from 2016-2019 which abbreviated as TEIP-AF (MoEHE, 2019). TEIP was evaluated by the educational measurement and evaluation department at the Ministry of Education and Higher Education, the evaluation was conducted by employing questionnaires and meetings with the trainee teachers. These instruments explore data about the in-service training program from teachers' perspectives and do not deeply investigate the effects of the program that appear as teachers' teaching practices inside the classroom. The present study, therefore, aimed at evaluating the impact of training Palestinian teachers through (TEIP-AF) on their educational practices and their level of resemblance of the competencies described in the PTPDI through using research instruments that produce data with a high degree of reliability. Thus, the study employed the Stallings classroom observation system which record timed observations that produce quantitative data about teachers' and students' time use. The rubrics of the levels of competencies described in the PTPDI were also used to find out the competences level teachers resemble in their teaching. The research questions that guided the study were:

1. How is classroom time allocated between students and trained teachers?
2. To what extent does the distribution of classroom time between students and trained teachers change as the number of observed snapshots increases?
3. How does the allocation of classroom time between students and trained teachers change with variations in Stalling classroom activities?
4. How is classroom time allocated between students and trained teachers based on the teaching materials used during instruction?
5. What is the level of sub-competencies teachers resembling according to the PTPDI competence rubrics?
6. Is there a statistically significant difference in PTPDI competences resemblance across teachers who received and who did not receive TEIP-AF training and need training?

Objectives of the study

The study is sought to provide a comprehensive understanding of the impact of the TEIP-AF training program on teachers and students, specifically it tried to achieve the following objectives:

1. To investigate the allocation of time in the classroom between students and teachers who have undergone training through the TEIP program activities.
2. To examine whether the distribution of time in the classroom between students and teachers, who have been trained through TEIP program activities, varies with an increase in the number of observed snapshots.
3. To explore changes in time allocation in the classroom between students and teachers trained through TEIP program activities as the Stalling classroom activity varies.
4. To assess how time is distributed in the classroom among students and teachers trained according to TEIP program activities, based on the teaching materials used during instruction.
5. To determine the level of sub-competencies that teachers display according to the PTPDI competence rubrics.
6. To evaluate whether there is a statistically significant difference in the resemblance to PTPDI competencies between teachers who have and have not received TEIP-AF training, and those who need training.

Methodology

This study followed a descriptive methodology to answer the first five questions, and also followed an experimental methodology to answer the sixth question.

Population

The population of the study consisted of all teachers (29 male teacher and 96 female teachers) who were teaching in grades from 1-4 in public schools in the academic year (2018/2019) and classified by the ministry of education as educationally unqualified or under-qualified in their academic and/or professional teaching qualifications and needs to be subjected to training through TEIP-AF. Table (2) shows the population of the study.

Table (2): study population.

Directorate	Male teachers	Female teachers	Total
Jenin	9	15	24
Qabatiya	1	7	8
Tubas	1	5	6
Tulkarm	8	13	21
Qalqilya	1	4	5
Nablus	6	40	46
Salfit	3	12	15
total	29	96	125

Participants

The study comprised two different groups of participants who were randomly selected. The first group consisted of thirty-one teachers who were teaching grades from 1-4 in public in the academic year (2019/2020) schools and classified by the Ministry of Education and Higher Education as educationally unqualified or under-qualified in their academic and/or professional teaching qualifications and complete the training through TEIP-AF. Table 3 displays how the participants are distributed based on the directorate they are employed in.

Table (3): Distribution of the participant according to the directorate and gender.

Directorate	Experimental group		
	Male teachers	Female teachers	Total
Jenin	3	4	7
Qabatiya	0	2	2
Tubas	1	1	2
Tulkarm	0	3	3
Qalqilya	0	1	1
Nablus	1	12	13
Salfit	0	3	3
total	5	26	31

The second group also consisted of thirty-one teachers who were teaching grades from 1-4 in public schools n the academic year (2021/2022) and classified as educationally unqualified or under-qualified in their academic and/or professional teaching qualifications and did not receive training through TEIP-AF. All the participants were recognized as experienced in-service teachers in Palestinian basic elementary schools. Table 3 displays how the participants are distributed based on the directorate they are employed in.

Study tools

The Stalling classroom observation system

The Stalling classroom observation system is a tool that uses direct observation to produce quantitative data about qualitative practices that occur during the interaction between teachers and students inside the classroom across four variables: "teachers' use of instructional time, teachers' use of materials, core pedagogical practices, and teachers' ability to keep students engaged" (Stalling, 2015). The classroom observer takes ten separate snapshots throughout the class to record the classroom interaction regarding the four variables measured by Stalling classroom observation system. The observer uses a snapshot coding grid or sheet to code the classroom observation during each snapshot. The snapshot coding grid has two dimensions: the horizontal dimension describes six common materials usually teachers use in the classroom as instructional aide, they are: "no material, textbook, notebook, blackboard, learning aids, ICT, and cooperative". The vertical dimension describes fourteen activities, in this study we record ten activities, and they are: Reading Aloud, Demonstration/Lecture, Discussion, Practice and Drill, Assignment/Class Work, Copying, Verbal Instruction, Social Interaction, Student(s) Uninvolved, and Discipline. Activities can be carried out by either the teachers or the student, thus two lines are associated with each activity, the (T) line indicates that the activity is carried out by the teacher and the (I) line indicates that the activity is carried by the student. Each material is associated with four columns indicating the symbols: 1, S, L, and E. 1 indicates the use of the material by one individual, S indicates the use of the material by a small group of individuals, L indicates the use of the material by a large group of individuals, and E indicates that the entire class is using the material. Coding is done by circling the appropriate box that describes the classroom interaction. For example, if the teacher is reading aloud using no material the coder will circle the symbol (1) in the (T) line. Figure 1 below presents the coding framework of the Stalling classroom observation system, as illustrated in Stalling (2017).

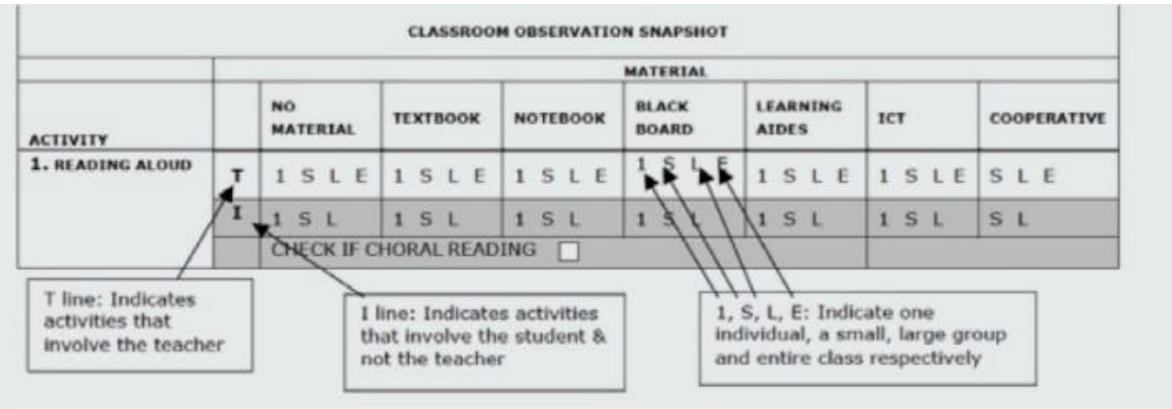

Figure (1): the coding framework of the Stalling classroom observation system.

The PTPDI level of competence rubrics

The sub-competences of the PTPDI describe knowledge, understanding, and skills that enable teachers to deliver good teaching. The competences are developmental in nature and subject to alteration between teachers and comprise six levels of indicators. These levels are: the Foundation level, the Readiness to teach level, the Essential level, the Capable level, the Advanced level, and the Exceptional level. Each developmental level is narratively described in the form of rubrics. For example, the indicators of the essential level of the establishing safe learning environment according to the PTPDI are: "Establish and maintain safe, motivating, interactive learning environments; that take into account seating arrangements, pupil groupings, organization of resources and displays; where pupils are enthusiastic to learn and where there is rapport between pupils and teacher" (Ministry of Education and Higher Education, 2018, p22).

The team of data collection

A team of twelve researchers were involved in the process of data collection during the academic year 2019-2020, all were enrolled as graduate students at the faculty of higher studies at An-Najah National University. Each team members have to get a clear vision on how to use these instruments; therefore, a training guide was designed to help make the best use of the instruments and to help unify the teams' vision on how to collect reliable data. A training workshop was conducted for the team; the training focused on how to use the instruments based on the designed training guide. There are four main sections in this guide. The first section provides a definition of the coding symbols for the Stalling classroom observation system, as well as an explanation of the symbols it uses. For example, one important guideline clarified in the guide is that the teacher's symbol (T) can only appear once every snapshot and the teacher can only be working on one activity at a time. The second section explores the theoretical aspects of the Stalling classroom observation system, providing further details on themes meant to increase the user's understanding of Stalling tool. In The third segment familiarizes users with the materials featured in a classroom snapshot, providing clarifications on terms such as "no materials," "observation notebook," and "book". The fourth section focuses on giving users the final section is dedicated to providing users with an understanding of the definitions and the diverse array of classroom activities that the Stalling classroom observation system is designed to assess.

The reliability of data collection

In order to assess the validity of data collection through the study instruments, the instruments were piloted using observation of two classes by two team members. Each member observed the same two classes. Kappa indicator which is a statistic that is used to measure inter-rater reliability was calculated based on the number of similar and different coding of the Stalling classroom observation system and was equal to 0.8-0.86, this value is considered reliable according to Altman & Kempf-Leonard, (2005). The same procedures were followed to assess the reliability of data collection through the PTPDI level of competence rubrics, Kappa indicator was 0.83 – 0.87, this value is also considered reliable according to Altman and Kempf-Leonard (2005).

Data Analysis

First, classroom observation schedule was developed. Second, the team members observed each teacher for three different classes, ten snapshots were coded producing thirty

snapshots in total for each observed teacher. Meanwhile another team member assessed the level of sup-competence teachers resemble according to the PTPDI level of competence rubrics. Third, the results were analyzed through computation of descriptive statistics such as frequencies and percentages. Independent sample t-test was conducted to examine the differences in PTPDI level of competences resemblance between TEIP-AF trainee teachers and other teachers who did not receive TEIP-AF and teach grades from (1-4) and considers as trainee candidates.

Results and Discussion

In this section, we present an overview of the findings obtained from the study by answering the research questions, as well as a discussion of these results.

How is classroom time allocated between students and trained teachers?

To have an overview of the extent of time teachers spend on instructional activities and the time students spend engaged in classroom activities, 31 teachers were observed using the Stalling observation system. Three classes were observed for each teacher, with ten classroom snapshots taken in each class, resulting in a total of 929 valid snapshots in total from the observed sessions. The frequencies of teachers' dedicating time to instruction were coded, as well as the frequencies of students spending class time engaged in classroom activities. Table (4) displays these frequencies and their percentages.

Table (4): Frequencies and percentages of time devoted of instruction by teachers and time students spend engaged in classroom activities.

	Frequency	Percentage
Time devoted for instruction by teachers	725	78%
Students' time use	204	22%
total	929	100%

The increase of teachers' time use may be explained in the context of their familiarity with teacher centered approach that uses imposing teaching strategies which maintain their dominance on the teaching and learning environment. Contrasting this result against the objectives of the TEIP-AF, it would be an indication that TEIP-AF objectives are still not fulfilled or institutionalized hence its main objective is to enable trainee teachers to plan, design, and deliver teaching in a student-centered learning environment. This outcome aligns with Fullan's (2013) assertion that the overall progress of educational reform hinges on the actions and thoughts of teachers. This result also agrees with Ikhlef & Knight (2013) study, which demonstrated that despite reform and innovation that took place in teaching mathematics and science in Qatar, Teachers retained a substantial portion of instruction time, utilizing activities they led personally, and allocated limited time for student engagement in classroom activities.

However, the vision is a bit vague to conclude that, therefor, a thorough insight into to the use of time according to the progress of snapshots coding is needed.

To what extent does the distribution of classroom time between students and trained teachers change as the number of observed snapshots increases?

During the observation process, the Stalling snapshot grid for each teacher was coded 10 times. Observations commenced five minutes into the class, with snapshots captured at three-minute intervals over the course of thirty minutes. The final five minutes of class time were excluded from observation. The frequencies of teachers dedicating time to instruction were coded, as well as the frequencies of students spending class time engaged in classroom activities. Table (5) illustrates these frequencies.

Table (5): Teachers' and students' time use frequencies and percentages across snapshot progress.

Snapshot progress	Teachers' time use frequency	Students' time use frequency	Percentage of teachers' time use	Percentage of students' time use
First snapshot	84	9	0.90%	0.10%
Second snapshot	80	13	0.86%	0.14%
Third snapshot	76	17	0.82%	0.18%
Fourth snapshot	67	26	0.72%	0.28%
Fifth snapshot	67	26	0.72%	0.28%
Sixth snapshot	65	28	0.70%	0.30%
Seventh snapshot	56	37	0.60%	0.40%
Eighth snapshot	60	33	0.65%	0.35%
Ninth snapshot	67	26	0.72%	0.28%
Tenth snapshot	58	34	0.63%	0.37%
Total	680	249	7.32%	2.68%

Table (5) clearly demonstrates that as teachers proceed in their teaching and the coding process continues, the frequencies of students spending class time engaged in classroom activities are steadily increasing up reaching the seventh snapshot (39% of class time), indicating they become more engaged in the teaching and learning activities. The type of this engagement is still unidentified (which is the scope of research question 3). However, by comparing the frequencies of teachers' dedicating time to instruction and the frequencies of students spending class time engaged in classroom activities we found that teachers' dedicating time to instruction is still more than students spending class time engaged in classroom activities indicating teachers' dominance on the classroom learning environment throughout the class time. Upon considering these results, it is not possible to affirm that teachers align their instructional methodologies with a learner-centered approach by leveraging skills potentially honed through TEIP-AF. Nonetheless, this serves as a positive sign that teachers are providing students with chances to take charge of their own learning. Despite this, the initial dominance of teachers over classroom time (in the first three snapshots) is crucial for establishing student discipline and acquainting them with classroom activities. This result differs than the result of Stalling al., (2014) which showed that students time spent in engaging in passive instruction was 10% of the class time indicating the education is shifting toward a student-centered approach.

How does the allocation of classroom time between students and trained teachers change with variations in Stalling classroom activities?

The Stalling classroom observation system documents how often various classroom activities occur, as detailed in table (6). Identifying how frequently teachers allocate time to these

activities and how often students are actively involved in them during class may provide valuable insight into the learning environment's characteristics and the extent of student participation in the educational process. Therefore, teachers' and students' use of these activities was coded during the 10 snapshots of the Stalling snapshot grid for each teacher. The frequencies of teachers' and students' use of activities were counted; Table 6 shows these frequencies. The results show that the highest use of activities in the classroom by teachers was the reading aloud activity and the verbal instructions activity (96% for both activities). Meanwhile, the highest use of activities by students was the copying activity (64%) and students uninvolved in any activity (65%).

Table (6): frequencies and percentages of teachers' and students' use of activities during class time.

Activity	Teacher' use of activity	Student use of activity	Teachers' percentage	students' percentage
Reading aloud	121	2	0.98%	0.02%
Demonstration/Lecture	51	34	0.6%	0.4%
Discussion	212	67	0.76%	0.24%
Practice & Drill	60	36	0.63%	0.38%
Assignment/Class Work	55	20	0.73%	0.27%
Copying	32	56	0.36%	0.64%
Verbal Instruction	94	4	0.96%	0.04%
Social Interaction	37	11	0.77%	0.23%
Student(s) Uninvolved	8	15	0.35%	0.65%
Discipline	26	4	0.87%	0.13%

These points to the fact that, to some extent, teachers do not employ the student center approach in their teaching. Even though some activities such as discussion may give more engagement opportunity for students in the class, but the results revealed that teachers had dominated the time given for this activity. TEIP-AF may have enabled teachers to become more capable of designing and implementing student centered activities, but may fall short to change teachers' philosophy of education and their beliefs about traditional teaching. This outcome is consistent with the findings from Ikhlef and Knight (2013), which demonstrated that students engage in fewer social interactions in the classroom, highlighting the inadequate adoption of learner-centered methodologies by educators.

How is classroom time allocated between students and trained teachers based on the teaching materials used during instruction?

The use of materials inside the classroom by teachers and students were coded using the Stalling snapshot grid. After 10 snapshots were taken for each observed teachers, the frequencies of using materials were counted. Table 7 illustrates the frequencies and percentages of teachers' and students' use of material. The results reveal that teachers spent more time on teaching without using materials (81%). Meanwhile, the students' use of their notebooks had the highest frequency (55%).

Table (7): frequencies and percentages of teachers' and students' use of material.

Materials	Teachers' use of materials	Students' use of materials	Teachers' percentage	Studnets' percentage
No materials	265	63	0.81%	0.19%
Textbook	170	57	0.75%	0.25%
Notebook	30	36	0.45%	0.55%
Blackboard	140	46	0.75%	0.25%
Learning aides	62	22	0.74%	0.26%
ICT	25	7	0.78%	0.22%
Cooperative	18	18	0.5%	0.5%

This result is in accordance with the previous results, this can be explained by the familiarity of teachers to use verbal communication that needs no materials in teaching, which is the main teaching method in traditional teaching, the redundancy of using notebooks by students is a consequence of this result hence teachers verbal instructions were dictated for students and students in their turn used their notebooks to write what was being dictated. The cooperative category is an indicator that shows how long do students work together. However, the results show that cooperation between students has the minimum frequency indicating the traditional nature of the learning environment teachers' employ. This result agrees with the results of Ikhlef and Knight (2013) study which indicated that there was minimal support for the utilization of materials by students that would facilitate learning through projects or cooperative learning activities.

What is the level of sub-competencies teachers resembling according to the PTPDI competence rubrics?

The PTPDI competence rubrics were used to assess the level of competences teachers demonstrate during their teaching. The frequencies of the levels of competences were counted. Table 8 shows these frequencies. The majority of teachers demonstrate all the sub-competencies on the essential level except for the using assessment outcomes to inform instructional planning competency which an exceptional level was demonstrated by the majority of teachers on this sup-competency. Using assessment outcomes is a main subject and a fundamental skill for teachers, the ministry design and conduct regional training workshops for every newly recruited teacher. This may have impacted their level of this sub-competency alongside the impacts of TEIP-AF training which is obviously have little impact on developing teachers' level of the other sub-competences. This outcome contrasts with the findings of Piwowar et al. (2013), who reported that teacher training programs significantly can enhance teachers' competencies, particularly their classroom management competences.

Table (8): The frequencies of teacher's levels of competences.

Sub-competency	level of competence			
	Essential	Capable	Advanced	Exceptional
Establishing a safe learning environment	13	12	5	1
Selecting effective teaching strategies	15	5	7	4
Using ICT to enhance learning	16	10	2	3
Using strategies that enhance students' positive behavior	15	9	5	2
Communicating effectively with students	13	12	5	1
Using assessment outcomes to inform instructional planning.	3	1	8	19

The reason for this result might be that there is no effective monitoring system implemented by the supervision department at the Ministry of Education to follow up teachers' continued execution of their educational tasks as per their training in TEIP-AF. In fact, there is a substantial separation within the administrative framework between the educational supervisors and the teacher training process. The educational supervisors, who are responsible for monitoring the teachers' teaching practices, were not involved in the training process, this may potentially impact their grasp of the training intricacies that ought to manifest in the teachers' instructional practices.

Is there a statistically significant difference in PTPDI competences resemblance across teachers who received and who did not receive TEIP-AF training and need training?

One of the aims of this study is to determine the impact of TEIP-AF training project in PTPDI competence resemblance across teachers who received TEIP-AF training and who did not receive TEIP-AF training and identified that they need TEIP-AF training. The level of each PTPDI competence resemblance across teachers was investigated and presented below in Table (9). The mean of each competence resemblance across trained teachers is higher than the average of each competence resemblance for teachers who need training. Furthermore, an independent t-test was utilized to examine differences in the mean scores between groups. According to the data presented in Table 9, there were no significant differences in the first five competencies. However, a significant difference was observed in the ability to use assessment outcomes for instructional planning between teachers who underwent TEIP-AF training and those who did not, with the trained teachers showing superior performance.

Table (9): t-test results for each sup-competency.

`	Group	M	SD	DF	t value	P value
Establishing safe learning environment	trained	2.15	1.09	58	1.87	0.07
	need training	1.67	0.88			
Selecting effective teaching strategies	trained	1.97	1.19	58	0.92	0.36
	need training	1.7	1.03			
Using ICT to enhance learning	trained	1.67	1.02	58	0.15	0.88
	need training	1.63	0.88			
Using strategies that enhance students' positive behavior	trained	1.61	0.75	58	0.59	0.56
	need training	1.48	0.89			
Communicating effectively with students	trained	1.67	0.96	58	1.38	0.17
	need training	1.37	0.63			
Using the assessment outcomes to inform instructional planning.	trained	3.67	0.99	58	10.4	0
	need training	1.48	0.51			

This outcome may be due to teachers reverting to their prior educational routines after some time had passed since their training in the TEIP-AF activities. Consequently, the training's impact did not persist in their teaching methods, except in their using the assessment outcomes to inform instructional planning competency. This exception might exist because the Ministry of Education requires each new teacher to participate in training workshops specifically about evaluating student learning, a practice already familiar to them prior to the TEIP-AF training. This finding contradicts with Piwowar et al. (2013), who reported that teacher training programs significantly can enhance teachers' competencies, particularly their classroom management competences.

This result aligns with other findings, such as the study by Mashira (2016). Trainee teachers according to TEIP-AF may prefer to use methods they are familiar with and the resist changing them. This also may be because in Palestine, the educational system lacks proper teachers' follow-up science the supervision department is separate from NAIET. As a result, supervisors know little about teachers' training. Concerning assessment, the insufficient training in alternative assessment methods among teachers in grades 1-4 has impacted their evaluation capabilities. Additionally, the ministry's ban on using exams for assessment has led to this situation. Consequently, trainees have embraced the new alternative assessment techniques introduced by TEIP-AF as effective methods for conducting classroom evaluations.

Conclusion

A key goal of the TEIP-AF training program was to equip teachers with the ability to design and implement lessons based on student centered approach. This study revealed that, to some extent, teaching was conducted using conventional methods and strategies. Nonetheless, it was observed that teachers possess the potential to adapt their teaching methods to meet the criteria set by TEIP-AF. Additionally, we identified the capability among teachers to align their instructional practices with the expectations of TEIP-AF. To conclude this study, we've presented three recommendations aimed at supporting this alignment.

1. Acknowledging that each teacher possesses a distinct teaching philosophy influencing their instructional methods, it is imperative that upcoming in-service training initiatives

incorporate elements aimed at evolving teaching philosophies and styles within their training exercises.

2. It is important to perform follow-up evaluation studies to learn more about the viability of in-service teacher preparation programs' impacts. Future initiatives for in-service teacher training should be better informed by evaluation results.
3. Linking the evaluation results with an advanced program of teacher incentives in order to reinforce teachers delivering their teaching in accordance with the requirements of the in-service teacher training programs.

Disclosure Statement:

This evaluation aims to assess the effectiveness and impact of TEIP in-service teacher training program. The primary objectives of this evaluation are to analyze the program's influence on teaching practices, professional development.

- **Purpose of Evaluation:** The evaluation seeks to provide a comprehensive understanding of how the training program affects participants, including any changes in teaching methodologies, improvements in classroom management, and enhancements in student engagement and performance.
- **Methodology:** The evaluation will utilize a combination of qualitative methods, including classroom observations. All data collected was used solely for the purpose of this evaluation.
- **Confidentiality:** All participants' responses and observations had ben be kept confidential. Only authorized personnel involved in the evaluation process had access to the data.
- **Voluntary Participation:** Participation in this evaluation was voluntary. Participants had the opportunity to withdraw at any time the felt they had to.
- **Ethical approval and consent to participate:** IRb was Issued from IRB committee at Najah National University.
- **Availability of data and materials:** Available.
- **Author contribution:** Abedalkarim Ayoub 50%, Belal Abu Eideh 50%
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