

## Pilot study: impact of school director-led workplace professional development training for in-service teachers

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### ABSTRACT

Teacher's attitudes and strategies can be influenced by workplace professional learning, which in turn affects student engagement and learning. Although educators are accountable for their professional development, the school must be learning-centered and able to provide resources for all members of the institution to improve their teaching and learning skills for the overall development of the school. The project's goal was to perform a pilot intervention study on the impact of school director-led workplace professional development for in-service teachers to provide evidence and recommendations on the impact of school director-led workplace professional development training for teachers. The intervention study on school director-led workplace professional development training for teachers on formative assessment indicates that there were significant changes in teachers' understanding and use of formative assessment. The result found that there is statistical difference between the teacher's pre- and post-intervention survey response on formative assessment workplace professional development training. The evidence stands as a recommendation for school directors, teachers, the ministry of education and other stakeholders for quality teaching and whole school development.

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## 1. INTRODUCTION

School principals could performance a key role in improving assessment, teaching, student academic accomplishment and teacher's quality. Numeral studies recommend that school principals can be a vital source for the success of their schools. School principals exercise considerable influence on teacher professional development. According to Louis and Wahlstrom [1], school heads have a crucial role in creating change-oriented learning environments. Shared or distributed leadership, as well as instructional leadership, are required to change a school's atmosphere identify three areas where school principals have the opportunity to have a substantial impact on teacher learning. A school environment that pushes teachers to improve their teaching must have three characteristics: First, teachers and administrators must participate in broader professional development, second, teachers must be members of a professional community, and third, transformation that implies collaboration between teachers, principals, and parents. This statement, in other words, means that having a qualified school principal at school is the initial stage of school success

because the principal would be capable of showcasing the three above mentioned characteristics of a qualified and quality school leader.

Louws *et al.* [2] findings' also showed that effective principals can sustain elevated levels of capacity by establishing trust, creating structures that promote teacher learning, and either connecting their faculties to external expertise or helping teachers generate reforms internally. They further suggested that during transitions in school leadership, incoming principals must be cognizant of shared norms and values among their faculties before initiating new practices in curriculum, instruction, or school organization. The school principal can build, change, and transform the school to benefit teachers, students, and whole school development by organizing an in-house professional. However, the qualification of the principal and level of his or her leadership skills will play a key role in doing this. Besides, DeMatthews [3] stated that principals must create an environment that supports collaboration among teachers provides time for teachers' professional development; and recognizes, rewards, and celebrates the concept of the teacher as leader. This is also supported by Fullan [4] who stated that principals are being designed as transformative leaders who "push the boundaries" and "narrow the performance gaps" by motivating teachers to achieving objectives they have never attained before. Within a school, the principal should be the chief "educator." Whilst, teachers' collaboration with the director is a vital key to students' academic improvement because teachers would be able to share ideas and develop a shared vision for school progress [5]. Teachers need continuing professional development to prepare their students to be a responsible and successful member of society.

Several studies have pointed out that teachers' quality and efficacy are strongly associated with teacher performance and students' academic attainment. The teacher's continuous professional development was associated with the teacher's quality and with a belief that their students can succeed academically. However, inadequate professional support in-house professional development programs that should be organized by school directors could lead to teachers' continuous lack of confidence in their abilities as teachers. They may continue to doubt their efficacy; they may not believe that their students can learn, and they may begin to channel these frustrations onto students by blaming them for the weaknesses of the system. According to Forte and Flores [6], teachers tend to stress the importance of interpersonal relationships at school, but they also identified formal meetings when they described the contexts and opportunities to work collaboratively in the workplace, namely department meetings and projects driven by central government or school administration initiatives. This study supported the importance of professional development at the workplace in which could be championed by the school directors and supported by the education ministry for effective delivery of the program across the schools nationwide. The main problem that always occurs is the active role of school directors in organizing workplace continuous professional development programs for teachers.

Another study by Kooy and Mary [7] stated that teachers should indeed receive professional development training in order for the school to improve. However, school directors should be able to offer opportunities for a professional learning community to support professional development at the school. This implies that if school administrators are successful in strengthening workplace professional conditions that provide learning opportunities and space, learning experiences will become the starting point for professional development.

The purpose of the study was to conduct a pilot intervention study on the impact of school director workplace professional development for in-service teachers during an internship research project. The intervention was used to understand the role of the school director. It was used as a transformational and progressive leader using their position for the whole school improvement; most especially by focusing on accelerating the learning process towards students' academic improvement. The objective of the study was to conduct a pre-and post-intervention survey on teachers' knowledge level of formative assessment and conduct a descriptive analysis of the impact of the formative assessment intervention teacher's workplace professional development training.

To identify the impact of the formative assessment intervention teacher's workplace professional development training, the following research questions were formulated to guide the study: what is the statistical difference between the teacher's pre- and post-intervention survey response on formative assessment workplace professional development training? The Ho of this study: there is no statistical difference between the teacher's pre- and post-intervention survey response on formative assessment workplace professional development training.

## 2. LITERATURE REVIEW

Workplace professional learning does have the ability to impact teachers' attitudes and strategies. Evans and Thornton [8] stated that a thorough understanding of change theory can benefit school administrators in coordinating major workplace changes. Similar to the study of Frost [9], lifelong learning

growth as a technique for transforming schools by unlocking teachers' immense undiscovered capability. It is logical to assume that one of the most significant steps in enhancing student accomplishment is to improve educators' knowledge, abilities, and attitudes. This literature review examines the impact of school director led workplace professional development training for in-service teachers. In addition, to look at the role of school director, aspect of leadership and the impact of workplace professional development allocation of funds by the educational stakeholders

**2.1. Theoretical perspective**

The literature review was focused on the theoretical aspects of Wenger’s social learning theory [10]. Various learning theories place different emphasis on several types of learning. The learning organization, for instance, focuses on enhancing the capacity of all employees by self-development and personnel development; it also considers the idea of "learning on the job" in and through the workplace for the organization to improve its capacity for self-renewal and adaptation. The components adopted from Wenger’s social learning theory as seen in Figure 1 which includes: i) Meaning: a way of talking about our (changing) ability - individually and collectively - to experience our life and the world as meaningful; ii) Practice: a way of talking about the shared historical and social resources, frameworks, and perspectives that can sustain mutual engagement in action; iii) Community: a way of talking about the social configurations in which our enterprises are defined as worth pursuing and our participation is recognizable as competence; and iv) Identity: a way of talking about how learning changes who we are and creates personal histories of becoming in the context of our communities.

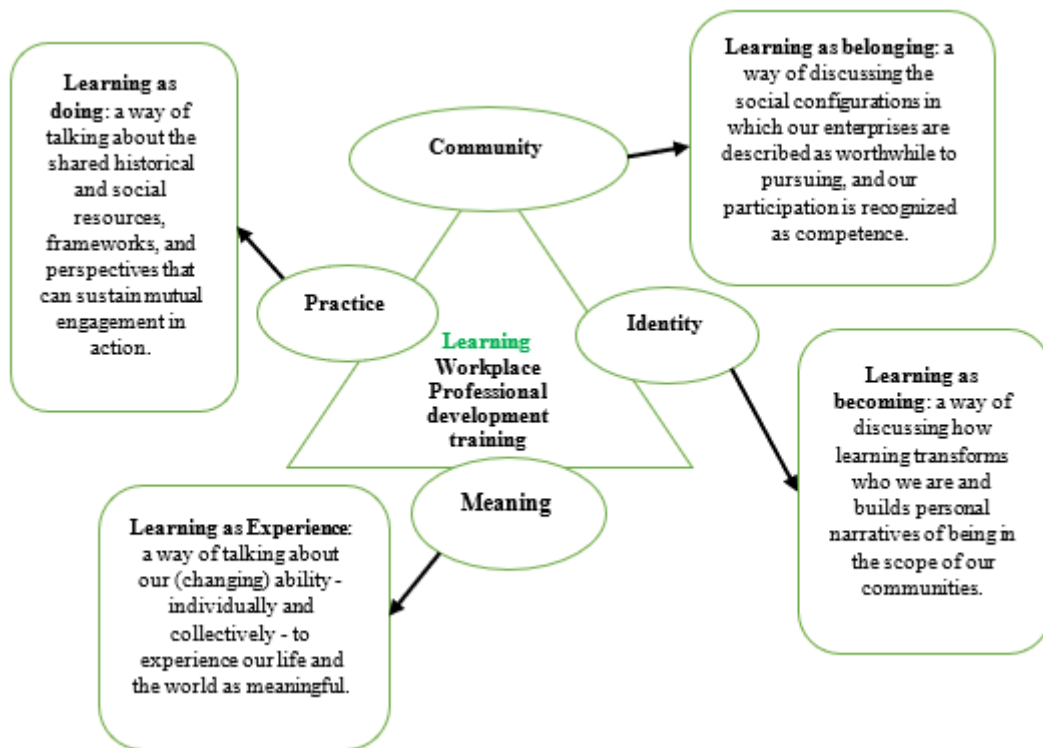


Figure 1. Theoretical perspective Wenger’s social learning theory [10]

**2.2. Conceptual framework school director workplace professional development training**

The conceptual framework for this study adopted the theory of Wenger’s social learning theory. It will be used to guide the study as seen in the theoretical perspective of Wenger’s social learning theory. Figure 2 shows the conceptual framework on how the school principal organized professional development training program and how it is intended to have an impact on the teacher’s quality, student’s academic improvement and whole school development.

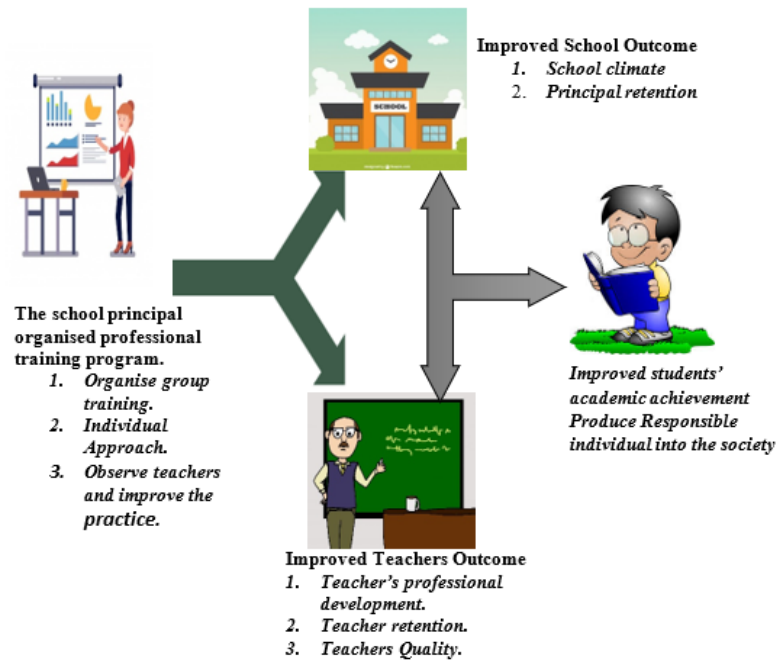


Figure 2. Conceptual framework school director workplace professional development training

Professional development training for in-service teachers is always needed since it will help educators grow professionally. Teachers should not be left in teaching service without professional training such as in-service training organized by school principal this will update the teachers in the contents of the related subjects as well as in the area of teaching skills and student's academic performance. According to Brown [11], improving school, leadership is the key linking bridge between the teachers, classroom, the individual school, and the education system as a whole, effective school leadership is essential to improve the competence and equity of schooling. The school director could contribute to improving student learning by shaping the conditions and climate in which teaching, and learning occur and one of the ways to do this is organizing in-house professional development training in the school for the teachers which can be effective beyond the school borders. As stated in the operation and development (OECD) report, one of the redefine school leader responsibilities for improved student learning is by supporting, evaluating, and developing teacher quality by adapting the teaching program to local needs, promoting teamwork among teachers, and engaging in teacher monitoring, evaluation, and professional development.

### 2.3. Impact of professional development for teachers

Teachers' attitudes and strategies can be influenced through professional learning, which in turn affects student involvement and learning. Teachers and administrators today face a variety of issues daily, ranging from leadership styles to student learning motivation, professional development opportunities for teachers, and overall school development. Professional development is supposed to lead to increasing levels of quality teaching and classroom management as stated by Durksen, *et al.* [12], Kearney and Perkins [13], Hilton, *et al.* [14]. The school administrators' engagement in the professional development program with their educators contributed to their professional development. As suggested by Mulford [15], include subjects such as how to define, focus, establish strategies for and evaluate all mentoring and coaching in all professional development programs for school administrators. The following remark was derived from Mulford; the position of the school director should include more than just managing school maintenance "Moving beyond maintenance/management to relationships and school improvement/ learning outcomes."

Teachers appreciate a social climate, managerial support, time, and space to engage and learn from one another, and access to resources as vital for quality of work-life and student progress, according to the study of Baleghizadeh [16]. We understand the necessity of people continually interacting and encouraging one another, as well as the construction of enabling conducive learning environments and support structures for teachers to work together within and across schools as they engage in networked community learning as stated by Karlberg and Bezzina [17]. DuFou [18] stated how important the workplace professional development is essential for the development of the whole school development, stated that the dilemma for

schools is to increase a group of teachers' capacity to meet objectives for the whole of their students while also increasing the school's ability to advance the school toward its vision. Administrators should urge that site-based professional development be regarded as a targeted, coordinated effort to improve school personnel's collective capacity to address challenges and maintain continuous improvement.

#### **2.4. Increasing support personnel**

Increasing support personnel by funding the school director-led workplace professional development training for teachers in all the schools. A study conducted in Australia showed that school directors' participation in teacher professional development programs has a positive influence on the capacity for teachers to enact and reflect on new knowledge and practices. They also revealed a positive influence on the professional growth of the leaders themselves as stated in Hilton, Dole, and Goos [14]. As shown in the conceptual framework in Figure 1, it would be more effective if school principals could utilize their leadership skills to promote teaching and learning in their various schools.

As stated in the study by Kochan and Bredeson [19], school principals of the 21st century must help create suitable school and classroom environments, develop supportive school cultures, ensure the productive use of human and other resources, and become involved in new forms of policy development and implementation. They further stated that the school director's job responsibilities have been further complicated by expanded demands from external constituencies, rapid growth in research on teaching and learning, changing demographics of our population, and increasing access to information resulting from an explosion of modern technologies. I believe the school principal also needed support from the ministry and other educational stakeholders to organize effective teachers' professional development at the workplace. Policymakers and school principals could evaluate and redesign the use of time and school schedules to increase opportunities for professional learning and collaboration, including participation in professional learning communities, peer coaching and observations across classrooms, and collaborative planning according to Darling-Hammond, Hyer and Gardner [20].

#### **2.5. School director and teacher's professional development training**

Allocation of funding for schools to send directors and teachers for external professional development training. This option could be more demanding and costly for the school and ministry to fund. Although some of the literature has proven it to be effective for school development, on the other hand, few studies have also proven it to be less effective stating that sometimes it does not meet the need of the teachers. Morris [21] suggested that when school directors and teachers attended external professional development training and then shared the knowledge contained in the school during internal training, the impact of professional development is doubled. The effectiveness could be minimal based on the teacher's interest in the training topic, time, distance, and environment. The program content and dose of the intervention could also affect the impact of the training. DeMonte [22] explained that successful methods and techniques originate in many places around the country, as is typically the case in education, but these bright spots are too often hidden from the bulk of educational organizations. Given the need to improve the quality of instruction and the lack of clarity and shared information about what approaches, and practices promote teaching, now is an excellent opportunity to review what is known, what initiatives are now ongoing, and what will be required as school systems progress.

#### **2.6. The role of school director**

The OECD [23] reported on school leadership matter stated that in many countries that have wide responsibilities and have become more accountable for school improvement, they have not received enough support. Often, school board members are volunteers, elected or nominated. Evidence points to problems such as tensions between boards and directors because of lack of demarcation between their roles, shortages of potential members to serve on boards, an elevated level of absenteeism of members and the lack of knowledge or skills. This is an indication from the OECD that schools' directors are not getting the support they needed to work effectively otherwise if there are enough support and funding, they would have been more productive leading the school for a positive outcome. one of the major frameworks proposed by OECD was to develop support structures to ensure active participation in school boards, with opportunities for skills development on topics related to school governance, including school evaluation and school improvement.

The OECD TALIS 2018 policy pointers [24] developed mentoring programs for school leaders apart from the pre-service preparation, education systems could also provide school leaders with other relevant opportunities for in-service training upon appointment. A viable way to achieve this would be to create professional networks of directors and support with funding to implement the program in their various schools. To further support this option, teaching and learning international survey (TALIS) data and research findings concur to suggest that school-based and collaborative professional development could have the potential for more impactful effects on teaching practices and student achievement. The Figure 3 was taken

from OECD, TALIS 2018 Database. Values are grouped by teaching strategy and ranked in descending order of the use of teaching practices within the respective teaching strategy. The figure illustrates teachers needs and weaknesses. The school directors could adopt the template and use it to create a need assessment for workplace professional development in their various schools.

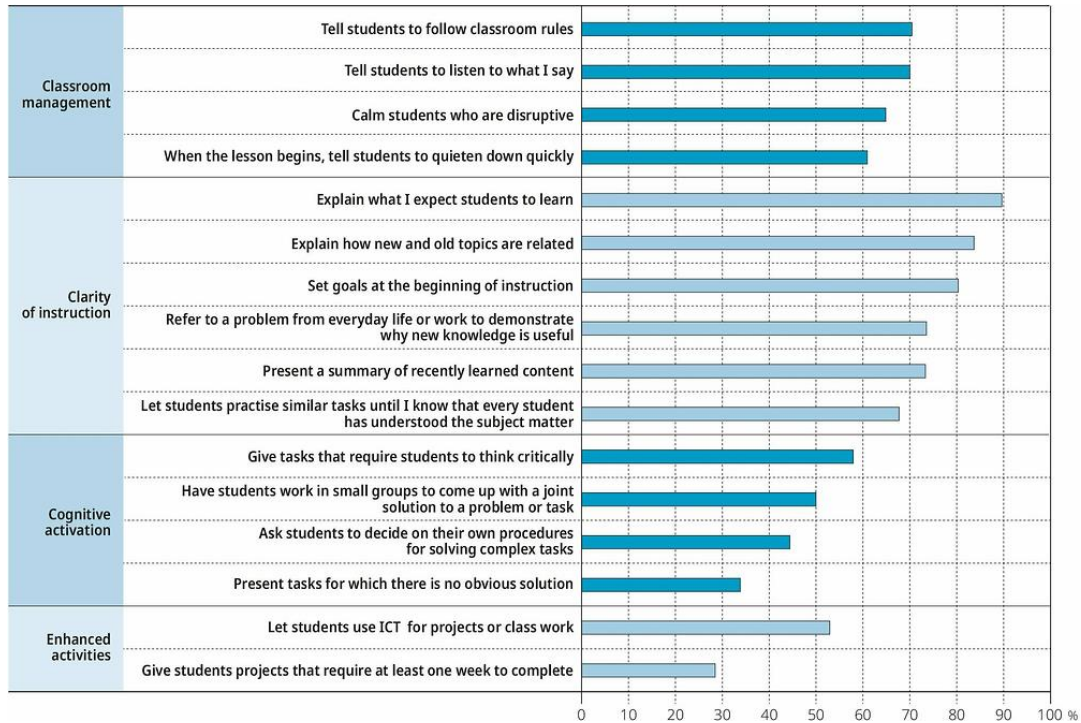


Figure 3. Percentage of lower secondary teachers who “frequently” or “always” use the following practices in their class1 (OECD average-31) (source: OECD TALIS (2018) policy pointer 20: as a proof for understanding teacher’s need for workplace professional development)

Figure 4 adapted from OECD TALIS 2018 school leaders’ views on school resources issues that hinder quality instruction shows the shortage of school resources as indicated by the school directors which indicated that, there are shortage of support for personnel. This indicated that lack of support such as funding could be an obstacle for school directors to play their roles such as providing training for teachers on certain areas of teaching practices for an effective classroom. As stated in the report that across OECD countries and economies participating in TALIS, the resource-shortage issues reported by lower secondary school directors are a shortage of support personnel (33%) which is linked to this current paper. This figure indicates that school directors at the primary level tend to report the same resource issue about the shortage of support personnel in most of the 13 countries and economies.



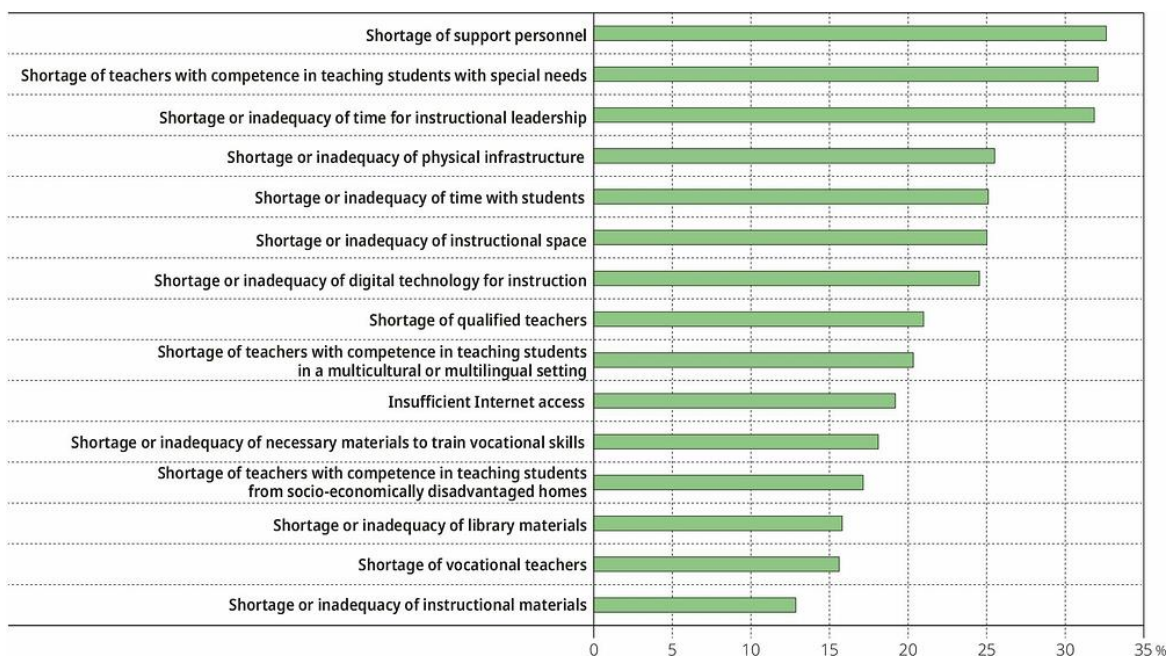


Figure 4. Percentage of lower secondary principals reporting that the following shortages of resources hinder the school’s capacity to provide quality instruction “quite a bit” or “a lot” (OECD average-30) (source: OECD TALIS (2018 School leaders’ views on school resources issues that hinder quality instruction) evidence to support the recommended option for school Director’s summary)

One of the themes identified for success as a principal role in providing workplace professional development training for the teachers. Clement [25] study describe the policies behind the influence on how school directors can improve the teachers and the school through social relation which is the main goal of this current study; the impact of workplace professional development. The main factors affecting teachers’ satisfaction with the instructional programs are related to their desire to maintain instructional processes “close to home”, and to shape these processes following their needs and expectations [26]. This implies the effectiveness of external professional development programs for school directors and teachers [27]. Here are four categories of leadership practice based on the role of an effective school director as the findings of this current study literature review: i) Building vision and setting directions; ii) Understanding and developing people; iii) Redesigning the organization; iv) Managing the teaching and learning program.

These two studies demonstrated the need for school directors to know their strengths and weaknesses and understand how they are perceived by the teachers at their school. In addition, it recommended that improving school director-led workplace professional development training for teachers; the stakeholders should look at increasing support personnel by funding school director-led workplace professional development training and also allocate funds for schools to send directors and head-teacher for external professional development training to be able to set up a learning community for teachers and staff in their various school.

### 3. RESEARCH METHOD

To further provide evidence to support this study, we adopted a mixed-method research intervention design using pre- and post-survey data collection, intervention training on formative assessment school director-led workplace professional development and a by-up teacher’s reflection. The data was collected for master internship research.

#### 3.1. Research procedure

Figure 5 shows the procedure and process of data collection and process of the study. The first stage was to conduct a need assessment, which involved visiting classes to determine whether teachers lacked classroom management and teaching strategy competencies. After that, a pre-intervention survey based on the suggested intervention is conducted. Participants were also given a post-intervention survey after the intervention. The data collected were analyzed, and a follow-up questionnaire was provided to the teachers to see if there was post - intervention retention.

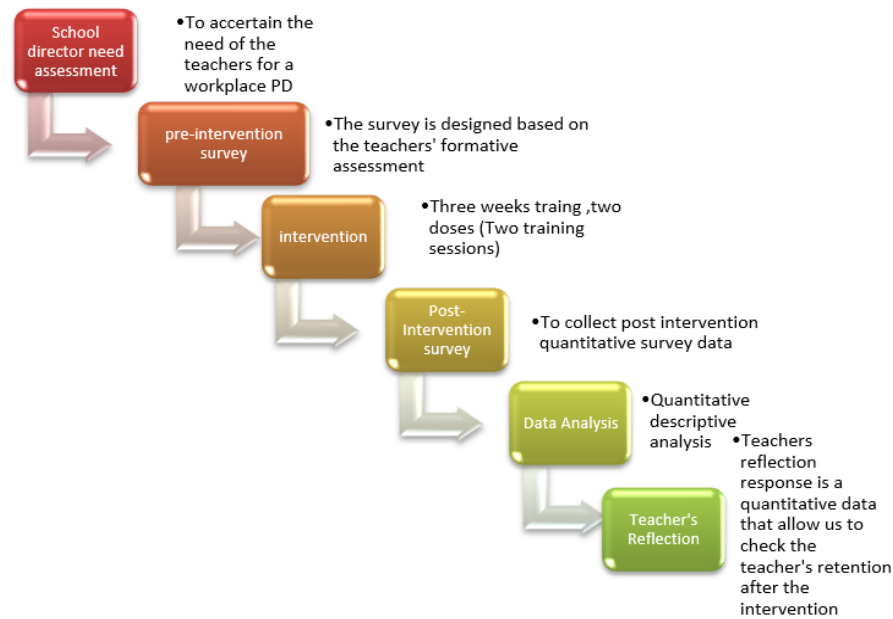


Figure 5. Research procedure

### 3.2. Sample

The participants for the pilot study were nine primary school teachers from one private school in Baku, Azerbaijan. The participants consisted of two English language teachers, one English Literature teacher, one Science teacher, and five Homeroom teachers.

### 3.3. Data collection

An observation for need assessment was conducted by the school director to understand the teachers' area of weaknesses using an observation checklist. The sample of the checklist can be seen in Table 1. By pre-intervention survey data collection, data was collected using the observation method to conduct classroom observations and to look for some of the key characteristics of formative assessment such as feedback, follow-up question, students grouping task, and Socrates questioning. The second phase of the data collection was a pre-intervention survey, the teachers were given the survey at the beginning of the first training. The third phase is the intervention training which takes place for three weeks and two training sessions and after three weeks, the fourth phase was a post-intervention survey, the teachers were asked to answer the same survey at the end of the second training session. The final data collection was a self-reflection follow up questionnaire given to two random selected teachers for their reflection, retention, and evaluation of the training sessions.

Teachers are expected to use a range of ways to help students understand the learning goals and success criteria, including discussion, co-creation, and the use of models. A checklist was formulated for the one-week observation session. A sample of the observation checklist adopted from the Nebraska Department of Education and modified to carried out the need assessment task by the school director.

Table 1. A sample of observation checklist form

Observation	Yes	No
Assessment (Classroom assessment)		
Teachers provide real-time feedback on student work to all students.		
The teacher used follow-up questions		
Students group task		
Students asked questions		
Teacher asked questions		
Lesson goal provided		
Instructional strategies (technology)		
Instructional strategies (engagement)		
All students were engaged in the lesson		
Teacher Socrates questioning		
Comment:		



#### 4. RESULTS

The outcome of the observation shows that all the teachers have scored low in all of the formative assessments criteria on the item list, and this indicated that they needed to improve their knowledge of formative assessment. The outcome of the observation was used as a need assessment, the need assessment helped the school director to identify the weak point of the teachers and schedule a training program based on the outcome of the observation findings.

##### 4.1. Pre and post survey data analysis

To answer the first research question number, what is the statistical difference between the teacher's pre- and post-intervention survey response on formative assessment workplace professional development training? After the two training sessions and follow-up meetings, the pre- and post-intervention survey data were computed on Microsoft Excel for analysis to check the central tendency of the data. The sum percentage of teachers' responses for pre-intervention shows Strongly Disagree at (19.13%), Disagree at (10.38%) Agree at (14.21%) while Strongly Agree was at (6.01%). After the two training sessions, the post-intervention data were analyzed and the responses indicated that Strongly Disagree dropped to (6.56%), and the same trend in Disagree which also dropped at (6.56%) Agree at increased to (22.40%) while Strongly Agree also rise to (14.75%). The summary statistics can be seen in Table 2 and Table 3. While in Figure 6, the descriptive analysis of pre- and post-formative assessment intervention survey which illustrates the descriptive analysis of the data.

Table 2. Descriptive analysis pre-intervention survey

Variables survey items	Participant's frequency	Strongly disagree	Disagree	Agree	Strongly agree
1. I understand what formative assessment is and how to use it	9	3	4	1	1
2. My class sizes allow me to individualize instruction for all students	9	4	2	2	1
3. My class periods provide enough time to use formative assessment	9	4	1	2	2
4. I review all student work during the lesson.	9	3	2	2	2
5. I ask questions within the lesson to assess the whole group progress.	9	1	2	6	1
6. I use follow-up questions when engaging students in discourse	9	4	1	4	
7. I review some student work during the lesson	9	3	2	2	2
8. I provide real-time feedback on student work to all students.	9	2	1	4	2
9. I use student self-assessment.	9	5	3	1	
10. I use student peer-assessment	9	6	1	2	
Valid percentage		19.13%	10.38%	14.21%	6.01%
Mean		3.199205166	1.736711376	2.376552409	1.382513661

Table 3. Descriptive analysis post-intervention survey

Variables survey items	Participant's frequency	Strongly disagree	Disagree	Agree	Strongly agree
1. I understand what formative assessment is and how to use it	9		1	5	3
2. My class sizes allow me to individualize instruction for all students	9	4	2	2	1
3. My class periods provide enough time to use formative assessment	9	1	2	4	2
4. I review all student work during the lesson.	9	1	1	4	3
5. I ask questions within the lesson to assess the whole group progress.	9		1	4	4
6. I use follow-up questions when engaging students in discourse	9	2		4	5
7. I review some student work during the lesson	9	1	1	4	3
8. I provide real-time feedback on student work to all students.	9			6	3
9. I use student self-assessment.	9	2	3	3	1
10. I use student peer-assessment	9	1	1	5	2
Valid percentage		6.56%	6.56%	22.40%	14.75%
Mean		1.508196721	1.340619308	3.747640338	2.467958271

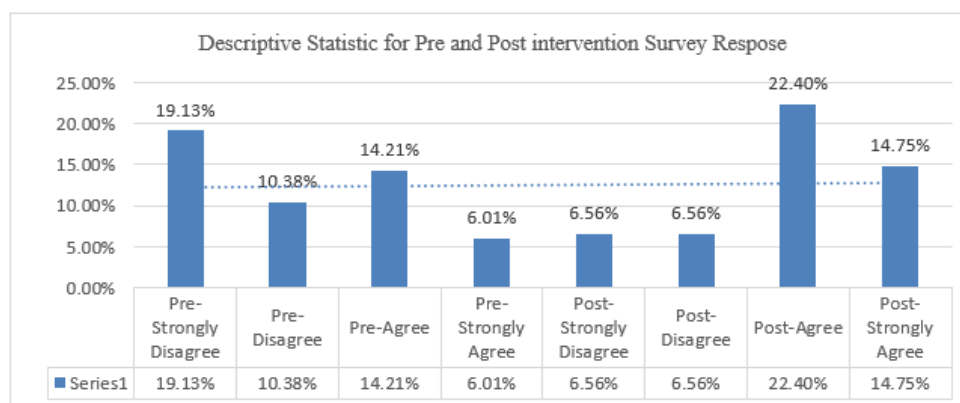


Figure 6. Descriptive analysis of pre- and post-formative assessment intervention survey

#### 4.2. Hypothesis

The H<sub>0</sub> of this study: there is no statistical difference between the teacher's pre- and post-intervention survey response on formative assessment workplace professional development training. To ascertain whether the means of pre- and post-intervention survey responses are equal then decide to accept or reject the null hypothesis. There is a difference between the pre- and post-intervention survey response a t-Test: two-sample assuming equal variances was conducted to calculate the mean percentage of the pre- and post-intervention survey results. The result of the data analysis participants (n=9), pre-intervention Agree (M=2.6), and post-intervention Agree (M=4.1), df (18) the test statistic is t stat -2.46598481 the P-value at 0.02 as seen in Table 4. The result of the data analysis participants (n=9), pre-intervention Strongly Agree (M=1.6), and post-intervention Agree (M=2.7), df (15) the test statistic is t stat -2.23035734 the P-value at 0.04 as seen in Table 5. Based on the outcome of the analysis, there is enough evidence to reject H<sub>0</sub> at the significance level of 0.05, because of the p-value of 0.02. As seen in Figure 7 and Figure 8, the graph shows the mean difference for pre- and post-intervention survey responses. We can conclude that there is a statistical difference between the teacher's pre- and post-intervention survey response on formative assessment workplace professional development training.

Table 4. The result of t-test (pre and post intervention agree)

	Pre-intervention agree	Post-intervention agree
Mean	2.6	4.1
Variance	2.488888889	1.211111111
Observations	10	10
Pooled variance	1.85	
Hypothesized mean difference	0	
df	18	
t Stat	-2.46598481	
P(T<=t) one-tail	0.01196946	
t Critical one-tail	1.734063607	
P(T<=t) two-tail	0.02393892	
t Critical two-tail	2.10092204	

Table 5. The result of t-test (pre and post intervention strongly agree)

	Pre-intervention strongly agree	Post-intervention strongly agree
Mean	1.571428571	2.7
Variance	0.285714286	1.566666667
Observations	7	10
Pooled variance	1.054285714	
Hypothesized mean difference	0	
df	15	
t Stat	-2.23035734	
P(T<=t) one-tail	0.020709939	
t Critical one-tail	1.753050356	
P(T<=t) two-tail	0.041419878	
t Critical two-tail	2.131449546	

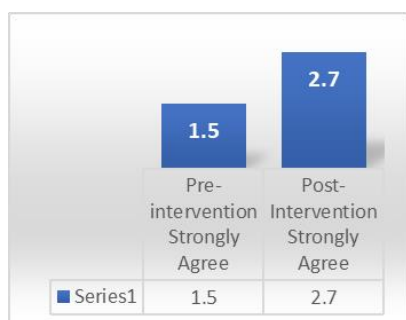


Figure 7. Pre and post intervention strongly agree response

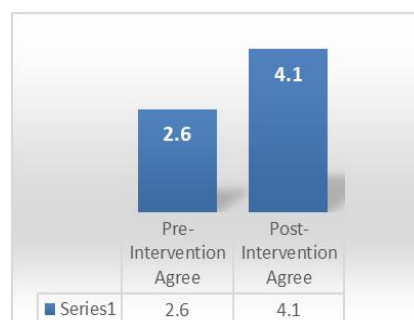


Figure 8. Pre and post intervention agree response

**4.3. Follow-up teachers’ reflection response**

The third phase of data was used to check the teacher’s retention after the three weeks, two-session workplace professional development training for the teachers. The teacher’s reflection method was adopted to evaluate the effectiveness of the workplace professional development program on formative assessment, the two teachers were randomly selected to write their reflection about the intervention training and formative assessment by writing a self-reflection about the training. The in questions were asked: i) What is your general opinion on the use of a formative assessment with the students?; ii) After the formative assessment training have you been using formative assessment with the students in the class /online?; iii) Do you think the training is effective and helpful for your professional development?; iv) If you are to conduct the training what would you like to add and what would you like to remove from the training activities?

**4.4. Teachers’ feedback response summary**

We were able to clearly identify that the workplace professional development training was valuable and relevant after summarizing the comments of both teacher’s responses in Table 6. The teachers agreed that formative assessment is an important component of good teaching because it allows teachers to identify topics that students are having difficulty grasping or learning requirements that they have not yet met. Teachers sometimes complain about not having enough time to assess students as they progress. Students are

unlikely to retain much of what is "covered" if they do not have time to reflect on and connect constructively with new information. According to the study's findings of Menéndez [28] which also supported the feedback response of the teachers stated that formative evaluation increases students' school performance and can be used to stimulate collaboration amongst pupils.

Table 6. Teachers' feedback response

Teacher 1	Teacher 2
<p>"First of all, I would like to say that this training session helped me with digging out my mistakes on providing feedback to students so they can improve their performance. Nowadays, I have used formative assessment on the teaching process. I take notes as much as I can to be more specific on giving marks to students every day. In addition to this, as I take notes about students every day, I can easily figure out problems in students' learning process such as if they skip classes or if they do not submit homework etc. In my opinion, the best part of the formative assessment is that students can see their weak points and set themselves future goals. What else? I think that each teacher has to use formative assessment while teaching students as collecting the data of students can be useful for them in understanding students' weak and strong sides kind regard."</p>	<p>"1) I think formative assessment is an integral part of effective teaching because it helps teachers identify concepts that students are struggling to understand or learning standards, they have not yet achieved so that adjustment can be made to lessons, instructional techniques, and academic support. 2) Yes, the training helped me so much understand what the formative assessment is, and I have been using it with my students. 3) Of course, it is. In my opinion, such kind of training is so useful for personal development. I learned quite enough information. 4) I would like to give more detailed information and examples about formative assessment, because sometimes teachers can confuse it with summative assessment. Besides, I also would like to show teachers an example of a lesson in which they could allocate their time properly so that they could use formative assessment because teachers often complain that they don't have time to assess students along the way. They fear sacrificing coverage and insist they must move on quickly. Yet in the rush to cover more, students are learning less. Without time to reflect on and interact meaningfully with new information, students are unlikely to retain much of what is "covered" in their classrooms regards."</p>

## 5. DISCUSSION

The valuable outcomes of formative assessment have been mentioned in many research articles by several researchers. The data interpretation and outcome of this intervention project are an additional or a contribution to the existing pieces of evidence in the area of formative assessment and workplace professional development training. The result and findings can be used in three ways. Firstly, as evidence that organizing workplace formative assessment by the school principal would not only save cost but have a huge benefit for the teacher's continuous development and quality delivery. Secondly, it could also be seen as an avenue for team building and collaboration between the teachers and lastly, it can build a good relationship between the teachers and the school director. I would like to suggest for school leaders and stakeholders adopt workplace training on formative assessment and other areas of teachers' technical skills that are needed to improve teaching and learning as an avenue for low-cost teacher's professional development training programs.

The stakeholders are continuously seeking evidence on the effectiveness of professional development training on students' progress. I have strongly believed that adopting workplace led professional development training by the school directors would increase the percentage of student's academic progress by 30%-40% per academic calendar as displayed in Figure 1 conceptual framework on how the school director-led workplace professional development training for teachers was intended to affect student's achievement. School administrators must be knowledgeable and steadfast to assist their schools to navigate the demands of an increasingly changing economy, instructional methods, teaching, and learning objectives maintain performance benchmarks and other administrative instructions from a range of policies and challenging conditions for teachers. We need to support teachers who are in daily contact with pupils to achieve what is best for student success, teacher welfare and career development. Professional development is supposed to lead to increasing levels of quality teaching and classroom management. According to Durksen [12] and Kearney [13], it is vital to see teachers' jobs in the light of the whole school and to objectively analyze the working environments that allow teachers to teach productively; this statement supported the findings of the pilot intervention, the more the working environment is conducive and supportive to teachers development the more teachers become productive in their daily activity. Thus, the intervention was a pilot study of three weeks two training session intervention it still produced a positive and promising result according to one of the teacher's reflection responses as shown on Table 6 teachers' feedback response.

*"This training session helped me with digging out my mistakes on providing feedback to students so they can improve their performance."*

The training session helps the teacher to dogged out his or her mistakes for not providing feedback to students, I strongly believe that many in-service teachers are in the same shoes as this teacher looking for the opportunity to dogged out their mistakes that are affecting their daily quality teaching delivery in our school.

The pre- and post-intervention survey result is enough evidence to support the policy of workplace professional development training for teachers; Strongly Disagree at (19.13%), Disagree at (10.38%) Agree at (14.21%) while Strongly Agree was at (6.01%). Strongly Disagree dropped to (6.56%), and the same trend in Disagree which also dropped at (6.56%) Agree at (22.40%) while Strongly Agree was at (14.75%) this can be explained that within two training sessions in three weeks the teachers were able to identify their mistakes and also made the correction during their in-class and online teaching. The findings of this study is also supported by the study of Admiraal [29] which stated that the more profoundly an intervention is integrated in a school's system and structure, the more long-term influence it has on transitioning schools toward a culture of professional development and collaboration. Young [30] also stated that to achieve the goal, execute the objective, and promote the school's values and principles, use methods of continuous professional learning. How teachers learn a study conducted by Jones and Dexter [31] highlighted the remark of one of the teachers who noted that she would rather have a fellow teacher train her than have an expert coming in and teach her everything she needs to know in three hours.

On the other hand, Lewallen *et al.* [32] also suggested that we could improve student outcomes by concentrating on children and young people as students, tackling important educational and health outcomes, building joint actions and projects to support students, and heavily involving community resources. Patton, Parker, and Tannehill [33] professional development serves as a venue for change and affirmation of present practice, and it is both an obligation and an opportunity. Hoppey and McLeskey [34] supported our recommendation based on the role of the school directors that the school director's role is to encourage and care for their staff, to protect them from the rigors of high-stakes responsibilities, and to provide high-quality professional development program both formal or informal within the school community.

## 6. CONCLUSION

This research revealed that there is statistical difference between the teacher's pre- and post-intervention survey response on formative assessment workplace professional development training. The findings of this pilot study suggested that school directors' workplace professional development training for teachers 'improvement could be a learning paradigm in the primary and secondary schools to enhance the teachers' competency and students' academic progress. It can redefine the set of professional responsibilities of the school director to set a stage for workplace teachers' professional development training. On the one hand, this workplace professional development training approach could benefit from creating an avenue for the school director's relationship with teachers, increasing teacher retention, collaboration among teachers for teaching quality, student learning, and academic progress, and also leading to discussions and experiences that could change the leader's behavior patterns and teacher perceptions of the leadership style.

This study recommends supporting school director-led workplace professional development training for teachers in all the schools to increase support personnel for continuous professional development at school. The school directors should be more involved in the process of continuous professional development programs internal or external for teachers toward providing quality teaching that accelerates student's learning and fair assessment in the school. Also, other researchers to carry out proper intervention study on this topic which could lead to another research gap such as looking at the role and perception of the school's director on workplace professional development. Besides, that could also be linked to school directors' leadership and power as an advocate of change for whole school development.

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