

How does training and implementation of Sean Cain and Mike Laird's model of fundamental 5 for delivery of quality instructions develop teachers in an international school?

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A Research & Development Project

Submitted for the MSc Learning & Teaching 2020

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Abstract

A small-scale explores the perceptions and views of teachers about professional development. Teachers learning is an intrinsic phenomenon and there are many factors involved in shaping the final outcomes of development programmes for teachers. Teachers learning is not linear, it should rather be taken as horizontal and vertical and is depended on many factors. The implementation of “Using Fundamental 5 to Deliver Quality Instructions”, it is concluded that teachers learning learn differently like their students and their learning can defined as a social experience. Teachers values peer learning and their personal professional needs to be taken into account in designing professional development programmes. After analysing the preferences and patterns of teachers’ professional development, the study concludes that teachers voice should be should be part of policy making for teachers learning. Coalition of integrated approaches, various methods and practices, differentiated mode of delivery and consideration of teachers’ professional needs and choices and learning context should be considered for teachers professional development plans.

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Introduction

Research and development project carried out in an international school focuses on different aspect of professional development. Professional development is a term that refers to continual progress in acumen and career or profession of teachers (Bolam, 2002). Professional development is gradual progression that teachers experience to frame their own unique identity and the nature of their knowledge becomes more constructive and multifaceted and inherent to be imparted and transferred.

It is the empowerment of teachers' accumulated learning both on personal and professional scale within the domain of professional efficiency (Berliner, 2001; Kuijpers, Houtveen, & Wubbels, 2010). This approach advocates that teachers must strive to make progress through their professional progression for two reasons: one, due to inclusion of evolving technologies in their specific field of expertise and two, because this is the inherent nature of teaching profession which keeps growing into complex paradigms with changing times. (Darling-Hammond, 2005). Literature reveals that many factors play a significant role in achieving successful outcomes of students learning, of which the most important aspect of consciousness of students learning, is the knowledge of the teacher; the knowledge that teachers possess and are able to deliver successfully is perhaps the most crucial of all factors contributing to students learning. Many researchers such as Dalring & Hammond (1999), Fullen, Hill & Crevola (2006), Wilson, et al, (2001) believe that teachers' knowledge and their abilities to teach effectively are most important factors influencing students learning.

Research Aim

The project aims at promoting successful outcomes for a professional development model implemented in an international school for teachers and bring effective and meaningful outcomes of teachers' training into practice.

It was therefore, important to investigate teachers' ideas and views about how they perceive professional development and their impact on their learning, and also, how the role of structures, methods and approaches to professional development, teachers' prior learning, implicit and explicit barrier and teachers' challenges impact the effectiveness of professional development. It was equally significant to understand how to enhance the effect of professional development of teachers in our school to overcome these barriers. The outcomes appeared to be a success as teachers having a better understanding of how to deliver quality instructions using different teaching strategies in classroom. Teachers became more articulate about their learning as a result of intervention implemented in the school.

Rationale

Bransford, Darling- Hammond, & LePage, (2005) believe that teachers have to experience quick decision making on daily basis in their teaching routine. Their challenges in teaching include to be equipped with variety of teaching methods, having the ability to be adaptive and flexible, and also to be in charge of many kinds of assessments and different kinds of knowledge. They need to gather more information about their profession and their learners which develops them into better decision makers who are able to make

right choices for their learners and understand well what is going in their teaching and what methodology or teaching strategy will work in the context they are placed in. They need to be aware that their decision will unfold students learning in context of cultural influences and differences, approaches to learning, learning differences. Educators in education world are focusing on students learning more than ever.

The demand of my role as an instructional leader in school asks for a probe into the effectiveness of professional development. Before I start a formal literature review, I decided to have a brainstorm activity with my peers, educator friends and colleagues about teacher's education. This activity served two purposes, I was able to explore others point of view and was also conscious of collaboration factor of my project from very onset. There were some key questions that emerged from these informal discussions with my educator friends about teachers education and I decided to explore literature around these question. For example, I wanted to understand once more how professional development has been defined by different researchers, policy makers, and educationists around the world in different context and different scenarios.

I decided to choose my topic based on my previous learning and the context of my school, however, the challenge here was that I had to carry out the project in another school setting. I had chosen my part 2 topic keeping in mind that I will try to implement the training in light of my conclusions about the fruitfulness of professional development and will try to address the issues which I had identified in my previous research in my training structure. The present study, therefore, was meant to be carried out in the same school setting. But I had to change my job and I am working in a different role in a different school. This school's setting is significantly different from the previous, so the sample of my research is altogether a new entity. But, on the other hand, this scenario offered an opportunity of new learning in a new system. I could avail a chance of understanding the same themes in context of a different school setting. The understanding of these two settings adds value to the triangulation and might as well offer a scope of future research opportunity. Another significant learning that I had was an opportunity of having explored the implementation of Sean Laird and O'casy Model in context of two different school settings. I was able to compare the outcomes of the professional development model in two different contexts.

There are other reasons too for why I have chosen this topic. Of which, one is to rediscover the standpoints of CPD and to investigate the impending stimulus of CPD on teachers, as per my practice and as per teachers' acuity in the context of literature.

The other one is to establish an understanding towards the prospect of insinuations and opportunities of CPD during a certain period of time and to understand the learning component of how the teachers receive a reflective response from these sessions and also how they impart the learned concepts in their classrooms. I have also formulated to understand the gradual change in teaching practices of teachers after they have successfully completed the PD sessions.

Another reason behind choosing this particular topic was to encourage teachers to be able take charge of their learning and be reflective in their practices. Teachers generally do not take much interest in observing or analysing their peers; practices without a bias or certain per determined agenda which revolves around power dynamics on internal or external spruces of the school. During the course of such analysis, teachers tend to miss the learning aspect because of lack of motivation or meaning attached to CPD and it becomes more of a control mechanism

which pressurizes teachers to be engaged in professional development they are unable to relate with and the real essence and fruitfulness of CPD (Pawson & Tilley, 1997, Henwood & Pidgeon, 1992; Leat, Lofthouse, & Wilcock, 2006)). This very notion of power and control politics in schools training programmes motivated me to design a research work which is concomitant to teachers' proficient development and learning. Teachers' co-working practices improve their mental and emotional health as well as professional development (Pawson & Tilley, 1997). It results in general improvement of those that are directly under the supervision of teachers i.e. students. Professional practices of teachers and good outcomes or results of students are directly proportional with each other (Darling-Hammond, 1998).

The main focus of this study is to explore teachers' perception about PD; its effectiveness on their professional talent and their struggles and barriers to step into learning regime. It also aims to identify the gap between the aim of CPD and the actual outcome on teachers' practices. It will also identify the effect of PD on teachers' learning from different background knowledge and training but are serving in varied academic settings.

In due course of time, it has been noted that the attention towards the overarching role of professional development has increased due to its impact on teachers' responsiveness towards academic challenges, intelligence and improvement in teachers' teaching practices to bring about best of the results in their students and in their own professional growth (Darling-Hammond, 1998). It is a two-way learning process for both teachers and students since the teachers too are learning every day in their own classrooms which will pave a way towards the vista of educational reform.

Research Context

Research and development project undertaken in this paper builds upon on my previous work about the effectiveness of implementing Cain, S., & Laird, M.' model Using Fundamental for Delivery of Quality Instruction.

Choosing this model was for three reasons: One, the understanding of the challenges faced by teachers, who have been trained in different parts of the world while teaching in international schools in Gulf region. Concerns about teachers' abilities to deliver quality instructions have been raised on national level in schools' evaluations reports (MoE, 2018). Two, the model offers five simple classroom teaching strategies in order to deliver quality instruction in all schools everywhere. Third: I had been engaged in understanding the effect of delivery of the same model in other schools. I wanted to use this model in this particular school to enhance teachers understanding and abilities to be able to cope with challenges they face in their day to day routine.

During my Part-1 research, I was working in an international American curriculum school as head of English department and was responsible for coaching, mentoring and professional development of my team. I worked with intervention on a small scale in reading comprehension of international students in a school located in Gulf region. This practitioner research gave me an insight how we need to focus on teachers' professional development in order to achieve desired outcomes for achieving Common Core State Standards for Literacy for speakers of other languages.

The conclusion I had drawn was the lack of ample professional development opportunities for teachers to be trained for teaching Common Core State Standards as most of the teachers in the Gulf region are trained in different parts of the world.

The second year of my master's program was situated in another school where I worked in professional development section for a school chain having more than seven branches in the country. The teaching population was a mix of different nationalities mostly trained in India, Pakistan, Egypt, Sri Lanka, Egypt, Jordan and Qatar and also some western countries. I had worked in professional development in two different schools during my master's programme and had been involved in research in both the schools.

The conclusions drawn in Part 2 assignment gave me a deeper insight to the conclusions that I had drawn in Part 1 research about issues in reading comprehension in an international school in Gulf. My part 2 research was to observe the impact of training given to the teachers on Using Fundamental 5 for Delivery of Quality Instructions and was concluded with an assumption that lack of coherent approaches, methods, strategies and also the absence of follow up, monitoring and evaluation and reflection were the major reasons of poor outcomes.

Presently, I am working as head teacher in a British curriculum school located in the Middle East. The population of teachers and students in this school is similar to that of previous schools. It is part of my role to make sure that teachers receive training and professional development opportunities which are useful in classroom setting of an international school. Most of the teachers in this school are trained in other parts of the world. Teachers struggle to cope with the teaching standards in international schools. The ministry of education has prepared and disseminated framework of national teaching standards. The monitoring and evaluation of international schools have been taken by the ministry in the recent years.

An Overview of the Project

Based on my current and previous readings from literature, I planned the project in four phases adapted from Shohet and Hawkin' (2006) model of action learning. The model is based on Kolb's theory of action learning. I consider this model suitable for my research design because learning is expected to happen within the paradigm of the same theory; teachers will learn by the process of introducing an intervention and reflect upon the impact.

The first phase is the planning phase, I will choose readings from literature as the basis of planning and will try to acknowledge the gap design my intervention based on that gap. I want to understand the factors which impact the outcomes of teachers' professional development and the best practices in introducing a teaching model.

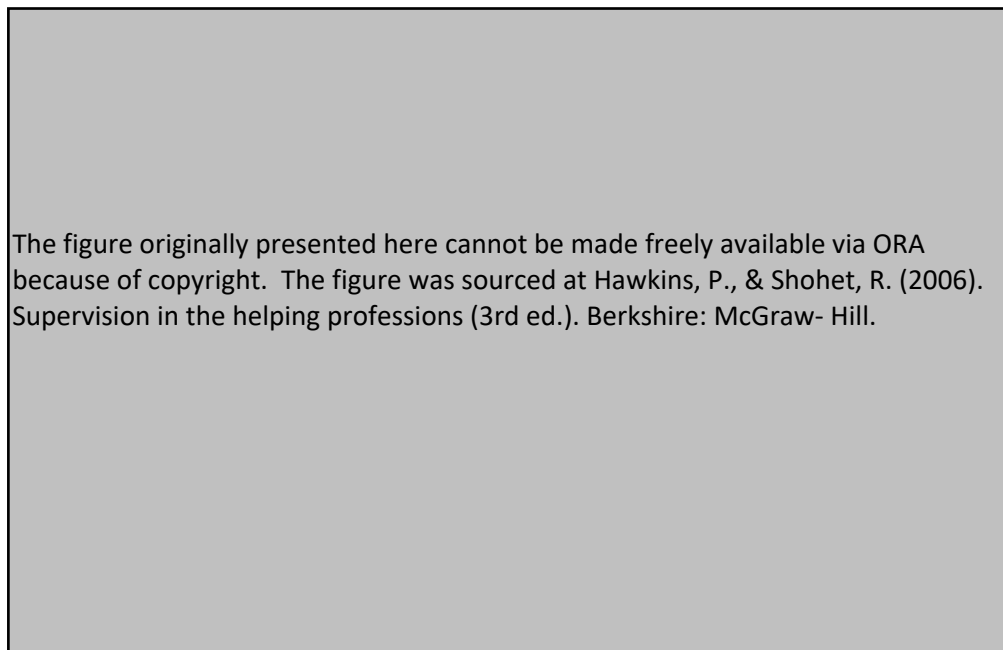
Phase 1: Initiation as literature review (Planning)

Phase 2: Research Design (Action)

Phase 3: Analysis (Observation and reflection)

Phase4: Taking the learning further (Conclusions, policy making and further research)

Fig 1: Learning Model (Shohet & Hawkin, 2006)



Phase 1: Literature Review

Literature Review Process

As explained in the rationale, I was quite clear about my topic based on my previous research in Part 2. In my current project, I wanted to make an inquiry into the impact of a certain training teachers given in a school setting. I also wanted to observe how it develops teachers; how teachers feel about it, and also how school and other similar systems can benefit from this.

My literature review was dictated by key questions; such as what is meant by professional development, why do we need to develop teachers, what are the factors affecting professional development activities and also what are the approaches, practices and methods to access professional development.

Considering all these aspects of my topic, I started examining the available literature. Literature was selected in three steps. As I had decided to build on the previous work and had decided to focus on the involvement of senior leadership in school with collaboration of teachers in carrying out a useful professional development model for teachers and students.

First, I reviewed my previous work and looked at the conclusions for further research in order to create a framework for professional development model for teachers. My previous work was an effort to understanding teachers' education, in which I had tried to make a commentary on how teachers learn better and what are the factors that influence teachers learning.

Second, I searched internet using keywords such as quality teaching, effective professional development, factors influencing teachers' development, opportunities of training and supporting teachers, impact of teachers' learning on students learning and also learning theories. I also collected views and papers written about the effectiveness of training and professional development.

Third, I selected relevant articles, journals, books, and book chapters referenced in the studies and also explored the research methods for qualitative research models and qualitative data analysis and the learning theory I was planning to focus on for this project. I also studied about the researches and the projects where experiential learning theory, theory of social learning and educational change were discussed in different contexts and different settings. I also reviewed school reports, reports prepared by government agencies etc.

Fourth, I also reviewed book chapters, books, research papers, projects about teachers' education and presentations collected in the previous year.

I explored all these categories of literature as a foundation for developing concept, understand the assumptions and also read about the implications, comments and directions for further researches in these papers. In the following paragraphs, I will present my readings from the selected literature.

Importance of Research about Teachers' Learning.

The importance of researching into professional development has become the need of educationists because teaching has become more complex and structured with time. Recent literature emphasizes that teaching is becoming more sophisticated and complex now and in order to keep their teaching successful, high performing teachers continue to learn in

formal and informal ways. They are adaptive to new learning and are able to apply skills from their own learning reserves, they build over time during professional development. They are skilled to use this knowledge flexibly according to the learning environment, needs of their learners and the context of learning (Bransford, Darling-. Hammond & LePage 2005; Cole & Knowles, 2000).

It is important for educationists to understand how professional development can be made successful because teachers to attend to their own learning before they facilitate learning of their students. Students learning depends on how effectively their teachers have learned (Clark,1992) which means teachers must be engaged in professional development effectively. Teachers everywhere in the world are responsible for working with their students for setting and achieving learning goals, translating theory into practice, and also to create an environment for learning. (Berliner, 2005; Feiman-Nemser, 2001; Fullan, 2001, 2005; Guskey, 1995, 2000, 2005; Lieberman & Wilkins, 2006; Tomlinson, 2005).

Meaning of Professional Development of Teachers

The oldest definition of professional development in this literature review comes from Joyce, et al., (1976) which considers professional development as “formal and informal opportunities” for the educators to be able to carry out their roles professionally. Fullan (1995) has termed professional development as “the sum total of formal and informal learning” teachers have been pursuing and experiencing in a demanding learning environment. He also conditions professional development with complexity and dynamic changes, which means teachers may have to opt for voluntary or involuntary learning based on the needs. Professional development is also described as efforts to improve teachers and enhance their abilities to be able to serve effective professionals by having them acquire new skills, expertise, new knowledge and attitudes and this new learning enables them to mend for the “deficit” in skills required to perform their job (Gall & Rencheler,1985). It was in 2006, when Fullan, Hilland & Crevola started using the term professional development and started referring it to teachers’ daily individual or collective focused and on-going learning activities and opportunities in and outside school routine. This definition is more comprehensive as compared to the previous definitions by Fullan in 1995 & Joyce, at al., in 1976.

Day’s (1999) definition probably best encompasses professional development teachers and its interconnected elements in broader context of educational change.

According to Day,

“Professional development consists of all-natural learning experiences and those conscious and planned activities which are intended to be of direct or indirect benefit to the individual, group or school, which constitute, through these, to the quality of education in the classroom. It is the process by which, alone and with others, teachers review, renew and extend their commitment as change agents to the moral purposes of teaching; and by which they acquire and develop critically the knowledge, skills and emotional intelligence essential to good professional thinking, planning and practice with children, young people and colleagues throughout each phase of their teaching lives. (p.27)”

An Overview of Learning theories

Before exploring the methods or approaches about how teacher learn better. it was crucial to explore andragogy. I have chosen to comment on five learning theories for this review because they appear to be at work during the learning of teachers through professional development. Teachers learning is rooted in adult learning theories and can be understood in context of known learning theories. Teachers learning experience needs to be viewed as holistic development and application of learning theories explains the phenomenon well.

Adult learning theories have been discussed at length by Marquardt & Waddill, (2004). These two researchers have categorised these theories by highlighting the nature of learning in light of each theory. Learning occurs by connecting with peers, mentors and coaches, and also in all formal and informal situations. Learning happens as a result of complex interaction of experience with the learning environment and this learning is holistic in its nature. It is believed that group, and organisational learning is significantly from when learners learn individually. (Watkins & Marsick, 1992). In an informal learning process, the individuals make mistakes, they internalize meaning from the actions of others, and they gain knowledge through interpersonal experiences.

For example, learning in the behaviourist theory happen by exercising control over learning environment and is focused on changes in behaviour and the development of skills (Skinner, 1976). On the other hand, the humanists assert that there is potential in every adult to learn. They place the emphasis on the whole person, particularly the affective domain (Rogers & Freiberg, 1994).

In cognitivists theory, it is believed that learning is taken place when learner is able to develop an ability of making a connection with the learning environment and transformation of learning experience through this connection. Learning happens when learners are able to understand how they learn and what they learn. This phenomenon is termed as metacognition; however, it must be noted that the ability of learner to be engaged in dialogue about learning experience and to reflect upon it are as significant as metacognition (Bruner, 1961; Schön, 1987).

The connection of social context and environment to learning is the key focus in social learning theory (Lave & Wenger, 1991). Muro & Jeffery (2008) have cited this theory as an essential element for sustainable management of desired behavioural changes. The theory is based on the understanding how we learn from our interactions with peer in terms of social context. Learners may be able to develop the behaviour they observe for a certain period of time. Imitation and assimilation of others' behaviours may become a tool for leaning specially if assuming the observed behaviour is rewarding. The actual reproduction of desired observed behaviour can be achieved through imitation (Bandura, 1977). Constructivists believe that knowledge is context bound and individuals make meaning from their learning experiences and also from their own view and understanding of reality while deeper learning occurs through reflection (Mezirow, 1991).

According to Hawkins and Shohet (2006) there are three learning zones. First one is the comfort zone, second one is the learning zone and the last one is the panic zone. The comfort zone is automatic and in this zone the learner is not seen as unique. All learners are viewed as homogenous. The zone in the cycle is the learning zone, which is basically a flexible boundary between prior knowledge and what is yet to be learned. When the learners are in the second

zone, they do not have answers to everything rather this is a stage in which the learner is at the beginning stage getting ready to learn.

The panic zone is the zone in which the learners feel that they do not have required skills or knowledge to handle the challenges they are exposed and this when the fear and panic factor sets in, learners as a consequence, tend to withdraw to safety zone. This scenario projects two aspects, learners may pose resistance to new learning as a sign of safety or embrace the change and push the boundaries of their learning. At this point, Vygotsky's theory becomes relevant which presents the idea of zone of proximal development (ZPD) and scaffolding. According to this theory, teachers' ZPD (learning zone) will widen if they are provided with proper mediation and scaffolding (Vygotsky, Veer, & Valsiner, 1994).

Hawkins & Shohet (2006) adapted Kolb's (1984) model of cycle of action learning. In this cycle each learner can start at a different step or point and along the way, may struggle with difficulties at different stages in learning. On the other hand, single and double loop learning model of Argyris (1992) also links two convergent aspects needed for learning - action and reflection (controlling variables, reviewing, and thinking) which are often being parallel processes happening simultaneously (Watkins & Marsick, 1992). Reflection involves intentionality and serve as a tool in making teachers conscious of their own learning (Schugurensky, 2000). It is expected that the learning focus presented in this model will be evident in the post intervention discussions and reflection.

How Teachers Learn Better?

It is necessary to look into how teachers can be made to learn better and what factors are involved. Teachers learning is a complex phenomenon. No wonder, teachers learning happens in more than one paradigm like their students learning.

The paradigm of teachers learning articulated by Gall and Renchler (1985) as "deficit in skill" was criticized by many other scholars because teachers learning is not located in context of one paradigm only. Some researchers like Garmston (1991) have placed teachers learning in paradigm of viewing teachers as vessel that need "to be filled" with necessary skills for teaching. However, in the recent years, professional development has been placed in the paradigm of professional growth (Feimam-Nemsar, 2001). Researchers like Fullen (2006).

According to Ann Webster-Wright (2009) this way of thinking, supported by results from research in schools around the world, indicates a shift away from whole school CPD activities and workshops for teachers during in-service training.

Bocala, Hargreaves and Fullan are united on the significance of enabling teachers to learn within their own school environment by providing them with opportunities, but Bocala also points out that this kind of learning is most effective when at the same time collegiality is also adopted. For the purposes of this study, companionship and cooperation between colleagues sharing responsibility is seen as supportive interaction between colleagues, working towards a common goal (Bocala, 2015).

A school's capacity to support teachers becomes limited when the focus is merely on the effectiveness of individual teachers and not on the way or manner in which a school is organized (Johnson, 2012). It is imperative to evaluate what opportunities are provided to the teachers to learn within the context of the school i.e. how they are enabled to learn from the school environment, and how collegiality contributes to it. Another crucial aspect to be

considered is that the strategy or programme which works in one context might not be suitable in another context. The plans should be carefully selected and drafted, and the CPD strategies need to be localized according to the context. The key factors that control the results or outcomes of PD are the educational systems to which the teachers belong, their background training and knowledge as well as their teaching beliefs and practices.

Approaches to Professional Development

There are number of approaches, methods, practices and structures which are considered as manifestations of professional development, for example, graduate programmes for teachers, study groups, use of research groups and research programmes, lesson study, career progress incentives, study programmes for teachers, professional development courses, certifications of teachers and many other such activities which have been taken as approaches to professional development. However, an interesting aspect to such beliefs is that there is no unifying view about the outcomes of these approaches and structures of professional development.

Professional development of teachers happens in many ways, it is usually a part of learning in school context and those seeking senior management positions in school, specialist or leadership roles evidence CPD particularly when credit bearing is a necessity for assuming such roles. In addition, Hustler, et al., (2003) also found that teachers are seeking meaningful CPD which facilitates change not only in professional practice and school effectiveness, but, importantly, in the development of the self.

Training is a fundamental, yet often a disregarded tool in in- service work with teachers and teachers at times are left on their own to discover the complexities and dynamics of teaching. It is important that useful training opportunities are provided so that the teachers may improve and develop their teaching skills (Doecke, 2003; Hargreaves & Dawe, 1990). Training. If the teachers keep on working on their own without any guidance in the form of faculty development activities, courses and practices, they would not be equipped with what they need in order to deliver a better teaching learning experience and environment. Professional development happens, when teachers are actively and consciously engaged in their own learning and development process which will be able to enhance the learning experience of their students as well.

The scholars who have worked on teacher development exhibit some common themes that include reflection, collaboration, action, and observation (Kervin & Turbill, 2003). Bubb and Earley (2007) talk about the importance of balance between expert input and the environment in which the teacher is situated. According to Aileen Kennedy (2011) for good results collaboration and the sharing of expertise among teachers needs to be fostered. Collaboration, sustainability, and enquiry and requirements for a PD plan should be a result of observations of teacher's work with their students (Bolam, et al., 2006 & Darling-Hammond & McLaughlin, 1995).

Professional Development: Methods and Practices

Literature in the recent years is the commencement of identifying the professional development practices and methods of delivery that seem to be of specific value to mid-career

teachers. These practices identify that as professionals learn, their knowledge gets wider and also more specialized and also that, their capacity to increase and outspread their knowledge and skills also grows. (Brown-Easton, 2004; Joyce and Showers, 2002)

Popular Professional Development Practices

Guskey (2000) has conducted an extensive review of popular professional development practices and has highlighted the advantages and disadvantages of these practices. In his review, he discussed almost seven practices of professional development being popularly used in school, a brief summary of his review is as follows:

Training: It is a traditional and perhaps the oldest method of teachers training and it mostly carried out through demonstration, whole group discussion sessions, structured workshops, content presentation or even readings, etc. There are certain advantages and disadvantages of this methods like all others. Such kind of delivery mode works well with large group and makes sharing information and knowledge easier. However, it has its own disadvantages which include it excludes the individualization factor or doesn't offer choices for participants. The elements of continuous feedback, supplement or coaching also usually remain missing.

Study Groups: Study groups focus on a particular issue, there can be various focus group which study different dimensions of the same issue. They can operate in parts and bring new learning as a whole. Advantages attached to this practice are lesser isolation and coherence. The focus is clear and the learning is ongoing. However, the study group may lose its focus or purpose at times because the individual participation can be discouraged by the dominant members and the group may become opinion group instead of research and learning focus.

Individual Needs Activities: This practice identifies individual needs and focuses on creating personal plans for teachers and it also assesses the success of the plan. This practice has advantage of being flexible and offers choice which promotes individualization. It offers opportunities of reflection and analysis. But on other hands, this practice may have its own disadvantages such as a possibility of repetitive work or less connected with other PD areas. It may even lead learning in isolation.

Observation and Peer Coaching: This practice promotes learning from peer through observation and coaching. Two or more colleagues observe each other, it may be coaching or peer mentoring, they give feedback through discussion or written reports. This practice helps lessen learning in isolation in the system and promotes critical thinking and usually leaves a positive impact on all participants. But the other hand, this practice may disturb the relationship balance in the organization and may be come counterproductive if there is no clear demarcation in observation and evaluation. And also, such practice takes time because a culture of mutual trust takes time. It needs to be well-planned well focused.

Mentoring: Mentoring is also one of the common practices which is popularly used in many systems. It is carried out by having a structure of regular meetings of more experienced professional with less experienced ones. The purpose of the meeting is sharing and guiding the less experienced individual. This process may be time consuming and may keep resources engaged over the period of time. This practice has its advantages also, both learners learn to reflect on their learning. They tend to be more metacognitive as a result of being engaged in this practice.

Professional Development oriented Processes: At times, professional development is carried out by opting for curriculum development & design or its review. Sometimes implementation of new strategies or problem solving is also at the core of this practice. This practice has its own advantages like enhancing knowledge for the system in local context or solving authentic problems and it also promotes the culture of collaboration. The disadvantages may result in tilt towards tradition instead of innovation or may involve only small groups. This practice also needs more time and access research and resources for guidance in decision making or carrying out action plans.

Inquiry/ Research Based: At times, systems choose for inquiry-based research and 5 steps of action research are used to determine a problem and finding its solution. It is a powerful practice which helps teachers build their knowledge, skills and empowers teachers in practice. This practice may need time and extra effort of individuals to initiate the process of change.

Liberman has advocated teaching teachers through conferences, workshops and training courses in two studies conducted in 1995 and 2001 and also indicated that such engagement in these activities promotes awareness among teachers about new ideas and research in teaching. These two studies also highlight the importance of job embedded learning through planning teams, peers, mentors, friendships and also research. Learning in and off school through such activities and networking offer multiple opportunities of deeper understanding and multiple approaches and perspectives. Teachers learning takes place with time, it does not happen isolated moment or sessions. Active learning is tied to opportunities which connect teachers' prior knowledge to new understanding (Cochran-Smith & Lytle, 2001). The overall direction of new approaches to professional development is constructivists oriented more than just transmission of knowledge. Like all other learning experience, this too is based on connecting prior knowledge and previous understanding with new learning environment and situation and this experience is over all particular and social.

Effective Modes of Delivery

In a 2008 report commissioned by the Training and Development Agency for Schools, the key findings show that the teachers value the CPD that gives importance to self-evaluation, working collaboratively, experimenting with classroom practices and peer feedback. The focus of the teachers is that the CPD helps in improving their teaching for the benefit of the students rather than the school image. The report recommends that the CPD approaches should be

collaborative and research informed, and that the schools should be supported in developing such approaches. Furthermore, the report suggests that teachers should be involved in active forms of learning, and there should be more emphasis on the long term, sustained learning. Teachers too like the schools need to be give support in coming up with collaborative, classroom-based practices.

For senior teachers, it is vital to understand the importance of CPD, the schools should provide such support to them that they get convinced of the importance of such programs. The senior leaders and teachers should be engaged in developing CPD strategies for teacher and school development. The report also suggests that in-school collaborative practices and CPD plans generate greater coherence. Programs that are out-of-school should only be carried out if absolutely necessary for the learning conditions of the teachers and the students. The pattern or plan for the CPD needs to be explicitly be made available to the stakeholders especially the teachers who are part of that program, it will help in understanding the rationale for the CPD within the context of the school. One of the fundamental suggestions of the report is that the school leaders must be aware of the advantages and shortcomings of the plans and strategies in the CPD before implementation.

Assessing the Usefulness of Professional Development

There is no easy way to measure what programs or pursuits will lead to changes in student learning (Kelleher, 2003). The long-established practices of teacher training programs for PD are often criticized. The reason for this is that often these programs do not have any follow-up and the fragmented and incoherent experiences of the teachers in these PD programs make them feel confused and due to this probably their training is not reflected in their teaching. It is therefore imperative that these programs are on a regular basis assessed and evaluated, so that their relevance to the teaching practices is maintained and the stakeholders also remain aware of their purpose and utility. This raises the question that how do we measure our investment in professional development? Simply asking the teachers about their opinion on a particular guest speaker, or training session is not adequate, because it does not convey any information about how their training will be reflected or implemented in their teaching. The important thing is to find out how teacher's PD will affect student learning.

According to Broad and Evans (2006) evaluation of professional development is critical formative information for developing effective programs, but they argue that professional development programs are do not usually evaluated in any systematic way. Evaluation is done via feedback questionnaires that assess participant enjoyment rather than the impact or outcome of the activity. Guskey (2000) and Goodall et al. (2005), point out that evaluation connected to professional development is quantitative in nature. It consists of counting or recording or outlining the activities in a professional development program and do not provide an "analysis of their impact on learning or practice". They do not collect any data regarding improved teaching or learning. Following Broad & Evans recommendations I too believe that "assessment or evaluation practices designed to determine the effectiveness of various models of professional development must be based upon solid principles of assessment" (2006).

Stiggins (2001) puts forth five broad standards of assessment quality for use with adult learners:

Standard 1: Quality Assessments are derived from clearly specified targets and outcomes; Standard #2: The results of sound assessment should be used to develop further learning or plan action; Standard #3: Appropriate assessment methods reflect the desired outcomes and kind of evidence required; Standard #4: Quality Assessments provide a sufficiently varied amount of evidence to allow confidence in evaluation and forward planning; and Standard #5: Sound assessments are designed, developed and used in such a manner as to eliminate bias (Broad & Evans, 2006). Shepard (2000, p. 12) suggests the development of a learner community in which the teachers would automatically critique their own work and seek feedback would exhibit the “same commitment to using data systematically as it applies to their own role in the teaching and learning process.”

According to Kelleher (2003), professional development must be cyclical. By backward mapping the cycle identifies outcomes and aids in planning in attaining those goals. It is vital that the evaluators assess the professional development for their teaching and learning goals. Self-assessment of learning, observation, conversation and products can be used as the assessment tools for experienced teachers (Broad & Evans). The “will to learn” or motivation to continue to improve practice is connected to the metacognitive ability of self-assessment (Eekelen, Vermunt and Boshuizen, 2005).

According to Katz, Sutherland and Earl (2005), “individual, social and institutional factors combine in complex and nonlinear constellations to shape how learning and change take place in school” (Guskey, 2003) studied characteristics of effective professional development, drawn from various organizations. He identified inconsistency in the claims of the research and the lists of “effectiveness” characteristics. Broad & Evans in their CPD literature review indicate that Guskey’s findings show that “many lists cited increased content knowledge as a key measure of successful professional learning but this has not been fully proven in all subject areas” (2005). The inconsistency occurs when the characteristics listed as key characteristics are inconclusive or show contrasting evidence to what they claim e.g. sufficient time, resources, collegiality & collaboration etc. Goodall et al. (2005) applied Guskey’s evaluation scale and arrived at similar themes in their study of the influence of CPD in schools in England.

“Evaluation of professional development rarely differentiated between different kinds of benefits in relation to different purposes, it was often based upon individual self-report that relates to the quality and relevance of the experience and not its outcomes, and rarely attempted to chart benefits to students, the school or the district” (Broad & Evans, 2005).

Increase in the level of sophistication in evaluation as well as coherence are recommended by Guskey (2003) and Goodall, et al. (2005). They explicitly suggest that those indicators that link CPD with student learning require special attention. According to Guskey indicators such as “assessment results, portfolio evaluations, marks or grades, scores from standardized exams and even behavioural measures such as attendance, retention and participation in activities as potential ways to determine if PD is having an effect on student achievement and learning” (2003, p. 748). This evaluation should be an ongoing process. The stakeholders must be able to understand it. It needs to be informed by multiple kinds of data and multiple sources of data. The evaluation process must be systematic so that it is self-motivating. Along with this there is a broad range of

recommendations that both give, related to purpose, location, impacts of models of delivery, and outcomes. Their recommendations related to purpose deal with the change, improvement, and maintenance. As far as location is concerned, they give suggestions about the on campus and off campus CPD. Their recommendations encompassing the models of delivery used talk about the collaborative and didactic models. And last but not the least their recommendations regarding the focused outcomes in the design of evaluative processes deal with the direct and indirect benefits for the pupils, the teachers, the classroom, the department, and the school.

In short, it is commonly seen that the PD activities and programs evaluate participant satisfaction, but this do not ensure the professional learning or shift in teaching practices. There is a dire need to relate assessment of these programs to the teacher learning and also to the student learning. Several information sources and measures are needed to effectively evaluate the intricate and multi-faceted nature of successful professional development, this includes observation, portfolios, behavioural measures, assessment data, etc. Association of program goals and standards offers intelligibility. Researches have been conducted in order to structure assessment and evaluation frameworks with performance indicators to aid in the process of self-assessment and evaluation (Broad & Evans, 2005).

The review of the researches indicates that the important components of PD are the connection of professional development to all facets to teaching and learning in order to maintain teachers engagement in learning. The PD programs should comprise of assessment of professional growth as well as the fulfilment of program goals; guaranteeing forward planning and reflection as part of the professional development cycle; providing many varied learning processes and practices within a learning framework. The CPD programs should fashion integrated design that aims to improve student and teacher learning, combining it to the larger system and integrating “a range of possible learning activities within a job-embedded context is recommended in the literature” There is agreement that the content of the PD programs should be evidence-based knowledge and practice. Time, resources and supportive structures are key elements for effective professional learning (Broad & Evan, 2005).

What Factors are Important

The first step toward planning any teacher development programs is to earn the trust of teachers. It is important for the teachers to know or believe that the professional development program that they would be undertaking will be long lasting and not a mere waste of their time and efforts. Teacher participation can be more involved. Key factors of any teacher training are for the training plans to be flexible with their review and assessments and to provide opportunities to reflect. The project must demonstrate this aspect to keep teachers engaged and convinced. School administrators and leaders assign more weightage to professional development activities developed in school context in comparison to randomly planned and delivered professional development sessions which do not focus on schools or are not school based (David, 2006). Some of the examples of such activities are good practices from other schools, linking research with school based professional development sessions. Three valuable recourses for school based professional development sessions can be mentoring and collaboration among teachers, best practices from other schools and voice of students.

Basing my intervention on borrowing best practices from other schools helps me in the planning and implementation of my intervention.

According to Wlodkowski (2003) for experienced teachers, contextualized job embedded learning through research holds great importance. Teacher and student learning and performance can improve by using research or professional inquiry. In a 2006 report prepared by Dr. Kathryn Broad Dr. Mark Evans present the findings from a review of the literature regarding professional development content and “delivery” processes/practices for experienced teachers. This review presents ERIC, other education research databases, Internet, OISE/UT Education Commons resources, and materials produced by provincial, national and international associations and educational jurisdictions. The information and conclusions contained in this report are not necessarily reflective of the policies, views and requirements of the Ministry of Education of Ontario. The key findings involve professional development practices, experienced teacher stages and pathways, standards, assessment, and considerations for professional development.

A collaboration between universities and districts which acknowledges and gives importance to the power of practitioner research and productivity paves the way for better understanding of the teaching learning process and is beneficial for all stakeholders (Leithwood, McAdie, Bascia & Rodrigue, Eds., 2006). Cochran-Smith and Lytle (1999, 2001) advocate teacher inquiry, they assert that it leads to transformative prospects of the education system. McLaughlin and Zarrow (2001) seem to be in agreement with the above assumption. Teacher inquiry and research projects are on the rise and establish the influence of teacher inquiry in different ways: teachers as investigators and problem generators (Sheerer, 2000), participatory action research (McIntyre, 2003), inquiry groups (Duncan-Andrade, 2004; Evans & Reynolds, 2004), practitioner-based collaborative action inquiry (York, 2005), and teacher inquiry and personal ethnography, (Donnelly et al., 2005).

Professional Development as Educational Change

Fundamentally, teacher development is a change or shift in the teaching practices. This development is seen in terms of an improvement in the learning outcomes of the students. In his theory of Educational Change, Fullen stresses on the outcome of teacher development in terms of improvement in learning by the students. However, it is important to keep in mind that teachers are usually subject to frequent changes in policy. They experience random approaches to teacher’s development over the years of their service. Due to such inconsistency in policies, the teacher’s confidence in CPD activities is adversely impacted. Also, the lack of or complete absence of review, follow up and assessment of such development programmes leave teachers demotivated and disinterested in professional development plans. Because of this trust deficit, it becomes difficult to convince teachers to participate whole heartedly in the development activities.

An Important Reminder

Reading and analyzing various learning theories, career stages and professional development approaches and methods add value to our understanding about teachers’ professional knowledge (Hammerness et al., 2005). However, one must be watchful that

professional learning of teachers is a complex phenomenon and is dependent on number of factors and combination of various element during the learning process. Predictions about teachers learning outcomes while designing an effective professional development model, cannot take all factors into account. Professional learning cannot be taken as a linear process. Unique personal needs, connection with learning environment, teachers background knowledge and even the capacity of individuals to learn differently are some of the complex phenomenon constantly at work in professional learning. Therefore, frameworks and models suggested in literature offer more complex paths and approaches to professional learning of teachers. Dall’Alba and Sandberg (2006) have added “horizontal and vertical” dimensions to professional learning of teachers after having conducted a critical review of number of studies. Horizontal dimension points out progression in acquiring skills as teachers gain experience and the vertical dimension reflects the variation of professional knowledge, with progress in experience teachers become more aware of their own learning and understand their profession and context better. The combination of these horizontal and vertical dimensions which mark progression in skills, practices and understanding the profession allows far reaching trajectories professional development and professional growth for teachers.

Research Question:

How does implementation of professional development model “Using Fundamental 5 for delivery of quality instructions” develop teachers?

Sub Questions:

- How do teachers involved in the intervention view the professional development?
- According to the perceptions of the teachers, what factors were for their professional learning during the implementation process?
- Which professional development patterns were prominent among the teachers involved in the reform?

Phase 2: Research Design

In this section, I will discuss the research design and the research methods. The current research design will serve two purposes for meeting research aim which are mentioned in the table below.

Using Research	to explore the process of development and the learning that has taken place. to focus on processes, changes and how particular strategies promote teachers learning to gain insight about teachers' development as professionals and its impact through this intervention.
Using intervention	to explore how using effective strategies and structure can enhance teachers' teaching abilities. to develop a community in a primary school, to support the development of teachers in which they can learn and collaborate in delivering quality teaching

Ethical considerations

Before moving onto details of the research methods, I will first discuss the ethical considerations and issues arising during the project.

The key reference for ethical consideration is BERA ethical guidelines (2018). I read through all the guidelines for a educational researcher and have to follow them as much as possible. Prior to conducting the research, I started talking to my colleagues about the model of fundamental 5 and explained to them how I want to use this model for school and teachers' improvement. The purpose of the research was made very clear to all participants. All views were welcome in informal discussions and then I started working on developing the project under the priorities identified by teachers. I gained the research approval from CUREC (Central University Research Ethics Committee) before collection of any kind of data.

Keeping in view the guidelines by BERA (2018), I decided to create a questionnaire for myself for addressing the key issues in ethical consideration of this research and development project.

1. How do I initiate the idea of research project in my school setting?
First of all, I wrote the approval letter to the board of our school. As I am serving as the principal of my school, I had to therefore, seek consent from the members of the board. After receiving the permission from the board, I started talking about the teaching practices with teachers before planning the project. I held random informal discussions with teachers in order to familiarize them the concept of teachers' professional development.

2. How can I ensure the transparency in getting consent of participants?
I explained the project details and the purpose of research with all the teachers and gave them documents to read about the structure and the purpose of the project. I also shared

excerpts from BERA guidelines with them for their reading. As prompted by Walker, et al (2008), I had prepared two pages long overview of the project for my participants (appendix). It was emailed to all the participants. After two weeks of this discussion and sharing of details, I shared the consent form with the participants and gave them one more week to think about it and consider the idea of participation (appendix). Throughout the research process, I ensured them of their right to withdraw from the research at any point. I also gained consent at the start of each interview. Participants were allowed to ask questions and were also assured about the anonymity and safe data storage and usage. I had stored my data in password protected folder on my personal computer and

3. How do I protect the identity and confidentiality of the participants?

The data I collected was stored in secure password protected files and the data recorded in papers was stored in my personal laptop bag which was never left unattended. I also ensured the participants the data doesn't affect their evaluation as teachers in any way. However, because of the power relationship with teachers, it was difficult for them initially to be comfortable with the idea of head teacher conducting research in school and collecting data. To address this ethical issue, I chose for an option of anonymity and I also shared with the participants that they can ask questions about the sharing the findings and research design. The forms I prepared for interviews or discussion didn't ask for recording the names or any other identification.

4. How will my role affect the process? Any harm?

I kept reflecting on my role as a researcher and as a school leader throughout the process. The professional boundaries within different groups may affect the process and course of the researcher, (Akkerman & Bakker, 2011) I was, therefore, mindful of the reflection aspect of my role. I was a facilitator in the first stage but then I tried to assume a reflection role but I am also aware that I had my agenda for the project, I may not have been as unbiased in reality. I might have chosen the patterns of discussions and interviews according to my "view of the world". I am also aware that in spite of assuming reflection role.

5. What are the consequences of the research for all participants including myself? Any potential harm?

I want to acknowledge that the whole process might have posed some kind of emotional risk to all the participants. I attempted to mitigate this effect during discussions with participants. I had tried to create a rapport of open communication with participants and tried to make myself available for them through WhatsApp and email so that they can approach me to discuss any feeling or situation about the project that might have experienced.

6. What are the possible beneficial outcomes of the research? Is it meaningful and useful for the participants?

The possible predicted beneficial outcomes was the development of skills, and knowledge of our teachers. A changed school culture and teaching quality was expected to rise. Apart from that, I expected them and myself to be more reflective of our practices. The

idea behind the project was to empower teachers for performing better against the teaching norms and standards.

Explanation of the Intervention: Using Fundamental 5 for Delivery of Quality Instructions.

“Fundamental 5 for delivery of quality instruction” is a well-researched model and has been used over decades for teachers’ development. The model was developed by Mike Laird and Sean O’Casey to help teachers overcome the gap in their training and experience. A brief detail of strategies used in the model are as below:

Fundamental 1: Frame the Lesson. The first one is these five fundamentals is framing the lesson. To frame the lesson, the teacher clearly shares learning objective and learning outcomes of the lesson with students. What students will be doing/learning in class today? What students will be able to do with that knowledge. This strategy is called “framing” the lesson because it summarizes the beginning and the end of the lesson. At the beginning of the lesson, teacher should state the daily learning objective(s) in student-friendly language and communicate a clear focus for the day’s class. Teachers must post the lesson content in a visible place in school and they should also take few minutes from the beginning go to the lesson to let students understand what will they learn, how will they learn and why will they learn. They should be shared with the expected outcomes. Teachers post the learning objective and learning out come in student friendly language.

Fundamental 2: Work in the Power Zone. This strategy recognizes a distinct relation between the positive impact on students learning and the position of teacher’s body during instructions. Students interaction with teacher can significantly impact learning. Teacher’s physical nearness to the students increases the chances of better learning. Teacher should arrange their classroom in such a way that all students are approachable and teachers can physically reach out to all of them. Teacher can enhance the scope of assisting in learning just by physical nearness (Poizzer-Ardenghi, L., & Roth, W.-M, 2005).

Fundamental 3: Frequent Small Group Purposeful Talk. Teachers must provide a talk time to groups in class after every 10 to 15 minutes. Teachers should use natural transition points in the lesson to initiate discussions in groups. Pre planning questions is helpful way to implement this strategy in class. Young adults prefer active learning over passive and they enjoy learning from peer interaction over learning from adults. Interaction with peers during learning makes learning a pleasant experience for them. (Developmentally Responsive Middle Schools, NMSA, 2010)

Fundamental 4: Recognize & Reinforce. Success & improvement needs recognition must be personalised with each student. Reinforce all good things & procedures. Descriptive praise, where you tell the child exactly what it is that you like, works best of all. On top of

that, praising children when they're behaving well is likely to make them want to keep behaving well." (Raising Children Network (Australia) Limited, 2012).

Fundamental 5: Write Critically. It is important that teachers understand the need of students about notes taking & how to use them. Some of the examples in classroom are purposeful note taking, summary paragraphs and class exit tickets use as a warm up to begin class. The literature (quote literature) reveals writing creates retention for every level of student although the least observable trait of the fundamental 5 is "write critically" (Gregory, G. H., & Chapman, C. (2007).

Structure & Strategies Used for Implementation

Literature reveals that use of integrated approach in professional development models is more successful than using one model or one method. Fullen (2005) elaborates the three levels of reforms in a school setting which depends on transformational approach through integrated activities of professional development.

Referring back to literature review, Goodall (2005) discovers that including a range of professional development activities in the structure helps achieve better outcomes for teachers as well as for students. Goodall's model facilitates teachers to focus and reflect on their learning. Instead of rigid structures of sessions, it allows multiple approaches to be applied for development sessions, for example, teachers' reflections, groups discussions, peer views, extending professional dialogues within school community, starting point, and also flexibility of structure and plans. Study by Liberman and Wilkin (2006) also supports the similar finding and promotes integration of multiple approaches in teachers' development plans. Keeping these considerations as the starting point, the intervention was structured in the following strategies.

The model was designed on the analysis of popular professional development practices by Guskey (2000) discussed in literature review. Keeping the commentary by Guskey and an assumption of achieving better results of the designed intervention in view, an integrated approach was adopted. The intervention was designed using multiple methods, practices and approaches in order to mitigate the disadvantages and maximize the benefits attached to each practice as discussed by Guskey (2006).

Baselines Data: Reviewing existing documents

Professional development recommendations from the previous years was used as one of the supporting methods for developing an understanding of the school context and teachers' needs.

As part of furthering my understanding about the topic, I viewed the existing documents in school about professional needs of teachers in an international school system. Reviewing existing data can be very helpful at the planning stage. I wanted to understand the priorities of leaders in school about the professional development aspect in school development. I reviewed school development plans from the previous years with a major focus on PD needs of teachers. I also collected the written feedback and reviews by school leaders and external auditors about the professional needs of teachers. The school had high employees turn over in the past two years. The data available was not complete and most of the teachers had left. It is significant to

mention here that I had the privilege of having an understanding of the implementation of the same model in context of two different schools.

Training Model. Training on *Using the Fundamental 5 for Delivery of Quality Instructions* led by the researcher lasted for four weeks with all teachers. Teachers were given two-hour training sessions in whole group. The first session was introducing the concept and sharing the reading material with teachers. The second session was planned in form of different activities. Teachers delved deeper into the provided literature, they discussed and reflected together and they also planned their lessons using fundamental 5 for delivery of quality lessons. They shared this planning with their peers by the end of the session and peers give them feedback. Both the sessions had multiple opportunities of reflection and discussion among participants.

The next four sessions were based on different segments of fundamental 5 for delivery of quality instruction. Teachers started implementing the strategies in their classes and these sessions were more of feedback and reflection sessions. Teachers discussed in groups about what were their challenges, how they were trying to overcome these challenges and how did they feel about the intervention. They also discussed how implementing this intervention changed their teaching practices and how the teaching became different in class for them, they discussed changes in students' behaviours as well. I will discuss different parts of the training model in the paragraphs below.

Whole group discussion sessions. Teachers had two whole group discussion sessions. During each session which lasted for two hours, teachers discussed all five fundamentals one by one. Teachers easily made connections with the strategies and most of them shared during the sessions they had been applying this strategy in their lessons; however, it is the first time they had to be consciously mindful of sharing the learning objectives and the outcomes with students. Teachers were asked to use this strategy as part of daily practice in first three to five minutes of the lesson. In group discussions, teachers discussed all five strategies one by one reading from a handout given to them and they expressed their ideas and brainstormed with their groups on how to apply these in real classroom teaching. Social learning theory (Argyis,1992) iterates that double loop learning can occur in an open and fair dialogue environment. The group must work on the rule of mutual respect. Participants value all opinions expressed in discussion and build their discussion on these opinions. This practice was more like using study groups from the review of professional development practices reviewed by Guskey (2000).

One on one sessions. The second part of the intervention was to hold one on one sessions with teachers and prepare the lesson plans together. The purpose was to provide individual help for teachers for any learning gaps they might have during the whole group sessions. As reiterated earlier in this section that the learners may enter at different points of learning cycle. This activity helped me understand which teachers need more time or coaching to be able to implement the intervention in their class. Having one on one sessions with teachers helped me understand the individual needs of teachers. After the training teachers started implementing these strategies in their classes. They started writing their lesson plans with

sections divided in the template for how they would implement these five strategies in their classrooms.

Visit your peers and reflect together. The review of best professional development practices highlights the importance of learning through peer coaching. Collaboration in acquiring teaching acumen plays a significant role in promoting the skill of analysing, reflecting and raising insightful concerns and queries. Teachers may be able to offer solutions to their colleagues when they observe each other in a safe unbiased environment (Glazr & Hannafin, 2006). Teachers visited their peers and reflected in groups or pairs to discuss their understanding about the model.

Study Population

The research was conducted with 22 teachers in all. All of them participated in the project. I chose five of them for semi structured interviews. Most of the teachers have been trained outside the country. Teachers' experience was between 2 to 7 years except two teachers who had been teaching for 15 years in different parts of the world.

Research Methods

I have chosen to use qualitative research methods for my study. I have planned to use two methods which are semi structured interviews and lesson observations. However, the primary method is semi structured interviews. All lesson observations couldn't be carried out because of the interruption of classes due to pandemic. However, I kept observing on line sessions of teachers.

Pre and Post Intervention Semi-Structured Interviews. Teachers discuss their experience, perceptions and challenges in semi structured interviews. The interviews were semi structured, teachers expressed their views about the professional development sessions they had been receiving. I recorded audio of these interviews, I deliberately avoided making videos of these interviews because I wanted teachers to speak freely. I transcribed the interviews later on. Considering the ethical considerations at this point once again, I informed all the participants about how interviews will be recorded and used. Two of the teachers opted for writing instead of talking. This choice was given to all of them, however only two opted for writing over speaking.

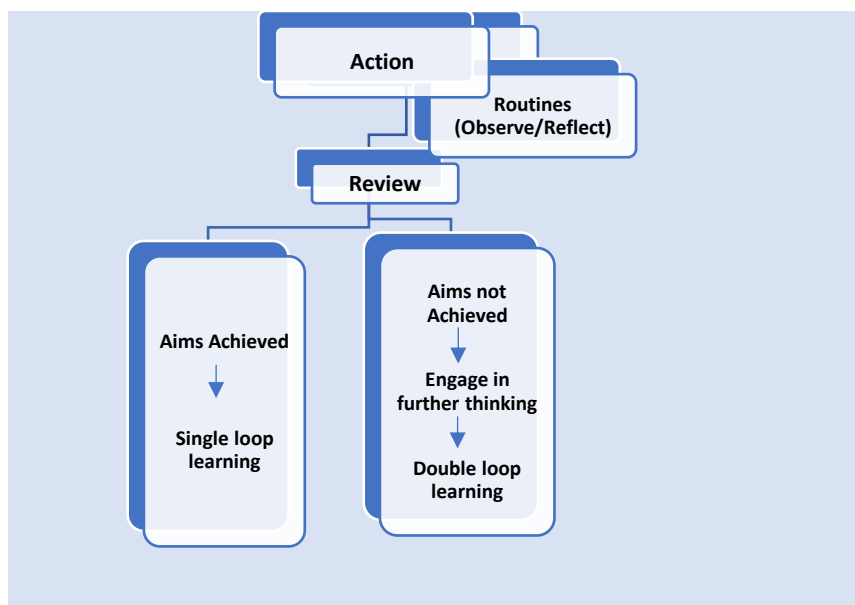
Pre and Post Intervention Classroom Observations. Pre and post intervention lesson observations were also used as one of the research methods for observing the effect of the intervention on teaching practices. All 22 teacher who participated in the research were observed. However, the pandemic situation had considerably disrupted the process of lesson observations. I observed the on line lessons of teachers. Observations were informed and teachers had discussion with the researcher after the observation.

Phase 3: Discussions, Findings and Analysis

The intervention was designed with a realist assumption of improving teaching quality in school after the training and implementation of Using Fundamental 5 for Delivery of Quality Instructions.

Hawkin and Shohet (2006) have based their learning model on Kolb's theory of action learning. As discussed earlier, the four phases according to their model are: plan; action & review; observe and reflect; and review. The planning and action of this research is based on literature review conducted. The training of the model is the action involved in the intervention and its implementation is the routinising the teaching practices. Observation and reflection were a continuous practice throughout the research design, teachers had opportunities to talk about their learning, reflect upon it and make suggestions. The training structure and research methods promote observation and reflection. The following figure is an anticipated model of the outcomes of the current study.

Adapted from Argyris (1992) & Hawkin and Shohet's (2006) Model of Action Learning



This model demonstrates that learning process doesn't occur in a simple and straight forward fashion; learners may enter the learning cycle at different points and may face different challenges at different learning phases based on their learning needs and other factors.

Review and reflection intertwined with doing (action) may change the course of learning significantly. Resultantly, the learning process will become more significant and leads the learners to discover more than one dimensions. To be engaged in review and reflection at

every stage and as a whole is significant because every stage has a different set of difficulties and also gives rise to new possibilities. The predicted outcomes may not be the actual outcomes by the end, a possibility of acquiring a new knowledge which was not considered initially. The acquisition of this new knowledge depends on how the learners make sense of the experience, The learning cycle having intended and unintended outcomes; can be a single or a double loop learning having more informed system, and also a scope of new thinking. A close study of the factors such as approaches, methods of delivery, collaboration, reflection and assessment, which tend to affect the professional development was taken up in the literature review.

Following the model of Hawkin and Shohet (2006), an allowance for ongoing collaboration, reflection and review during the process was made part of the design by having group discussions, peer visits and one on one sessions with teachers. Reiterated in literature review, reflection and collaboration were recognized as powerful tools and were used through peer visits and group discussions basing on the idea of practitioners becoming more aware of their learning if they reflect meaningfully (Schugurensky, 2000). The idea of reflection was targeted in the interviews and group discussion, teachers reflect on their own practices and articulate their ideas about their learning.

Discussions and Evaluations

Discussion and Evaluation: Research Design. I have chosen Sean and Mc Laird's Model of Fundamental 5 for delivery of quality instructions as an intervention. I had planned to choose a well observed intervention in context of an international school. Teaching population in settings like this school and other schools in Gulf countries is mostly trained in different parts of the world and their teaching is understandably, embedded in their teaching background, teaching beliefs and barriers.

Another interesting aspect is that teachers here mostly on family sponsorship visas and their stay in the country is usually short term and also uncertain. They do not prefer to be heavily engaged in strenuous professional development, their engagement in profession is dependent on how long they stay in the country. I have chosen an easier to implement intervention which is using five teaching strategies in classroom. Teachers do not have to be heavily engaged because teachers' lack of time is one of the most important factors impacting their engagement in professional development.

The benefit of choosing this intervention is that teachers didn't have to be involved in long labour of reading researches or complex structures of professional development models. It is well known that teacher struggle with time limitations. Literature review reveals that teachers usually do not have enough time to be engaged in heavy professional development activities. The intervention is based on a simple global theme of professional development for teacher which is: to be able to deliver a quality lesson is need of every teacher everywhere.

My realistic assumption is that these five simple strategies of classroom teaching may help teachers develop significantly if the design of the intervention takes care of most of the other factors involved. These factors have been discussed in the planning phase, i.e. literature review section.

One of the major responsibilities of my present role is to play the part of an instructional leader. Instructional leadership is responsible for the improvement of school systems and having effective professional development model in place for school development. The roles and responsibilities of instructional leaders such as principals, lead teachers involve development of teachers and of school, curriculum development, identifying teachers' professional needs and their fulfilment. They are also responsible for ensuring the whole group development and research opportunities within the school settings (Glickman, et al.,2001).

Directly supervising the teaching practice at school is part of my responsibilities. I have taken this project as part of not only for teachers' development but also for school development. Teachers may participate more enthusiastically when they are assured that this development would be sustainable and rewardable. I have included this important aspect for discussion in interview questions with teachers before and after the intervention. And based on my reading from the literature, I understand that primary focus on teachers needs in professional development will eventually lead to the school development as well. The selection of intervention becomes relevant referring back to Fullen (2012) who believes that teachers should be motivated enough to be able to attach a meaning to the interventions and professional development plans.

Discussion and Evaluation: Study population. One of the major issues in research is the nature of participation, voluntary and involuntary participation raises a question the findings, we cannot ignore an important consideration which is: whether the people who did not participate in the research have a different view or not. However, in lieu of ethical considerations, it is not supported and is not practically advisable to consider the views of those who have chosen not to participate. Therefore, the research should be mindful of the potential biases of the voluntary participants and treat this possibility as one of the limitations of the research.

Another source of potential bias is the nature of interpretive framework used by the researcher. Sturman (1999) emphasises to be mindful about the transparency at all stages of data interpretation, researcher should be aware that choices in data collection and its interpretation can change the course of the research significantly. Transparency in collecting data and its interpretation establish the credibility of method and results. My strategies for data collection and analysis are based on Sturman's advice. However, this research doesn't claim to be free from such limitations on account of personal and epistemological preferences.

Furthermore, it is clear that this is a small study of only 22 participants. The aim is not to make claims that what is interpreted from the data will necessarily be applicable to other population of the same profession. The implications of generalisation can be interpreted easily as being a contribution to analysis and theory (Miles and Huberman, 1994). The study by these two researchers also follows the advice of Sturman during the process of analysis and synthesis. Sampling in the context of my study, both within and across cases, are meant only to represent general constructs in relation to the context. The generalisations made in this study doesn't mean "all teachers or "all schools" it is more of the presentation of processes and the outcomes meant to be significant for similar systems. As Firestone (1993) suggests, the most useful generalizations from qualitative studies are analytic, not "sample to population." This issue was also considered by Cobb (2001) in his discussion of the generalizability of design

experiments: “This is generalization by means of an explanatory framework rather than by means of a representative sample.”

Discussion & Evaluation: Research methods. Before delving into finding and analysis section, it is important to comment on the use of qualitative research and the research methods used in this study. Many researchers like Barnes (1999), Black (1996) and Ritchie (1994) have considered that qualitative research methods as more effective tools for researches to be carried out in social sciences. Qualitative research methods, have gained popularity in past two decades (Bryman & Burgess,1994; Denzi, 1994; Morse,1994).

The aim of my research was to have a deeper insight about the views and perception of teachers about their learning and semi structured interviews were one of the appropriate tool I could use to explore the views of teachers which Robson (2002) has described as individual’s views and perception of the learning experience.

I have opted for qualitative methods of research for the project considering the popularity of using these methods in social sciences and also because of my background in English literature. Had I applied quantitative research methods; data produced would leave me dependent on external help for interpretations and analysis which would pose a potentially detrimental to the originality of the conclusions.

Discussion and Evaluation: Semi Structured Interviews. The purpose of interviews was to understand the learning experience of teachers who participated in the intervention, interviews also targeted the perception of the participants about their own learning. The aim was to understand how teachers reflect on their experience. These interviews framed within evaluative framework helped researcher to explore complex deep-rooted information from the interviewees (Wengraf, 2001). Many studies have supported the use of interviews as research methods in social sciences (Drury, Homewood, & Randall, 2011; St. John, Keane, Jones, & Milner-Guland, 2014). Interviews are an effective tool for researchers allowing them to focus on interviewee’s perception and point of view. Fontana & Frey (2005) argue that interviewee may highlight issues during discussions, they were not aware of and it may open up new opportunities for them to allow changes in policies and improve their own learning. Some researchers believe that interviews are a preferable research method because they help identifying and filling the knowledge gap specially when complex behaviours are being observed (Fontana & Frey, 2005; Timewell and Alexander,1995). I had used audio tapping and voice noted for the semi structured interviews. Literature available on research methods supports this strategy although it also recognizes that power relationship between interviewer and interviewee, or interviews conducted in groups may affect the level of articulation and openness of participation by members in the group (Robson 2002).

In order to mitigate such effect as part of ethical considerations, I had chosen to interview participants individually; however, in spite of taking this measure, having an interview with me because of my role in school, might have intimidated the participants. They might not have been able to express freely while discussing their views about different aspects of the intervention and their views specially in the context of this particular intervention in our school.

Discussion and Evaluation: Lesson Observations. The reason for opting lesson observation as a research method has two benefits for me. First, it is used to incorporate the triangulation of methods to mitigate the issues about authenticity and quality. Second, choosing this method was helpful in observing the impact from others point of view, it was important to understand the challenges teachers had in the implementation of the model in light of prior readings. Apart from these two reasons, it was also a way of addressing the limitation in using semi structured interviews. I was aware from the onset that conducting interviews with all the teachers might not be possible because of the nature of the method, analysing all the interviews would be time consuming and overwhelming.

The lesson observations were planned around three approaches suggested by Donald Freeman. (1982). These three approaches can be integrated into teachers' development programmes. In "supervisory approach", the observer's role is of arbitrary nature. Teachers receive comments and evaluations against a predefined criterion. The second approach is "alternative approach" where the teachers are provided with number of alternative approaches and are given opportunities to learn in many different ways as result of feedback and comments and lastly, the "non directive approach" which is designed around a detailed feedback and reflection by the observer.

The present study on the last two approaches for two reasons, one is the data collection and the second is in service training of teachers. These two approaches were embedded in research design where teachers and observers had the opportunity to reflect and follow up on observations notes collectively.

Discussion and Evaluation: Triangulation of Methods. The following paragraph comment on the rationale behind choosing more than one research method for the project.

According to Gorard and Tayler (2004) in order to mitigate the scope of limitedness in a research method, using a range of research methods for answering research questions is a useful strategy in educational research. The triangulation of methods helps develop a deeper understanding of the issue under investigation. I was able to collect data from existing documents, interviews and classroom observation which helped me develop a holistic view of the issue regarding teachers professional development needs. Using these methods recognizes the divergence and convergence of multiple independent measures applied to achieve the same objective (Campbell & Fiske, 1958). Data collected from different methods makes it easier to confirm the authenticity of methods used and the drawn conclusions and also pins down any deviation. It not only helps identifying the patterns and themes from different sources, but also ensures the authenticity of research methods used (Denzin, 1970).

In conclusion, two research methods were used in the current study for a better triangulation of the methods and data. Consequently, having two types of data from two different methods about the issue being investigated is helpful for the researcher to reach a more authentic conclusion. The main research method was conducting semi structured interviews, but I have also used baseline data, lesson observation, and teachers and students' views as supporting methods.

Discussion and Evaluation: Approaches and methods of data analysis. “When it comes to improving instruction and learning, it’s not the quantity of the data that counts, but how the information is used”. (Lewis, Harris, Muoneke, Times, 2012).

The phase 3 of my project is discussion and analysis of the data collected and the effect of the intervention on teachers views and practices. In the analysis of all qualitative data, as well of course not using the data as an interpretation of researcher’s biases. (Cohen & et al., 2000). It was important to be mindful of staying non-judgmental in data analysis. During reading, discussing and analysing data, it is duty of the researcher to provide a sense of safety to colleagues and to earn their trust because they might have revealed during the discussion which they wouldn’t have spoken about in normal school days (Simon, 2009).

During the studies being carried out in qualitative paradigm, the researcher, should be watchfully observant in capturing data which hint at important points which might appear in overlapping patterns and would be useful in answering research questions (Braun and Clarke,2006). A well-planned research design and correct application of appropriate methods will allow researcher capture the data that will answer the research questions.

If a research has to produce meaningful result, the data should be analysed through methodical framework. But the dilemma with social sciences researchers is the overwhelming nature of data in the form of narrative text. Social sciences researchers are tempted to use these methods because of theoretical and epistemological reasons, but the problem occurs at the stage of analysis; they are left stranded at the analysis stage due to overwhelming nature of data and struggle with producing useful and measurable results (Bryman and Burgess, 1994; Feldman, 1995; Silverman, 1993). The absence of following a methodical fashion in qualitative research poses challenges for the researcher to employ when, why and how to interpret the textual material gathered as data.

However, these issues have been recognized in literature growing in the past two decades. The issues in data analysis in qualitative research methods have been discussed at length by Bryman & Burgess (1994) & Cresswell (1997). These researchers recognise the need of developing more advanced tools for data analysis in qualitative researches.

Despite reading about data analysis from available literature, I found data analysis the most difficult part of my research. In qualitative researches, data analysis is a complex process and due to lack of due attention in literature, it is generally challenging for the researcher to find frames of instructions and guide lines. Qualitative data is usually massive but little guidance and interpretive analysis methods are available. The combination of analytical approaches, for example, observation data, filed notes, transcripts etc makes an overall meaning in qualitative research methods. It meant to analyse snapshots from data, cutting up things and examination of these pieces to better comprehend the whole. The data collected from all sources was categorized in three different folders. I had tried to create a model adapted from data based on emerging patterns and finally I created one table on the basis of my detailed observation and analysis of captured data. All emerging themes were recorded in the table and then all of them were discussed one by one systematically.

Guidelines were taken from Kyle’s approach for data analysis. A systematic categorisation through multiple readings of the data is at the core of Kyle’s approach (2006). This approach helped in classifying data into systematic analysis through identifying the codes and then themes, it also allows researcher creating a sequence of stages for data analysis. I

chose to opt for identifying themes in collected data using thematic analysis framework. Analysing the data collected from interviews was conducted in stages: first, condensing stories into shorter versions; giving codes, identifying patterns; and finally shaping themes for discussion according to these findings. According the grounded theory approach, data can be translated into codes and these codes can be further expanded as themes (Strauss & Corbin, 1997) and this practice allows creating definitions and explanations of the phenomenon under investigation. The next section of the assignment discusses the analysis of data.

Data Findings

Bruan and Clarke’s (2006) framework thematic analysis was used for identifying themes and their analysis. However, the data analysis designed in four stages is adapted from the guide by Bernadette Dierckx de Casterle (2011), based on Kyle’s approach of data analysis.

The guide proposes seven stages of data analysis, I have however, condensed the data analysis into four stages for this study.

Stage 1: from reading to narrative reporting

Stage 2: from narrative to developing concepts from data

Stage 3: re reading data for re testing concepts development

Stage 4: Constant comparison process and conclusions

Stage 1: Familiarisation with data: from reading to narrative reporting

Data collection and data analysis happen simultaneously in research process. In this stage, it is more of a pencil and paper work, I had been taking field notes during the research. I read through my notes made from baseline data, classroom observations and interviews.

Reading interviews was the most time taking and tedious process and I made further notes while reading though the text of these interviews. I had to read almost all interviews many times and I kept consulting the classroom observation notes simultaneously. Analysing qualitative data makes the researcher move back and forth constantly during the process. (Strauss & Corbin, 1994). I had 5 transcripts of interviews and lesson observation notes. Reading and arranging the data in light of my research question and research aim was the main task at this stage.

Stage 2: Generation of codes and concepts: from narrative report to developing concepts

I had collected lesson observation notes from the previous years and I had also collected notes from PD needs analysis mentioned in school development plans and professional development goals and priorities. Some of the major concepts I could find overlapping in the data are listed below. Table 1 & 2 given below are concepts identified during the reading of interviews and lesson observation notes.

Table 1. Concepts from Semi Structured Interviews

Professional development	Teachers Challenges	PD structure
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Reflection and feedback	Teachers priorities	Harmony in practice	PD needs
Struggle with time	Student participation	Time management	Teacher student relationship
Personal learning	Effort	Theory and practice	Teaching strategies
Time management	Peer help	Time management	PD needs
Classroom management	Factors impacting PD	Teachers	Priorities
Impact on teaching	Students learning	Teachers learning	School development
	Teachers needs	Long term PD plans	

Table 2: Concepts from Lesson Observations Notes

Peer learning	Concept of professional development	Curriculum development
Teaching with the concept of differentiated instructions	Recommendations for individual teachers	Learners needs
Professional development needs of teachers	Unaccomplished PD goals (time)	Classroom management
Inconsistency in implementation of PD plans	Collaborations with other schools and organizations	

Stage 3: Searching themes: re reading data and developing themes and concepts

After generating initial coding, I have converted these codes into recurring themes. This exercise will provide a foundation for the stage 4 of data analysis framework, I am following. This stage is about discussion and analysis of the findings.

The findings from the data analysis didn't deviate much from the literature review conducted for this study. The overarching themes in the literature review had covered different aspects of the concept of professional development. At this stage, it is important to recognize the biases of the researcher (Willig, 2013). I have tried to engage myself in personal and epistemological reflexivity in order to mitigate the effect of my biases and belief system and how I understand the effect of my choices in research on overall findings.

I must engage in my personal reflexivity in order to recognize my own biases and the beliefs system. Johnson and Duberley (2003) warn the researchers that biases and the belief system of the researcher will shape choices about selecting and analyzing the data and would challenge the assumptions which were believed to be realist at the beginning of the project.

Epistemological reflexivity reminds me of how the choice of research questions, selection of research methods and data selection dictated what I found in the end. I understand that the methods I have used have made a difference to what I discovered. I also accept the fallibility of how I interpreted the themes and the literature I selected to elaborate them further (Willing, 2013). Engaging in this activity removes the biases in the work of researcher and promotes realistic view of the data collection and findings.

The concept of Professional development for teachers

Teacher identified professional development as acquiring skills in formal and informal way of training. Four interviews reiterated that professional development is a set of formal and informal activities, training sessions and learning from other. Interviewee no. 5 spoke

thematically different as compared to other saying that it is self-learning, the participant did not mention any sessions or training.

Table 3: Concept of Professional Development for Teachers

<p>Interview 1: <i>“developing and improving skills to better meet the needs of students”</i></p> <p>Interview 2: <i>“...providing opportunities to teachers which will help them improve their skills”</i></p> <p>Interview 3: <i>“...training, workshops and other formal and informal session to improve skill...’</i></p> <p>Interview 4: <i>“...training and guidelines for improving teaching practice....”</i></p> <p>Interview 5: <i>“...training myself... I am always trying to get some kind of professional development...”</i></p>
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Professional development structures.

Responding to questions about structure of professional development, participants narrated that teachers should have more and free opportunities without pressures and compulsions. Participants spoke about that they would associate with the training only if it is connected to their needs. They also repeatedly talked about the time constraints. Teachers expectation from the managements about professional development seemed to have a similar pattern. They wanted the school leadership team to be more considerate about planning professional development for teachers. They want school to understand that teachers time is a

Table 4 Professional Development Structure

<p>Interview 1: <i>“...we must see some value in that...” “most of the them are too broad and not relevant...”</i></p> <p>Interview 2: <i>“...having limited resources and times hinders...”</i></p> <p>Interview 3: <i>“...the management must have a professional and positive approach, there must be realistic expectation from teachers...”</i></p> <p>Interview 4: <i>“the management should focus on the development.... rather than set criteria towards students’ grades....”</i></p> <p>Interview 5: <i>“... teachers’ needs are more important... I think school should think about these things before planning any sessions for teachers...”</i></p>
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Teacher's needs in international context.

Participants showed concerns about their teaching in international schools. They commented on how they should be trained and what do they need to learn in order to be able to deliver quality teaching. Teacher appeared to have faced challenges in dealing with students and community in international schools. Teacher feel it is harder for them to teach in international school and they find teaching significantly different in international schools. Teachers trained in other countries seem to find it harder to deal with the cultural diversity in international schools

Table 5 Teachers' needs in international school

Interview 1:

"...it was so hard for me when I came to join an international school. teaching here is so different..." " ...some kind of cultural shock is always there..." "....you will find many different nationalities of children learning together and often shock will be experienced..."

Interview 2:

"...keeping pace with the international standards..."

Interview 3:

"...teachers struggle with cultural difference here..."

Interview 4:

"... I think teachers are struggling with cultural differences...." " ... teachers don't have strong back ground in adjusting with students of different backgrounds and different mental capabilities..."

Interview 5:

"... issues because of students' behaviour..."

How teachers learn better: Methods and approaches.

Teachers talked about having integrated approaches to teachers' professional development. They wanted all their needs and time constraints to be considered in planning for professional development schedules. Teachers learning depends on how training sessions and CPD opportunities are created. The approaches and methods use discussed in literature seemed to be relevant.

Table 6: How Teachers Learn better

Interview 1:

"... teachers need to be interested and engaged..." " ...Just like students, teachers learn differently and respond differently..."

Interview 2:

"...a competitive environment with healthy rewards and proper check and balance..."

Interview 3:

"...training, workshops and other formal and informal session.... to improve skill..."

Interview 4:

"...we should have training and guidelines for improving teaching practice...."

Interview 5:

“...I am always training myself... I am always trying to get some kind of professional development...”

How teachers deal with challenges.

Peer learning is the most preferred way of problem solving for teachers. They like to turn to their seniors and colleagues for solution if they face problems in teaching. The data analysis reveals that consulting peers and seniors appears to be the most common practice among teachers. Teachers prefer consulting with their colleagues before as the first strategy.

Table 7: Challenges in teaching

Interview 1:

“... discuss idea and difficulties with your colleagues”

Interview 2:

“...discussion and sharing ideas with other teachers from other systems...”

Interview 3:

“... I talk to my colleagues and the to the seniors or even teacher trainer if needed...”

Interview 4:

“...I try to find out the cause and fix it at my end if I am unable to find a solution, I talk to my colleagues and seniors”

Interview 5:

“... if I face a problem, I try to find other ways to deal with it ... discussing with my colleagues...”

Collaboration from teachers’ point of view.

Teachers understand well about the learning through collaborating with other schools and other systems. They are willing of share best practices from other schools. Teachers believe that collaborating with other schools will help them learn better in their practices.

Table 8: Importance of collaboration for teachers

Interview 1:

“... you can take effective design.... and develop new approaches”

Interview 2:

“... definitely... the best way to move forward...”

Interview 3:

“...colleagues can talk about research based best classroom practices ...”

Interview 4:

“...colleagues can talk about latest classroom practices, teaching tools and procedures...”

Interview 5:

“...yes sure, looking for help from other teachers...videos from other schools...”

Differentiated needs of teachers.

Teachers have expressed their view about having different learning needs like students. They prefer that teachers’ professional development sessions should be based on their and should also be able to help them in performing well in the context.

Table 9: Differentiated needs of teachers

<p>Interview 1: <i>“...like their students, teachers learn in different ways and responds differently...”</i></p> <p>Interview 2: <i>“...different activities and courses”</i></p> <p>Interview 3: <i>“training, workshops and other formal and informal session.... to improve skill...”</i></p> <p>Interview 4: <i>“...training and guidelines for improving teaching practice....”</i></p> <p>Interview 5: <i>“...training myself... I am always trying to get some kind of professional development...”</i></p>

Teachers’ perception about the educational reform.

All of them found the intervention helpful, they discussed the usefulness of the intervention among themselves and found it helpful. However, they all were of the opinion that it took them time to adjust with the change. They found it confusing in the beginning but they found it easy to implement as time passed by.

Table 10: Teachers perception about the educational reform

<p>Interview 1: <i>“...the experience was a great learning...it’s a systematic way ...”</i></p> <p>Interview 2: <i>“...I loved attending the workshops... it really revives the energy and motivates me and makes me go on and on...”</i></p> <p>Interview 3: <i>“...it was really a good experience ...”</i></p> <p>Interview 4: <i>“...a great learning experience, very creative and up to date....”</i></p> <p>Interview 5: <i>“...it was a good learning experience; I think I changed my teaching considerably... I became more reflective. I would think almost after each class how can I use this strategy better or how can I implement that strategy in a better way ...”</i></p>
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Collaboration element of the project.

Before I write tentative conclusion of my study, I want to highlight the collaboration factor in my study. Given the context of the project, the teaching community in school was involved in the collaboration in many ways. The teachers had a voice in co-planning the structure of the intervention. It was designed through mutual discussions and preferences of the community. Teachers were using peer observations as a part of learning; group discussions

and reflections were dominant elements which exhibited a considerable level of collaboration. Teachers were involved in planning the structure of group discussions and also creating peer observation forms and protocols.

Another level of collaboration was exhibited in the form of peer visits, teachers visited their peer classrooms and chose to reflect together. Teachers collaborated for peer visits, made peer visits schedules with mutual understanding. “visit your peer and reflect together” was used as part of the intervention to promote the collaborative factor of the study.

Apart from these contextualized practices, guidelines and assistance by my supervisor was another form of collaboration. The feedback, discussion and seminars during the project were collaborative. Other than the supervisory advice as form of collaboration, the feedback and group discussions and feedback among my class fellows was also one form of collaboration. The structure of the poster conference was another manifestation of the collaboration during the project. The presentation of the poster and the feedback by peers was a meaningful collaborative exercise. Session with part 2 students about the research and development project was an exhibit of collaboration.

Phase 4: Taking learning further/Analysis and Conclusion

The patterns emerging from data analysis all methods used in the research. The findings didn't deviate much from the literature review. The analysis identified five key areas for an effective professional development.

Research Questions had addressed as three important areas of teachers learning through an implementation of professional development of “Using Fundamental 5 for Delivery of Quality Instructions”.

The findings made significant contributions and have highlighted the importance of the following factors as prominent features of teachers' professional development.

- Teachers Views about Professional Development
- Factors important for professional development: Approaches, practice and methods and structures of professional development
- Professional development patterns
 - Personal Context
 - Peer Learning/Mentoring

Teachers Views about Professional Development.

Teacher have defined professional development differently. Teachers consider professional development as set of an on-going activity for themselves. Teachers do not consider teaching isolated from their own learning. Teachers in this study have described professional development as a process of learning through a variety of method and approaches, they consider professional development as every day business. Two of the teachers mentioned that their professional learning happens in every class they teach. According to critical review of definitions of professional development by researchers (Berliner, 2005; Darling Hammond, 2005; Kuijpers, J. M, Houtveen & Wubbles, 2010) professional development shapes the professional identity and facilitates in making implicit learning explicit and also enhances the professional skills. Teachers need to see the value and meaning attached to the professional

development plans for them. For example, Interview 1 mentions, "...we must see some value in that...". According to the approach adopted by these scholars, teachers must progress professionally as a result of their professional development because the profession is becoming complex and innovations in the field make it imperative for teachers to keep themselves engaged in learning.

Important factors: Approaches, practice and methods and structures of professional development

Teachers have demonstrated a number of factors which pave the way for their professional learning. The wide-ranging bearings of the new methodology to professional development are based on a transmission outlook rather than the constructivist approach. It is the acknowledgment of the fact that both forthcoming and skilled or veteran teachers bring or attach pre-contextualized knowledge and aptitude to learning domains that can be classified as collective or discrete in outlook. Additionally, it is also assumed that teacher learning is a process of learning which is accumulated over a wide-ranging period of time rather than specific isolated moments and dynamic learning is partially dependent on the link between accumulated knowledge and innovative considerations. (Cochran-Smith & Lytle, 2001, p. 45-46).

Literature in recent years has started to classify professional development practices and means of delivery methods which are of core value to teachers. These practices identify the fact that as teachers grow proficient in their career their knowledge base enhances and becomes specific and specialized and that their ability to further proliferate their awareness learning and to divulge this understanding also expands. (Brown-Easton, 2004; Joyce and Showers, 2002).

In a broad appraisal of the research, six approaches for professional development practices are ostensible. These contain: shared learning; teacher researcher/practitioner; peer-supported erudition; teacher-as-learner; self-regulating learning and consolidated approaches. Each of these categories contains a wide range of approaches and transfer or delivery modules. The root of most of these cases is embedded in real-time academic challenges of learning and teaching and often implicates the need for teamwork and investigation. The segment below delivers a brief rundown of these idiosyncratic positions.

Shared-learning. This position accentuates the contribution of skilled teachers in study groups, stepping forth to deliberate the ideas and challenges pertinent to classroom practices and student education. Brooke et al. (2005) sketch a writing skill project that created an opportunity for students to connect to a post school hours writing group which included teachers to join the activity and talk, read and write about how the practice of teaching writing skill can be improved. McTighe and Emberger (2006) reveal the efficiency of a supportive peer evaluation method which involved skilled teachers in an investigation of a group focusing on improvement on elements of assessment practices. Feiman-Nemser (2001) designates "Descriptive Review", as a practice where teachers form teams to collectively discuss and strategize a problem-solving approach in instructional and program requirements of individual learners. It also involves their participation in study groups and pooled classroom observation to form mutual schemes that generate high output for skilled teachers.

Teacher as practitioner. This position underlines that to improve student and teacher learning output certain database is used for action research and specialized investigation by experienced teachers. Wlodkowski (2003) advocates the significance of action research to determine job based experience and contextualized knowledge of the experienced teachers. Cochran-Smith and Lytle (1999, 2001) and McLaughlin and Zarrow (2001) pinpoint the usefulness of teacher inquiry and its tremendous potential for educational reform on individual and collective level in academic settings.

Teacher-as-learner. Collective scholarly works lay emphasis that the professional development of all teachers must strongly be linked with the infusion of extensive research and on evidence based academic practices. Comprehensive professional degree programs and courses must be offered by universities and faculties of education in order to provide an opportunity to the academic professionals for achieving higher skills and to achieve better professional growth by qualifying and acquiring additional degrees for example, B.Ed., M.Ed. and additional qualification courses and certifications. The importance of working concept of school university partnership is highlighted by Sandholtz (2001) as a new way to nurture the professional learning of current/working teachers. Miller (2001) reviews that collaborative or partnership activities between schools and degree awarding institutes like universities must cater to the areas of mutual interest and requirement such as joint publications, New Teacher Induction Programs, multimedia learning models, think tanks, webinars , seminars and reproduction with shared resources and input. Schools and universities can coordinate to design activities that are beneficial in two pronged way for example teachers can model teacher ed programs, interdisciplinary teaching teams can be established , jointly organized conferences and presentations for conferences , teachers researches , grant writing , co-teaching university courses, skill development and interactive discourse between different levels of teachers from mid-career to experienced teachers. Sheerer (2000) puts forth the idea the emphasis of professional development models should be based on collaborative activities between schools , universities and faculties of education and school districts. To further this collaboration all partners must come together at a single approaching point to interpret research, deliberate the concerns and inquire about the teaching practices with a wide range of topics inclusive of culturally or religiously sensitive topics.

Self-regulating Learning. According to Deojay and Pennington (2000) all possible forms of professional development must offer two things; one a direct relationship between singular student output and the professional learning of teacher and second they must offer certain control to teachers over their independent learning with the help of a framework which proposes a problem solving approach and agenda. When the approach and focus of the teacher is real life problem of the classroom, or the student or a group of students, teachers then formulate and design their own activities and professional learning. This very model submits that teacher must determine the need-based requirement of the student and also must determine the strength of the student and the accordingly design an action plan; and re-evaluate this plan and also take into consideration its results. In the course of these three steps teachers ascertains and self directs the personal learning. It may be carried out by cross questioning and undertaking PD, interviewing colleagues in casual manner, carrying out observations, participating in workshops and seminars or striving to continue additional qualification courses or using the internet sources. Latest investigative studies in England (General Teaching Council for England, 2005) put forward the finding that while this model still involves a learning

process from others but complete collaborative models of professional learning are more effective and result oriented.

Consolidated Approaches. Literature has multiple references to the inclusion of broad range of assimilated methodologies within a holistic framework and methodologies of professional development (Cole et al., 2002; Lieberman & Wilkins, 2006). A “tri-level reform solution” according to Fullan (2005) is central to academic reform and revolution of systems, teachers and students’ learning. Professional Development Pathways Model is an example of this position, supported by University of Northern Illinois a field study conducted with urban, rural, suburban and elementary, middle and secondary schools. This model recommends a four step plan which is based on the individual need of the school or district because the schools are entirely different in configuration, needs and context, the model is flexible and gives space to faculty and staff possibilities for customized and cooperative professional development. “Lesson Study” is yet additional sample of the position in which area of the interest or need of the teacher is kept in view and research based lessons are designed with the assistance of skilled teachers and school partners. Review of the lesson study method by Rock and Wilson (2005) and Blum et al. (2005) reveals that participants experience a desire for staying connected in professional collaboration, grow in understanding towards teaching and learning process and attach value to professional reading and research studies that are the component of development model. Almost similar results have been observed with extended practice and transference of new knowledge through training activities. (Joyce and Showers, 2002).

Professional development patterns

Teacher professional development patterns were identical to the patterns identified in the current literature. Two most significant patterns emerged in the research which were personal context and also the peer learning and mentoring. It emerged from the research that teacher turn towards their peers as the first point of learning and collaboration when they face any challenge or have any query about their teaching. Teachers attach great importance to the element of collaboration in their teaching setting.

Personal Context: The data reveals that most of the teachers who are trained in other parts of the world are at times unable to cope with the framework of teaching standards in the local context. The ministry of education has framed standards for teaching and demands from school to implement them. Reading through the existing school documents shows a little evidence of sharing these documents with teachers. There were no professional development sessions planned around educating teacher about these standards. Readings from data show although school leaders have recorded an emphasis on professional needs of teachers but there was no follow up or evidence of needs based professional development structure. School has one day of the week dedicated to professional development sessions. But during these sessions, generally school meetings were held.

This finding through research confirms the existing view in the literature that the personal context for professional development was more important for teachers. They want to address their unique situation in professional development sessions. They prefer learning which will help them relate to the needs of their learners. For example, teachers here have highlighted the challenges they face in teaching in international schools. Table 5 reveals that professional

development needs of teachers teaching in international schools should have an allowance for preparing teachers to meet the cultural differences adequately. Using the intervention made them feel different about their teaching and they were of the opinion that teaching changed significantly after the introduction of this model. Teachers revealed in their interviews that teaching in an international school is a challenge for them. They would value a training which will help them cope with the challenges posed by their teaching setting. The finding can be related to the critical review of studies conducted by Goodall et al., (2005). Teachers have unique needs like their students and these needs must be taken into account during plans of professional development teachers. The appropriate match of professional needs of teachers with training programmes and CPD activities are a critical factor for ensuring a positive outcome on students learning as result of teachers learning. Various psychological stages theories such as Malow's Theory of Human Needs, Moral Development Theory by Kohlberg or Hunt's Theory of Cognitive Development encompass differences in the mindset and varying learning needs at different stages of professional life. The understanding and application of adult learning theories in combination with psychological stages theories will result in more effective professional development programmes.

Peer Learning/Mentoring: Learning from peers, consulting more experienced teachers, sharing professional knowledge & inquiry, and collaboration have been quoted as the most effective ways of learning by teachers. All teachers in the interviews have mentioned learning from peers or mentoring by senior teachers as the most common professional learning practice among teachers. Literature supports that skilled teachers are engaged in an advisory role (e.g. teaming with forthcoming teachers, associate teachers and early career teachers, discussions on day to day challenges faced by teachers).

Many scholarly works on advisory role or mentoring signpost the importance of this approach for the learning of the mentor and for the protégée engaged in the process of learning from the mentor. (Feiman-Nemser, 2001; Sanders et al., 2005; Workman, 2005; Weasmer, 2003). Mentors advocate that the acquiring the abilities and thought process mandatory to analyze and review their own practices, to generate a useful response to the intelligent inquiry raised by the protégée and the holistic skill to listen, reflect and respond is of great contribution towards achieving an incredible professional growth.

Glazer & Hannafin (2006) endorse the "Collaborative Apprenticeship" prototype for positioned professional development within school settings. This very model appoints an advisor or mentor engages a set of teachers towards establishing their skill for designing and expansion of learning activities and their proper execution from beginner level to expert level. This is a reciprocal learning paradigm which has direct impact on cognitive skills, credence, atmosphere, philosophy and disposition of both participants. Discourse activities and shared intercession exchange a cetin level of social and personal skills on acceptable level.

Conclusion

Learning as a social Experience

It is significant to mention the model used to infer the finding in context of the model adapted from Wenger (1998) which views learning as a social experience. There are four key elements addressed in the model proposed by Wenger in 1998 and are reflected in these

interviews. These four elements are meaning, practice, community and identity. The first element is that of meaning which reflects our capacity to accept and embrace change individually and collectively. This reflected in the interviews when teachers talked about their experience of learning and how it changes them and the world around us. This aspect was addressed in pre and post intervention discussion. The second element of our learning as a social experience is the practice which is talking about out the history of shred resources, frameworks and practices which can ensure a sustainable engagement with learning, it is referred as learning as doing and by doing, teachers engagement in the professional development served as learning as doing and by doing. The third element is the community which is reflected through our sense of belonging which means how we talk about the social configuration around us and our view of sense of competence around us. This aspect was also discussed in pre and post intervention discussions and the teachers discussed their improved ability to cope with the challenges around them. They felt empowered and more capable of teaching more effectively. The fourth element of our learning through social interaction is the identity, which is talking about how we learning can bring changes in our identity as who are in relation to who we were and which also lets us create a connection with our community through creating personal history. This aspect was part of the post intervention discussion. Learning taken as social participation can also be linked to the participation, an active process which needs mutual recognition of participation in a piece of work. This recognition can lead to the meaning of the experience (Wenger, 1998).

The conclusion could be linked to the group developing its own voice and understanding through the use of an intervention, supported by giving form and articulation to the social learning experience of the group and also through the use of the professional development model practically applicable to the setting in context. Teachers appeared to be more skilled, confident and were able to handle the challenges by making connections, they were to be more connected with their world through “professional identity” in their world around them through their professional skills.

Reform policy is formulated by the policy-makers independently and does not as such involve the teachers point of view whose voice should be most crucial to the process of change. (Ben-Peretz, 2009).

Henceforth the key factor to successful implementation of reform is the extent to which all stakeholders are engaged. (Cook, Holley, & Andrew, 2007). All stakeholders must be treated as equivalent cohorts to formulate, design and model successful reform process . It is pertinent to note that the models that pronounce successful implementation of reform process emphasize that most critical preliminary phase is when concerned parties profusely comprehend or prophesize the need for restructuring (Cook et al., 2007). Teachers all over the world go through different experiences and concoction of improvements which are the bottom-line to introduce shifts in academic policy roadmaps, such system-oriented reforms and these reforms have direct impact on teachers’ professional development. Reform process in academic settings in general is a complex task which is often hampered with the gap in the goal and result of reform process (Day, 2004).

In conclusion, teachers who are the major stakeholders and are responsible for serving the real purpose of all systems of education which is to students learning should be part of any

policy making. Teachers' voice is most important in the development of approaches, structures, methods and practices of professional development.

This research does not claim to be representative of how teachers in other schools of similar population experience professional development, I would assume that other school systems may also be able to benefit from the findings of this small scale research because the reported and observed challenges for teachers and leadership in international schools in the country reported in where research is conducted are similar. Using fundamental 5 for delivery of quality instruction may be helpful for other schools.

Policy Making

The school community opted for devising new lesson planning and lesson observation forms based on using fundamental 5. which caters for the implementation of this intervention to be part of the school culture. All teachers new and old were supposed to use this training.

What changed due to pandemic?

Teaching in schools have undergone a drastic transition since the onset of the pandemic. The course of the research and development project had to altered considerably. I will highlight the impact on all aspects in paragraphs below.

Impact on research design. The research design had lesson observations as one of the research methods but lessons in schools were stopped in March. The research method lesson observation which was meant to a mode of observing the outcomes of the educational reform introduced could not produce enough data. The possibility of observing on line lessons was also tired, but it did not prove effective. The new situation was very challenging for schools, teachers, parents and students and on line lessons were not very effective at the time of data collection.

Impact on the intervention. One of the most intriguing situations comes from the intervention introduced in school. The fundamental 2 and fundamental 3 which are “power zone” and “small purposeful frequent group talk”. The implementation of these two strategies need to be reimaged. How to reinvent “working in the power zone” which is related to physical position of the body of the teacher is a critical question. The use of “small purposeful frequent group talk” was also another question mark. There are possible ways of implementing these strategies in virtual learning environment also but two important factors were impeding. One, the innovations takes time to make its impact and teachers were still in the process of making it a culture in their teaching. As mentioned in the interviews, teachers have reiterated that it took them time to understand and implement the model. Secondly, the students in this particular school are still young to adjust with the new situation.

Impact on learning. The study was designed in light of learning theories and learning as a social experience. The findings of the project had to be validated against the model by

Shohet and Hawkin & (2006) and I was enthusiastic to discover the single loop or a double loop learning which would offer new thinking but the disruptions I mentioned have impacted the learning considerably. The way forward for me is to reimagine the professional development in the changing scenario of current circumstances.

Impact on community. The element of uncertainty had affected emotional and mental health of the community. Furthermore, the education community was not prepared to meet this kind of challenge like rest of the world. Schools and teachers struggled with the new of teaching. Reimagining the whole paradigm of education became a challenge specially in these countries where on line education was not recognized as system of education. Online degrees and on line schooling was one of the least accepted practice in this country, due to such regulations in the country, schools and teachers were not equipped and they got engaged in these compelling circumstances for seeking swift professional learning about conducting remote teaching. Teachers were left stranded to deliver in on line education.

Impact on personal life. Apart from the challenges at work and struggle with emotional and mental health of my teachers, students and my family, we, my family and I, contracted corona. First my husband was infected and was hospitalized due to his critical condition. My son who is declared vulnerable because of life long medical condition was the second in line. In the end, I also got infected and have not fully recovered yet. I am unable to focus on my work. I also suffered from loss of a close family member due to corona in my home country but was unable to travel. The span of our illness lasted over more than three months which was a crucial time of writing and analysis of the study. I could not focus on the findings of the data and its linkage to the conclusion. I could not revisit the list of references; I also couldn't focus on reviewing the assignment to fix linguistic issues.

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Appendices

Appendix 1: Consent Form

1.	I have understood the concept of the project and I was given all the information I asked for	<input type="checkbox"/>
2.	I have asked questions about the purpose of the project.	<input type="checkbox"/>
3.	I am willing to participate in this project. I have been informed that I can withdraw any time without explaining the reasons.	<input type="checkbox"/>
4.	I have been briefed about the procedure of maintaining the confidentiality.	<input type="checkbox"/>
5.	I also know that data collected from me and about me in any form will not be used for any other purposes.	<input type="checkbox"/>
6.	I agree to sign this form which is meant to be gaining my consent for participating in this research project only and it can be shared in the form of publication.	<input type="checkbox"/>

Appendix 2: Group Work and individual work

Fundamentals of Quality Instructions	What would it mean?	How would it look in a class?)
Frame the lesson		
Frequent, Small Group, Purposeful Talk (FSGPT)		
Work in the “Power Zone”		
Recognize & Reinforce		
Write Critically		

Appendix 3: Schedule Individual Teacher

Using Fundamental 5 Time: 12:30-1:15 Term/Lesson Plans Time:1:15-2:00

CLASS	Teacher	Date	Subject	Class	Teacher	Date
✓ YEAR-1A	[Redacted]	04/03/2020	English	YEAR-1A	[Redacted]	04/03/2020 ✓
YEAR-1B	[Redacted]	05/03/2020	Arabic	YEAR-1B	[Redacted]	05/03/2020
✓ YEAR-2	[Redacted]	08/03/2020	Math	YEAR-2	[Redacted]	08/03/2020 ✓
✓ YEAR-3	[Redacted]	09/03/2020	Social	YEAR-3	[Redacted]	09/03/2020 ✓
✓ YEAR-4	[Redacted]	10/03/2020	Social	YEAR-4	[Redacted]	10/03/2020
✓ YEAR-5	[Redacted]	11/03/2020	Math	YEAR-5	[Redacted]	11/03/2020
✓ YEAR-6	[Redacted]	11/03/2020	Science	YEAR-6	[Redacted]	11/03/2020

These one on one sessions by Principal [Redacted] with teachers will be training sessions for writing term pl

MC Ave is with Mr. Fakh

Appendix 4: Sample Questions for Interview

Pre Intervention

1. What is your concept of professional development?
2. What is your struggle in teaching in an international school?
3. What would you like to change about present professional development structure in school?
4. How do you learn best?
5. What you do when you have a challenge in teaching, how do you try to overcome that challenge?
6. Do you feel that teaching practices can be borrowed from other teachers and other schools?

Sample Questions for Interview

Post Intervention

1. Did you find the intervention helpful? In what ways?
2. Did you have to change anything? Why?
3. Do you find yourself teaching differently after this training? How and why?
4. Please share your thoughts about fundamental 5
5. Were you comfortable with my presence in your class during the observation?
6. Which part of the intervention was hardest to implement and which one was the easiest?
7. Did the participants have any discussions about the intervention among themselves, what did you notice about the discussion?
8. What helps you the most in improving your teaching?
9. How was the overall experience?
10. What else could have been done to make it more effective?
11. Would you like to use these strategies even if you are teaching in some other school?

Appendix 5: Interviews Transcripts

Interview 1

Sample Questions for Interview

Pre Intervention

1. What is your concept of professional development?

For me, professional development refers to instructors developing and improving their skills to better meet the needs of their students. Approaches to professional development include reviewing case studies, consultation and coaching, mentoring and technical assistance. Here, collaboration and evaluation take place to enable educators to enhance students' outcomes. I don't know how other think but honestly for me ... professional development is more of having many and different opportunities to develop.

2. What is your struggle in teaching in an international school?

For teachers who move abroad to work in an international setting, it is inevitable that some form of culture shock will be experienced. You'll find many different nationalities of children learning together, and often, several different nationalities of teachers. ... However, most international school teachers say they still have plenty of time to socialise, enjoy their weekends, explore, travel and make the most of their location. It was so hard for me when I came to join an international school ... the teaching here is so different.

3. What would you like to change about present professional development structure in school?

The structure ... I feel teachers should have more free and pressure free opportunities ... Pressures like time, money and stress ... we should be given more time and more opportunities but for learning, not as compulsion or as what school wants to do ... We must see some value in that ... In the name of time, cost and efficiency, many professional development opportunities for teachers are too broad and not relevant to most, or even many, of the teachers attending. If you want professional development to be relevant, ask your teachers for their suggestions — there's a good chance that they have plenty to say. Give teachers a choice about what or how they learn. Give different options for workshops or courses they can take.

4. How do you learn best?

Teachers need to be interested and engaged. Just like their students, teachers learn in different ways and respond differently to auditory, kinaesthetic, written or visual learning methods.

5. What do you do when you have a challenge in teaching, how do you try to overcome that challenge?

Your engagement in teaching — not just your students' engagement in learning — is the key to success. Have fun looking for new ideas, don't be afraid to be creative and discuss ideas and difficulties with your colleagues.

6. Do you feel that teaching practices can be borrowed from other teachers and other schools?

Yes, we can take effective design principles rather than entire policies, and develop new approaches based on these.

Sample Questions for Interview

Post Intervention

1. Did you find the intervention helpful? In what ways?

Interventions, properly understood, can be a helpful way of providing additional support to students' progress and achievements. I think it was very helpful for us ... I was clear how I have to plan my lesson and what are all those things I need to do in class ... it was like a check list ...

2. Did you have to change anything? Why?

Nothing was changed as such; **however, additional teaching practices were implemented in classrooms.** I found it easier to engage students through the strategies we learned in the training.

Meaningful

3. Do you find yourself teaching differently after this training? How and why?

Yes, I find myself **teaching more effectively, engagingly and growth oriented in a classroom.**

4. Please share your thoughts about fundamental 5

Meaningful

Teachers who can incorporate instructional models like the fundamentals 5 Model into their classrooms help students build a strong foundation of knowledge through active participation.

Student Learning

5. Were you comfortable with my presence in your class during the observation?

Active Participation

Power relationship

Yes, I was very comfortable, however it made me more active and alert in the classroom.

6. Which part of the intervention was hardest to implement and which one was the easiest?

The goal for the intervention is to **step in, and start helping before anyone falls really far behind and deliver good teaching in international school... It was very helpful on one side but then there was another side to it... the hardest part is keep yourself updated and upgraded all the time.**

timely

Updating knowledge

7. Did the participants have any discussions about the intervention among themselves, what did you notice about the discussion?

Some people find it difficult to **coupe up with someone else in their classroom as an observer, however, learning the effectiveness of this strategy makes you comfortable with this support system.**

Support system

8. What helps you the most in improving your teaching?

The **increasing levels of support** mean that if the first intervention method doesn't work, there are other options for improved education.

Support

Gradual

9. How was the overall experience?

The experience was **great learning, as it's a systematic way of measuring progress and providing more support who needs it.**

systems

support

10. What else could have been done to make it more effective?

You can ask for **a special education evaluation, the strategies to coupe up with students of special needs** alongside the students who are not of special needs.

Students with special needs

11. Would you like to use these strategies even if you are teaching in some other school?

Of course, the **learning and improvement never stops, you take along your experiences where ever you go.**

teacher learning

special education

Value and sense of meaningfulness

Interview 2:

Sample Questions for Interview

Pre Intervention

Ok let's start this.... I haven't done any hard core intervention before but let's keep in mind introducing a centralized peer learning programme.... we teachers divide topics, assign tasks and present in front of other teachers. Later a healthy discussion is held to analyse the demon lesson. This happens once a year before the start of a new session. It has proved to be very effective.

Pre Intervention

1. What is your concept of professional development?

By professional development my understanding is to provide such opportunities to teachers which would help them improve their teaching skills and in turn help students learn better and show better results.

2. What is your struggle in teaching in an international school?

Keeping pace with the international standards with limited resources available

3. What would you like to change about present professional development structure in school?

To start with, I would like teachers to take this profession seriously, to remain honest and passionate about it. Having limited resources and time can hinder professional development to a great extent. Due significance must be given to professional development.

4. How do you learn best?

A competitive environment with healthy reward scheme and proper check and balance forces me to keep improving my teaching skills

5. What you do when you have a challenge in teaching, how do you try to overcome that challenge?

Recently we have faced the biggest challenge....online teachingdiscussing and sharing ideas with teachers from other systems proved very beneficial. You Tube is another personal favourite.

6. Do you feel that teaching practices can be borrowed from other teachers and other schools?

Definitely.....I just mentioned this in the previous Q.... this is the best way to move forward

Post intervention....

1. Did you find the intervention helpful? In what ways?

Yes, very helpful. We initially started this practice individually. Later we started inviting a few teachers from other departments. The results were so brilliant that we got it centralized.

Tis model has always been a great idea and peer visits also helped us. Teachers don't just work hard to present their lesson in front of others, they learn from others a great deal. When we observe somebody teaching, we learn from their mistakes too. That's the best part. It increases the level of motivation for the teachers.

2. Did you have to change anything? Why?

We didn't have to change anything as such, we were just compelled to keep on adding different activities to reinforce learning

Peer learning

Structure Peer learning

Structure and support

developing skills

Limited Resources

Better outcome for students

Limited Resources

teacher's view of profession

Passion

Reward

Monitoring and follow up

Skills

collaboration

collaboration

Peer learning

Resources

collaboration

Peer learning

Collaboration

Motivation

compulsion

different activities

3. Do you find yourself teaching differently after this training? How and why?

Yes, the teaching methodology gets effective and efficient and for sure, the whole year long we keep feeling the effect of this intervention

teaching methods

effectiveness

sustainability

4. Please share your thoughts about fundamental 5

The most important factor affecting student learning is the teacher, so empowering them to be as effective as possible improves education and fundamental 5 is an effective strategy to empower a teacher.

students learning

5. Were you comfortable with my presence in your class during the observation?

Yes, your presence in my class has been a delight. Thank you

Observation's power relations

6. Which part of the intervention was hardest to implement and which one was the easiest?

The hardest part was to reflect in a realistic way and also to accept what others have to say to you.

reflection

conflict

7. Did the participants have any discussions about the intervention among themselves, what did you notice about the discussion?

Initially everyone was taken aback by the idea but now we are actually enjoying the it.

point of view

8. What helps you the most in improving your teaching?

Over the years we have become more creative and more practical by understanding our profession and by useful PD's.

9. How was the overall experience?

I loved attending the workshops and attending courses, it really revives the energy and motivates me and makes me go on in a more effective manner.

10. What else could have been done to make it more effective?

This year to make it more effective we invited coordinators from other departments on fundamental 5 to present their demo lessons and I think it was very helpful.

11. Would you like to use these strategies even if you are teaching in some other school?

For sure I would like to continue with these strategies even if I am teaching in other school these are really beneficial for teachers, I think every system must do such kind of learning

sustainability

system

Meaning

Interview 3:

Sample Questions for Interview

Pre Intervention

1. What is your concept of professional development?

I think I should have included a question about the significance of the feedback in the ~~some~~ interviews

Professional development

Professional development includes trainings, workshops and other formal and informal sessions for teachers to improve their skills.

2. What is your struggle in teaching in an international school?

I think, teachers struggle with cultural differences here.

3. What would you like to change about present professional development structure in school?

The management must have a professional and positive approach. There must be realistic expectations from a teacher as well.

4. How do you learn best?

I learn better through personal experience and practice and from someone more experienced.

5. What you do when you have a challenge in teaching, how do you try to overcome that challenge?

I talk to my colleagues and to the seniors or teacher trainers if needed.

6. Do you feel that teaching practices can be borrowed from other teachers and other schools?

Yes, colleagues can talk about research-based, best classroom practices.

Sample Questions for Interview

Post Intervention

1. Did you find the intervention helpful? In what ways?

Training or intervention is important for teachers to have effective class management skills and it was very helpful for me. I had clear idea of what I am supposed to do... like 1, 2, 3.

2. Did you have to change anything? Why?

Yes, because sometimes I had different ideas and had to take a few decisions according to the particular situation in the class because everything doesn't work every time.

3. Do you find yourself teaching differently after this training? How and why?

Yes, the training has helped by choosing strategies that engage students, can help to plan lessons that accommodate various learning styles. They provide effective educational solutions especially teaching a new course to IGCSE students.

4. Please share your thoughts about fundamental 5

The five fundamental practices include: framing the lesson, working in the power zone, frequent small group purposeful talk, recognize and reinforce, and writing critically. The most important factor affecting student learning is the teacher, so empowering them to be as effective as possible improves education.

5. Were you comfortable with my presence in your class during the observation?

empowering teachers

student learning

teacher learning

Peer learning

experience

coaching

Mentoring

Mentoring

Collaboration

Structure

Meaning

Needs

Modifications

engagement

effective solution for students

After a long experience of about 14 years teaching, I do not have any problem with the presence of an observer and I think our training pattern was very friendly, so I didn't feel awkward. Although there was some pressure at times, but then I thought you will understand it.

6. Which part of the intervention was hardest to implement and which one was the easiest?

Nothing was difficult to implement. It rather made it easy for me because I clearly know what I have to do. For example, I already knew that I have to share the objective with students but this time it worked differently.... I think I made it like my teaching routine... the first thing I do is to share the objective as soon as I am done with attendance.

7. Did the participants have any discussions about the intervention among themselves, what did you notice about the discussion?

It was an interactive session so participants shared their ideas regarding solutions.... I think we were all okay with it, because it is not hard to implement..., it was part of daily routines... I feel we all felt that we are more comfortable with implementing it...

8. What helps you the most in improving your teaching?

My experience and trainings I received for what I need to learn... I don't like to participate in training which is not usable and practical.

9. How was the overall experience?

It was really a good experience.

10. What else could have been done to make it more effective?

The training could be arranged within departments... I think if our heads all of them had done that training with us, it would also have been good.

11. Would you like to use these strategies even if you are teaching in some other school?

Yes, of course. I would definitely use these strategies and my skills at any other place I am working.

→ routines

→ native of the training

→ experience

→ Needs

→ useful and practical

→ department collaboration

→ training

↓
Value

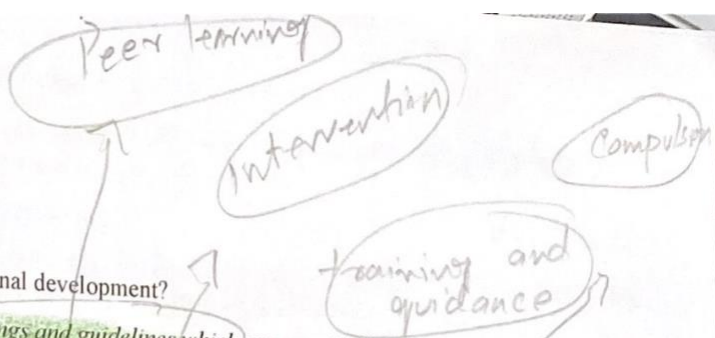
Interview 4:

Sample Questions for Interview

Pre Intervention

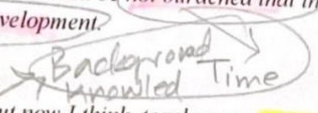
1. What is your concept of professional development?

Professional development includes trainings and guidelines which are provided either by formal or informal way. Formal way involves trainings provided by the school and informal professional development includes trainings done by our own selves excluding the school intervention. It includes implementation of procedures for effective teaching practices, peer learning, etc.. Teachers should be not burdened that they don't have enough time for their self-development and professional development.



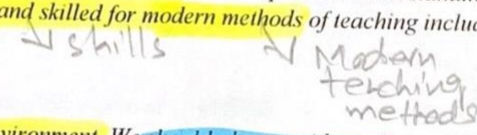
2. What is your struggle in teaching in an international school?

I did not have experience working at an international school before but now I think, teachers are struggling with cultural differences as they are not be having a strong background to adjust with students with different backgrounds and mental capabilities.



3. What would you like to change about present professional development structure in school?

The management of the schools must focus on the development of students and teachers rather than set criteria to student's performance based on their grades. Teachers should be focusing on students understanding than their grades, teachers should be trained to help students develop better understanding and personality grooming. Teachers should be trained and skilled for modern methods of teaching including technology and methods.



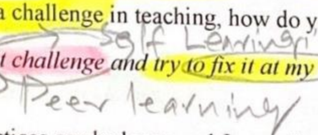
4. How do you learn best?

I learn better when I am provided with best learning environment. We should also provide students with best learning environment as well, create curiosity in a mind, so that the person is eager to learn. Secondly when I am appreciated for my efforts, I am given positive feedback and rewarded for my efforts.

Reflection

5. What do you do when you have a challenge in teaching, how do you try to overcome that challenge?

I find out the cause and source of that challenge and try to fix it at my end if I am unable to find a solution I talk to my colleagues and seniors.



6. Do you feel that teaching practices can be borrowed from other teachers and other schools?

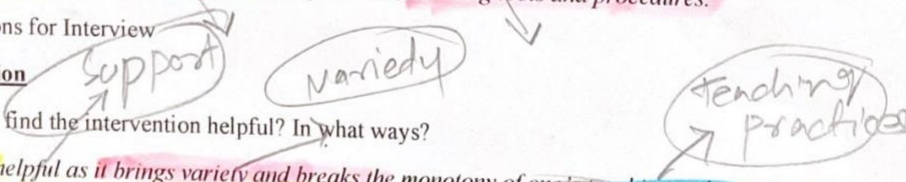
Yes, colleagues can talk about latest classroom practices, teaching tools and procedures.

Sample Questions for Interview

Post Intervention

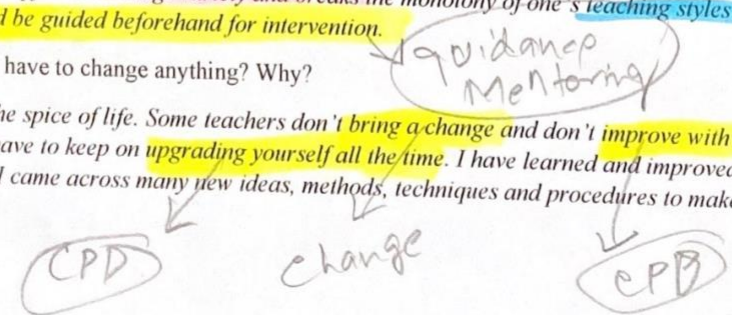
1. Did you find the intervention helpful? In what ways?

Intervention is helpful as it brings variety and breaks the monotony of one's teaching styles and practices. Teachers should be guided beforehand for intervention.



2. Did you have to change anything? Why?

Yes, variety is the spice of life. Some teachers don't bring a change and don't improve with time. Time is changing, you have to keep on upgrading yourself all the time. I have learned and improved a lot after intervention as I came across many new ideas, methods, techniques and procedures to make my teaching effective.



3. Do you find yourself teaching differently after this training? How and why?

Yes, the training helped me to change my teaching style and incorporate latest teaching methodologies like use of technology, making student centred learning more effective.

4. Please share your thoughts about fundamental 5

The fundamental five are five critical practices that result in highly effective teaching, it is a simple plan that a teacher can implement and it will begin to improve the quality of classroom instructions.

5. Were you comfortable with my presence in your class during the observation?

Yes, I was comfortable with your presence in my classroom, or maybe I felt more passionate, encouraged, and motivated. I think I was excited.

6. Which part of the intervention was hardest to implement and which one was the easiest?

Everything I learned from intervention was resourceful and worth implementing. I found everything to be implanted easily.

7. Did the participants have any discussions about the intervention among themselves, what did you notice about the discussion?

I noticed that the intervention was greatly appreciated and taken as a positive step towards improvement at individual level and as an institution as well.

8. What helps you the most in improving your teaching?

My curiosity, experience and my informal learnings.

9. How was the overall experience?

It was an interesting and a great learning experience; very creative and up to date.

10. What else could have been done to make it more effective?

The training can be arranged within premises of other schools or outside school environment.

11. Would you like to use these strategies even if you are teaching in some other school?

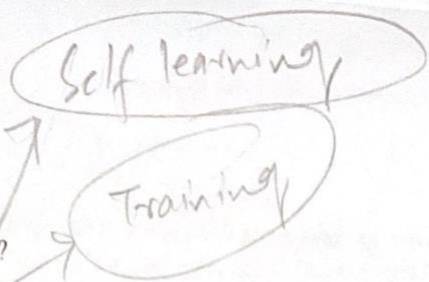
Yes, of course. I would certainly use these strategies and my skills at any other place I am working as I have included these practices to my skills and methodologies.

Sample Questions for Interview

Pre Intervention

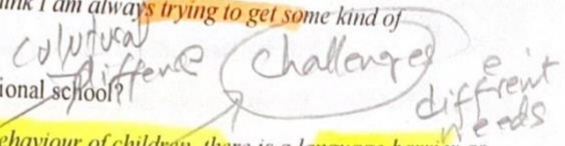
1. What is your concept of professional development?

Professional development is training our self for any particular profession. I think I cant define professional development in one or two lines... I think I am always trying to get some kind of professional development...



2. What is your struggle in teaching in an international school?

Yes, I have faced a lot of discipline issues because of behaviour of children, there is a language barrier as well, as many Arabic students are not good at understanding English as well. I think teachers have to face cultural differences in international schools. I have been trained differently and was teaching in public schools before, but teaching here is very different. You have students from many nationalities and also teachers from many countries... it is not only a challenge, it an oportunity to learn as well.

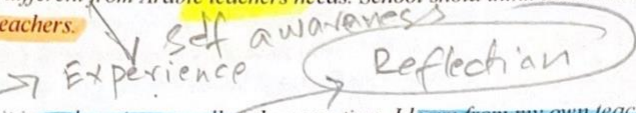


3. What would you like to change about present professional development structure in school?

PD sessions should be given based on subject specializations. I think teachers needs are more important... Well, in my opinion my needs are different from Arabic teachers needs. School should think about these things before starting any sessions for teachers.

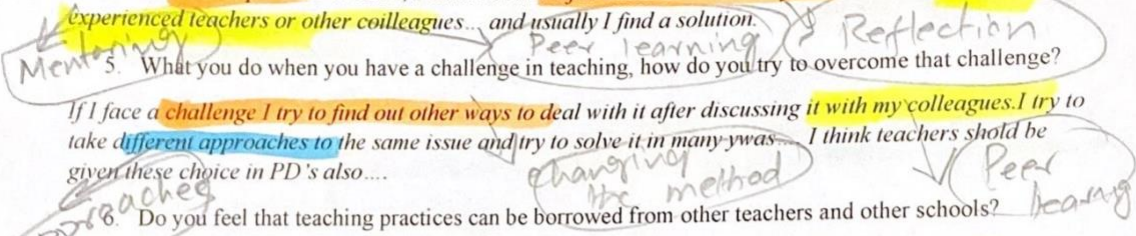
4. How do you learn best?

I learn best when I am teaching, it is my learning as well at the same time. I learn from my own teaching. When I have some problem in calss, I think about it afterwards and then I try to dicuss it with more experienced teachers or other colleagues... and usually I find a solution.



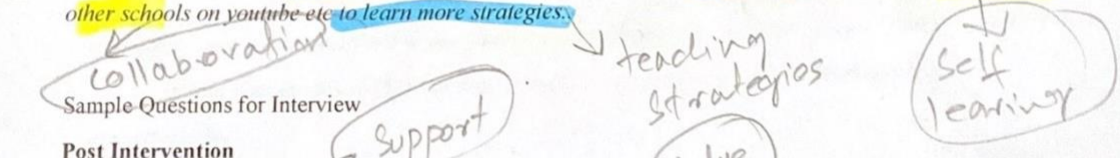
5. What you do when you have a challenge in teaching, how do you try to overcome that challenge?

If I face a challenge I try to find out other ways to deal with it after discussing it with my colleagues. I try to take different approaches to the same issue and try to solve it in many ways... I think teachers should be given these choice in PD's also...



6. Do you feel that teaching practices can be borrowed from other teachers and other schools?

Yes, for sure. I am always looking for help from other teachers.... I talk to my friends and I see viodo of other schools on youtube etc to learn more strategies.



Sample Questions for Interview

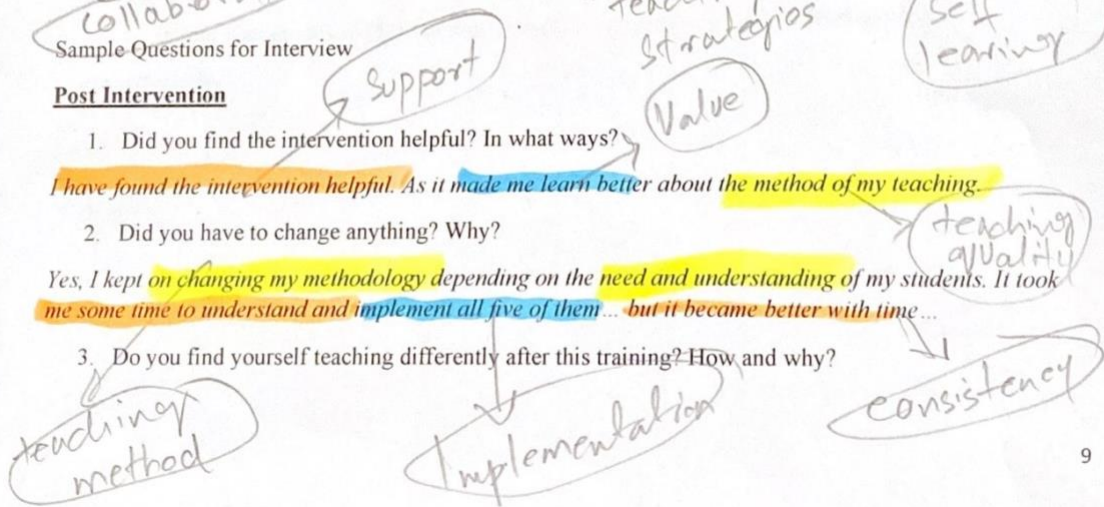
Post Intervention

1. Did you find the intervention helpful? In what ways?

I have found the intervention helpful. As it made me learn better about the method of my teaching.

2. Did you have to change anything? Why?

Yes, I kept on changing my methodology depending on the need and understanding of my students. It took me some time to understand and implement all five of them... but it became better with time...



3. Do you find yourself teaching differently after this training? How and why?

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... training helped me to change my teaching methods. I think I am more engaged with students now...
... always thinking in my class about what is next I have to do...

Engagement

4. Please share your thoughts about fundamental 5

The fundamental five are the effective tools for better teaching and learning for teachers and students as well. Our students were enjoying the lessons more... and I also felt less stress in class... I had to spend more time in planning but my teaching time in class was more satisfying because students were mostly independently.

teaching method

Time

5. Were you comfortable with my presence in your class during the observation?

Yes, I was very comfortable with your presence in my classroom. This is what I think... maybe my teaching changed in your presence... maybe I felt more excited.

Reflection

engaged teaching quality

perception

6. Which part of the intervention was hardest to implement and which one was the easiest?

I found everything to be implemented easily... it was not that hard... yes planning for group work and keeping it under control during students discussion was hard... But as time passed, they were trained and it became part of class culture.

teaching quality

challenges

consistency

7. Did the participants have any discussions about the intervention among themselves, what did you notice about the discussion?

Teachers encouraged the idea of intervention. We were confused in the beginning but I think the way it was structured made it easier. And then these strategies are used by almost all teachers but we didn't take a responsibility for ourselves initially... some days we did it, some days we didn't.

Value

consistency

structure

follow up

8. What helps you the most in improving your teaching?

My preparedness for the lesson helps me to improve my teaching. I have noticed that follow up on trainings and feedback is very helpful...

planning

Feedback

teaching quality

training

9. How was the overall experience?

It was a good learning experience. I think I changed my teaching considerably... I became more reflective, I would think about almost after each class how can I use this strategy better or how can I implement that in a better way... teaching methods

Reflection

Reflection

teaching quality

10. What else could have been done to make it more effective?

The trainings should have more activities. And I think we should have more time in planning these activities... our classes went online just when we were about to see the full potential of these intervention.

11. Would you like to use these strategies even if you are teaching in some other school?

Yes, of course.

collaboration approaches

Structure

circumstances

Time

Planning

Appendix 6: Professional Development Evaluation Reflection

Title of Professional Development: **Using Fundamental 5 to Deliver Quality Instructions**

Professional Development Provider: ~~XXXXXXXXXX~~

Subject area: Teaching Practices/

Audience/levels: Faculty/School leaders

Objectives/Activities: Develop teachers' capacity and knowledge of best practices professional development activities and explicit classroom strategies.

These questions are intended to serve as a guide for PD department to reflect on the design of plan(S)

Guiding Questions	Yes/No/NA Explanation	Evidence/Reflection
1. Is the professional development based on the needs of participants?	<i>Yes</i>	<i>Teachers learning needs were identified through observations and interviews. Data is also analyzed to determine areas of needed professional development.</i>
2. Is the professional development sustained and ongoing?	<i>Yes</i>	<i>The PD includes both new participants and continuing participants in the promotion of quality of instructions.</i>
3. Is the professional development job embedded?	<i>Yes</i>	<i>Participants engage in a cycle of lesson planning and reflection related to new strategies using learning from the sessions provided to them</i>
4. What is the content/pedagogy that is being taught that will promote developmentally appropriate instruction and assessment?	<i>Learning Model</i>	<i>Participants learn strategies, how to apply them in their classrooms, via demonstration lessons, guided practice, and reflection. Following implementation of strategies participants share their work and identify implications for future classroom instruction.</i>
5. What research base is being used and how do		<i>Mentor texts include Summary based on Rachel Behnke's presentation for Region XIII at the TCE Conference</i>

educators make meaning of it?		http://www.tceconference.com/uploads/files/behnkerachel-fundamental-5-for-administrators.pdf
6. Is collaboration built in?	<i>Yes</i>	<i>PD structure for workshops, training in facilitating a culture of collaboration and creating a shared vision. Opportunity for participants to collaborate & plan with district administrators.</i>
7. How does the new learning assist teachers in meeting diverse student needs?		<i>Strategies for formative assessment and use of questioning technique to address varied learning styles and academic needs.</i>
8. How does the new learning assist educators in creating a safe, supportive and equitable learning environment for students?	<i>Yes.</i>	<i>Focus on building collaborative culture in the classroom, including strategies for increasing student self-efficacy. Focus on learning styles and collaborative learning.</i>
9. How will the professional development be evaluated? Consider intended outcomes, tools, multiple measures, and to whom the results will be reported.	<i>Multiple Measures</i>	<i>Participants keep implementation and reflection journals; participants set goals in terms of students outcomes and reflect on accomplishment; participants complete reflection forms and surveys; presenter observes in classrooms. Ongoing attendance and participation are tracked.</i>
10. How are you tracking long-term, measurable or observable changes in behavior or performance data that drove the development of this program?		<i>Follow Up observations in the absence of PD leader and data from these observations will be analyzed, the statements will be converted into numbers to understand the impact of PD.</i>
End of Year Reflection		
11. How have you incorporated new data to adjust the direction of ongoing professional development?		<i>End of the Year Reflection bases on the collection, analysis and interpretation of data.</i>

Signature: _____

Appendix 7 Example of Reflection Form

Date:

Time: 1:15 to 2:00 PM.

Name of the Teacher: ~~XXXXXXXXXX~~

Facilitator: ~~XXXXXXXXXX~~

Reflection Form

PD Session



Topic: Fundamental 5

1- What did I want to learn?

Sometimes I could identify that most of the children misunderstood or needs more time to understand if the topic or concept is critical and difficult, but usually we do not get time to re-teach the lesson. Can we do so by excluding unimportant topics?

2- What did I learn?

In this PD session I learnt that re-teaching is more essential ~~it~~ before conducting a test or quiz. I also agree that students understand better when they work in group and when they are given a chance to discuss and understand from their peer.

3- I still need help with:

How can I implement all these basic rules when I want to teach online. I also need help in K12. As

most of the explanations in K12 are in Arabic, I don't understand. The names of students are still in Arabic.

As these Fundamental 5 are the basic rules that every teacher need to follow to make her lesson most effective, this PD session was very useful for us to know that how many fundamentals are we exactly following in our daily lessons.

Appendix 8: Lesson Observation Notes

Total Number of Classes Observed: 20

Objectives (Planning & Preparation)

Present	Absent	NA
14	6	0

Power Zone

Present	Absent	NA
15	5	0

Write Critically

Present	Absent	NA
14	6	0

Turn Talk

Present	Absent	NA
12	8	0

Academic Praise

Present	Absent	NA
16	4	0

Graphic Representation.

