

**Mapping the Individual Professional Development Journeys  
of Teachers in an Indian School Setup**

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# 1 INTRODUCTION

Professional development of teachers has been a topic of exploration, scrutiny and debate for the past decades. Numerous studies and researchers around the world have made valuable contributions into defining and explaining the concept of professional development as well as many have contributed into outlining the process of professional development. This research has impacted the planning and implementation of professional development programs, rightly so. In India, teacher professional development is a comparatively neglected area of education, as major focus is on the delivering content and skills to the teachers in order to achieve improved student outcomes.

This action research addresses the journey of professional development within a school community which is a part the Akanksha Foundation. The study spans over a period of two months and has three teacher participants. In doing so this study focuses on training the teachers to use the 4C framework in order to enhance their professional competencies such as planning and implementation of lessons. This study goes on to map individual journeys of these participants while they adapt and implement practices based on the 4C framework. Alongside, it also explores the impact of implementing new practices on a teacher's mental and emotional well-being. Thus, highlighting the various personal and professional factors that impact this process in a negative or a positive way.

The first few sections explore in detail the concept of professional development and ways to conduct it. It also explains the concept of CLIL and the 4C framework and justifies the reason it was chosen as a professional development. The latter sections focuses on the research problem, research partners and the methodology of the study. The last two sections focus on findings and discussion.

## 2 THE AKANKSHA FOUNDATION

Akanksha is an organization which was started in 1990 with one simple idea; that each child should receive high-quality education irrespective of his or her background. In the initial years, Akanksha started by Shaheen Mistri comprised of after-school centers. These centers made use of generally non-usable spaces and converted them into after-school classrooms for children going to government schools. These centers were run by professionally trained teaching staff, social workers and volunteers. With up to 60 after school centers Akanksha started catering to over 3,000 children belonging to the lower economic strata of the society.

In the year 2007, Akanksha began The School Project in collaboration with the Municipal corporations of Mumbai and Pune. The projects main aim was to establish an expandable school model within an existing government setup driving a wider systemic reform in education. Today Akanksha has a network of 20 schools across Mumbai and Pune. The School Project focuses beliefs in 3 major outcomes of an excellent education system; student achievement, youth development, and community engagement. Student achievement is a product of using innovative pedagogical models to help learners achieve academic excellence. Youth development focuses on building character and skills in young learners through co-curricular and effective pedagogy. Community engagement focuses on creating a constructive partnership between the students, parents, teachers, school and the larger community to ensure holistic development of the child.

As mentioned above, Akanksha School Project aims at establishing a wider systemic reform within the education system. Thus, Akanksha's School Project focuses on establishing high performing schools within the public sector to set a high standard of education for all the children in India. Furthermore, Akanksha creates networks and collaborates with existing ones to share and create a web of best practices and ideologies which will, in turn, have a substantial impact on the

learning and lives of our students. Finally, Akanksha focuses on identifying policy and research gaps to initiate a systemic reform. Once these gaps are identified, research plays a vital role in bridging these gaps at each stage of the policy cycle; thereby commencing systemic reform.

Akanksha school system runs on a clearly defined set of values (see FIGURE.1). These values are the basis of any systemic reform and apply to students, teachers, and other stakeholders equally. Akanksha is always looking for ways to excel and refine their practices to achieve best possible outcomes. Akanksha follows task/skill based pedagogy in order to equip students with 21<sup>st</sup> century learning skills. Akanksha uses English as its instructional language and hence students and teachers communicate and collaborate with each other in English. English being the second language for these students, poses another set of challenges for teachers to overcome. While driving instruction through English, they are also required to build language skills in their students in order for them to be able to use it contextually in their real life.

When it comes to identifying research gaps, Akanksha's pedagogy is somewhat similar to the immersion programs which focus on teaching content through a language which is not native to the students, in this case English. Teaching done through the use of native English language textbooks and resources, leading to complete immersion into the foreign language and poses a threat by over-burdening the student. A pedagogical tool, which is closely aligned to Akanksha values and pedagogy but is devoid of the threats posed by immersion programs is needed to bridge the current learning gaps. Content and Language Integrated Learning (CLIL) is a model that would not only align with the practices and values of Akanksha but would also help in filling existing gaps, leading to better student achievement (Lasagabaster & Sierra, 2009). The next section will provide a detailed understanding of CLIL as a concept and its applicability in the Indian as well as Akanksha context.

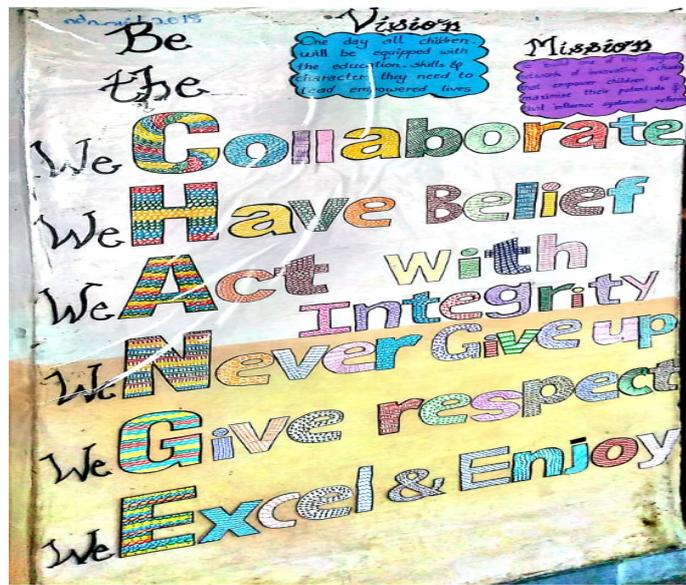


FIGURE 1. Akanksha values displayed in a school

### 3 CONTENT AND LANGUAGE INTEGRATED LEARNING (CLIL)

CLIL is a dual-focused educational approach wherein there is an equal amount of focus on the teaching of both content and language (Coyle, Hood, Marsh, 2010, pp. 1-5). CLIL as an educational approach does not focus on one methodology, rather it focuses on an amalgamation of various second language supportive methodologies leading to a dual-focused form of attention towards building language as well as content knowledge. It is a pragmatic response towards overcoming linguistic shortcomings, as it adopts a communicative language teaching approach providing a more holistic way of teaching and learning languages. CLIL is neither about translating the first language teaching and learning into another language nor is it an attempt at disguising traditional language learning by incorporating the grammatical nuances of the target language into different subject content. (Coyle et al., 2010, pp. 7 & 27).

In order to understand CLIL further Llinaries (2015) discusses two major theoretical approaches: classroom discourse approaches and systemic-functional linguistics. Systemic functional linguistics (SFL) based on Halliday's three

metafunctions (ideational, interpersonal, and textual) and discourses used to convey them in a classroom context. The SFL model helps to understand how integration unfolds in a classroom by addressing the process integration (Llinary, 2015, p.63). Alongside SFL, task-based learning (learning a second language through engagement in meaningful activities), socio-cultural theories and discursive pragmatics in a classroom. All of which contribute to understanding the what (content) and how (process) of integration.

Another theoretical framework to understand CLIL better is the 4C-framework by Coyle. CLIL is separated from other content-based language learning methodologies due to the planned pedagogical integration of contextualized content, cognition, communication and culture (4C's) into teaching and learning practices. The 4C framework focuses on integrating content (through content and cognition) and language (communication and culture) together.

The 4Cs Framework focuses on the interrelationship between content (subject matter), communication (language), cognition (learning and thinking) and culture (social awareness of self and 'otherness'). It takes account of 'integration' on different levels: learning (content and cognition), language learning (communication and cultures) and intercultural experiences (Coyle, 2007, p.550).

In addition to the content and language, the 4C framework concentrates on building a culture in the classroom, as language is fundamentally related to culture. From this perspective culture is understood as means for learners to engage with authentic texts and experiences relevant to the vehicular language and construct an understanding of similarities and differences between cultures rather than focusing on a particular national culture. The focus on cognition allows this framework to incorporate 21st-century learning skills such as; problem-solving and creative thinking in order to maintain a high rigor in the classrooms, which fuels student motivation. Through communication, this framework works on the lexical and grammatical aspects of the language (Coyle et al.,2010).

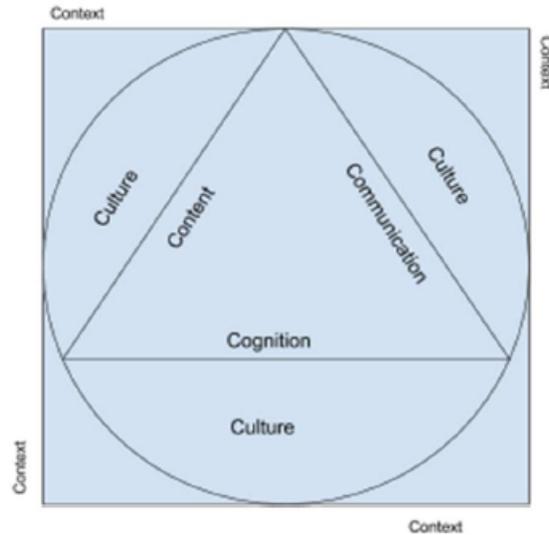


FIGURE 2. The 4Cs framework. From CLIL: Content and language integrated learning by Coyle, D., Hood, P. & Marsh, D. , 2010, p.41

### 3.1 Implementing the 4C framework

In order to understand and implement the 4C framework, Coyle et al. (2010) and Coyle (2007) provided the 4C planning guide. This planning guide provides an explanation and a set of questions which act as a checklist while planning lessons. This section provides a detailed explanation of each of the 4C's as well as the questions one needs to answer while planning a 4C based lesson.

#### 3.1.1 Content

Content is the 'what' of the framework as it focuses on what needs to be taught in the classroom. This can be a part of the prescribed curriculum or could also be drawn from cross-curricular and integrated studies. Simply put, the content could be any knowledge or skills we want our learners to learn (Coyle et al., 2010). While planning the content, a teacher should take into consideration the following;

- What will I teach?
- What will my students learn?

- What will be the aims and objectives of my lesson?
- What will be the learning outcomes? (Coyle, 2005)

### 3.1.2 Cognition

CLIL is not only related to the transfer of knowledge but rather a process to allow students to construct their own understanding, it is imperative that CLIL classes are able to engage learners meaningfully through higher order and lower order thinking tasks based on Bloom's taxonomy. The questions that need to be answered in order to incorporate cognition are (Coyle et al., 2010);

- What kind of questions must I ask in order to go beyond 'display' questions?
- What tasks will I develop to encourage higher order thinking- what are the language(communication) and content implications?
- Which thinking skill to concentrate on which is appropriate for the content? (Coyle, 2005)

### 3.1.3 Communication

Communication in the 4C framework is a means for interaction. Here language is used to learn new content, which helps the learners use the language contextually and regularly. Thus, aiding the process of learning a new language. CLIL as a concept does not negate the importance of grammar and lexis in language learning, however, it does adopt a different approach to language learning. Teachers using the CLIL methodology have to understand the interrelationship between content objectives and language objectives. This helps teachers distinguish between language that is necessary for the student to be able to learn the content (content objective) as well as language which is compatible with culture (language objective). The language triptych helps makes this connection, by analysing language from three interrelated perspectives: language of learning, language for learning and language through learning (Coyle et al., 2010)

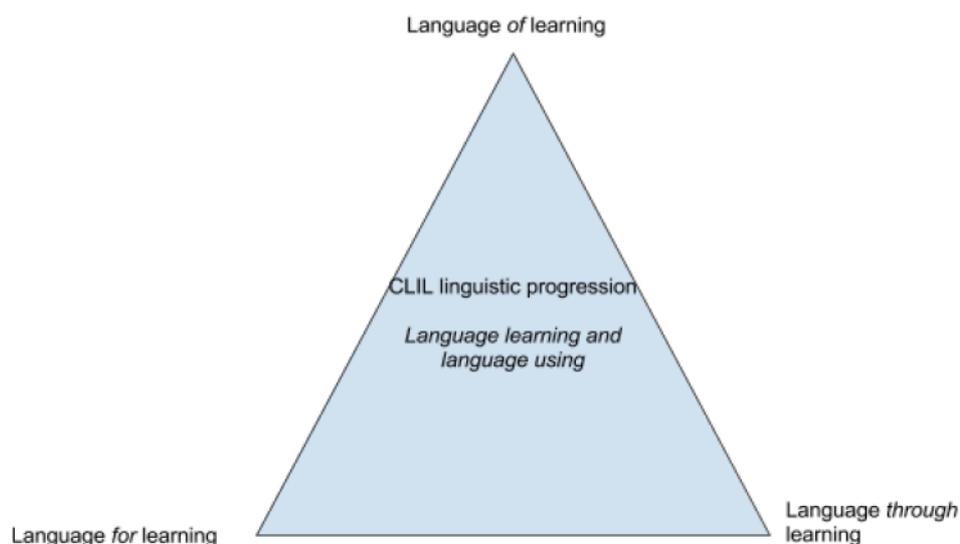


FIGURE 3. The language triptych. From CLIL: Content and language integrated learning by Coyle, D., Hood, P. & Marsh, D. , 2010, p.36.

*Language of learning* is necessary for the students to be able to learn the basic skills and concepts related to a particular topic. The linguistic progression of the language for learning may not always synergize with the grammatical progression. Thus, in such cases, the teacher needs to identify certain phrases, vocabulary and grammatical rules which the student would need in order to understand the subject (content) and teach those to the students explicitly.

*Language for learning* is language skills that the students need to work with the content in a foreign language setup. This is the language the learners will be required to use during group/pair work. This language will enable the students to support each other by engaging in activities such as debating, questioning, enquiring, etc. Thus students will learn how to use the foreign language to communicate their understanding of the content, while also developing their language skills.

*Language through learning* is the language developed through learning. This is the unplanned part of CLIL wherein, the student develops a deeper understanding of using the foreign language through classroom discourse. This language can be built upon to help students find more meaning and form (Coyle et al., 2010)

The questions a teacher needs to ask herself while planning the communication part are;

- What language do they need to work with the content?
- Specialized vocabulary and phrases?
- What kind of talk will they engage in?
- Will I need to check out key grammatical coverage of a particular tense or feature e.g. comparatives and superlatives?
- What about the language of tasks and classroom activities?
- What about the language of discussion and debate? (Coyle, 2005)

### 3.1.4 Culture

Culture in CLIL is a means to build awareness about self and others and develop a deeper understanding of the pluricultural and plurilingual world. CLIL offers a planned and transparent methodology to develop pluricultural understanding and global citizenship (Commission of the European Communities, 2008). Thus culture in CLIL weaves all the other C's together, improves pluricultural awareness and increases self-awareness. At a micro level culture encompasses the culture of the subject or the culture in the classroom, which is fostered by meaningful activity in the classroom with the teacher and the peers. At a macro level, it is an extension beyond the classroom to build collaborative partnerships beyond the classroom. (Coyle et al., 2010; Byram 1989; Donato, 1994). Some questions teachers should keep in mind regarding culture are;

- What are the cultural implications of this topic?
- How does the CLIL context allow for 'value added'?
- What about otherness and self?
- How does this connect with the other C's? (Coyle, 2005)

It is crucial to understand that the 4C's do not exist in isolation and their integration is central to the foundation of CLIL planning. Content and cognition determine the type of tasks planned, whereas communication is providing the language to work with the content as well as work in the classroom. Culture either related to the subject or the classroom or beyond determines the effectiveness of the other C's (Coyle et al., 2010).

### **3.2 CLIL in the Indian context**

Based on the understanding of CLIL from the previous section and the research conducted on CLIL, it had been noted that CLIL learning environment can have a positive effect on thinking and content learning process. Most importantly several studies indicate that CLIL learners have a positive attitude, satisfied and display a stronger sense of confidence about themselves (Jäppinen, 2006). Overall, research has reported that CLIL has a considerable effect on global communicative competence, receptive skills, speaking, morphology, vocabulary, writing, creativity, risk-taking, collaboration, and increased learner motivation generally (Pérez-Cañado, 2012).

India has bilingual models which either have students transition to L2 (English in this case) in either primary or secondary school, or many times students are immersed in the English language from kindergarten itself (Rani & Inamdar, 2017). Thus India as an ideal set up to experiment CLIL in order to build second language acquisition (SLA). Studies show that CLIL implementation in Indian classrooms can lead to better student management, increased student engagement and collaboration while improving their oral and written language skills, and perceptibly a more self-aware, responsible and independent set of students (Rangarajan, 2017). Better results were observed when CLIL was combined with technology (Vency & Ramganes, 2013). Moreover, CLIL model is flexible in order to cater to a wider range of contexts (Coyle et al, 2010). Thus, integrating CLIL within the Indian context would ameliorate the current teaching and learning standards in Indian classrooms.

### 3.3 CLIL as a professional development tool

The CLIL model comprising of the 4C's does not follow one certain methodology of implementation. It is flexible and requires teachers to engage in effective planning in order to facilitate effective learning. Individuals wanting to implement CLIL, need to have a clear and defined vision regarding CLIL based upon the fundamental principles of the organization and CLIL itself. This will lay the foundation for the process of planning and evaluation of the CLIL model in a particular context (Coyle et al., 2010).

Individual teacher change in relation to a teacher's classroom practices is based on three characteristics: subject matter knowledge for teaching, understanding of student thinking, and instructional practices. Knowledge of the subject helps the teacher understand the central idea and concepts related to a particular discipline (Borko, 2004). A detailed understanding of the correlation of these ideas helps in establishing the process required to build new knowledge. It is imperative for teachers to breakdown the content in order to get a clear understanding of the subject matter, which in turn makes it easier for the teacher to plan the process of teaching a particular topic effectively (Anderson, 1989; Ball, 1990; Borko & Putnam, 1996; McDiarmid, Ball, & Anderson, 1989). Based on Coyle et al.'s (2010) explanation of the process of implementation of CLIL in the sections above, CLIL would prove to be an effective tool in order to help teachers get a clear understanding of the subject and align it to their learner's needs.

Teachers must have a clear understanding of students thinking processes and how does the construction of knowledge take place, by creating a link between the student's ideas and with the central idea of a subject. Knowledge of the strategies that students could use to solve problems, the kind of problems that students find more challenging as compared to the others and ways to help students overcome these challenges are some key factors of professional development (Borko, 2004). The 4C framework of CLIL focuses on using school curriculum and routines to build a student's self-confidence and identity by creating opportunities which expand the depth of exposure offered, elevating the student's thinking process (Moate, 2014). Cognition in CLIL is all about guiding the

teachers to make connections between a students' thinking process and content through strategic planning of higher order and lower order thinking tasks (Coyle et al., 2010).

CLIL is context dependent and improves instructional practices, it gives the teachers' an opportunity to develop their professional competencies and gain the required confidence to 'own' their classroom practices. The CLIL toolkit is a process of teachers' deciding on a set of practices they want to implement followed by creating a detailed plan to set these practices into the classroom context. CLIL teachers create their own material which focuses on giving equal focus to language and content and a carefully planned process to orient their learners with the language and the subject. After the planning and implementation phase, teachers' reflect and evaluate the performance of these practices which eventually contribute to the creation of collaborative learning communities. Collaborative learning communities is the key feature of CLIL as subject and language teachers both co-create the CLIL progression in their educational community (Moate, 2011). Hence, it appears that CLIL allows teachers to make this framework relevant to their existing instructional practices through reflection and collaboration (see Table 2) (Coyle et al., 2010; Borko et al., 2010).

One of the most important parts of this toolkit apart from its flexibility is its Lesson observation and Critical Incident Technique (LOCIT) a framework for creative professional collaboration of teachers. LOCIT is intended to enable teachers to share their practice-based evidence, build on their theoretical knowledge of CLIL and other methodologies and most importantly becomes more confident regarding their own practices; all of this by collaborating with other teachers.

It is generally accepted that teachers cannot be expected to create a student learning community if they do not have a similar community to collaborate and grow. Hence, providing the teachers with an opportunity to learn and improve their practices through a carefully planned process while being a part of a collaborative learning community would ultimately lead to the professional development of teachers (Coyle et al, 2010 & Borko, 2004).

## 4 PROFESSIONAL DEVELOPMENT AND ITS EVOLUTION

Professional development (PD) as a concept carries a sense of elusiveness, even though myriad studies have tried to provide a clear understanding and definition of the same. PD has commonly been referred to as in-service training, staff development, professional education and so on. Taken from several authors, the many definitions of PD, shaped over the years, provides an overall understanding of the concept and its implementation (Schwartz.et.al, 1998). This section provides an overview of the evolution of professional development as a concept.

Professional development, formerly known as in-service development, staff development, in-service education was about providing an opportunity for the teachers/educators to learn new knowledge or skills or to ameliorate their understanding of educational practices. The knowledge acquired served as a means to effectively cater to the ever-changing student needs and produce desirable student outcomes (Truitt, 1969; Beeler, 1977; Canon, 1981). Bryan & Mullendore (1990) extended the definition of PD by adding the component of using motivation and commitment to building creativity, credibility, and competency alongside gaining better knowledge and skills to ameliorate job performance.

Contemporary PD practices have been attributed to workshops and conferences to create a space for the exchange of ideas and establish purposeful networks amongst educators. However, the design and delivery of these programs made PD seem like a commodity or marketable product, that could be learned quickly and used immediately to fit the educator's context (Bredeson, 2002, p. 672). Teachers were expected to learn a concise set of skills through a detailed process; all of which was not in alignment with the classroom practices and the school's theories of reform (Borko.et.al, 2010). Hence, it could be said that earlier PD meant a teacher taking complete responsibility of one's learning, and a systemic effort to change classroom practices to ensure better student outcomes

through the process of accumulation of knowledge rather than its application (Bredeson, 2002 & Guskey, 2002).

Even though these programs have a clear purpose to imparting knowledge and skills to cater to the needs of the changing paradigm, the majority of them fail in bringing about desired changes because they pay little or no attention to,

- Factors which motivate teachers to engage in PD programs
- The process through which change occurs in the practices and attitudes of teachers (Guskey, 1986).

A teacher's interest in PD lies in their willingness to expand their knowledge and skills, contribute to their personal growth and transformation, and enhance their cogency with students. Even though the above explanations of PD have emphasized on building skills, knowledge, and organizational growth, they fail to address teachers need for personal transformation. Also, teachers hope to gain specific, tangible and realistic ideas from these programs which will enrich the day to day workings of their classrooms (Fullan & Miles, 1992). However, PD programs fail to acknowledge teachers hopes and requirements, which makes PD a cumbersome process for teachers.

Moreover, the process of PD aims to change the attitudes, mindsets, and beliefs of the teachers. The presumption is that, if the teacher's perception of certain curricular practices would be different, it would reflect in their classroom practices and invariably in student outcomes (Fullan, 1982 as cited in Clarke and Hollingsworth, 2002).

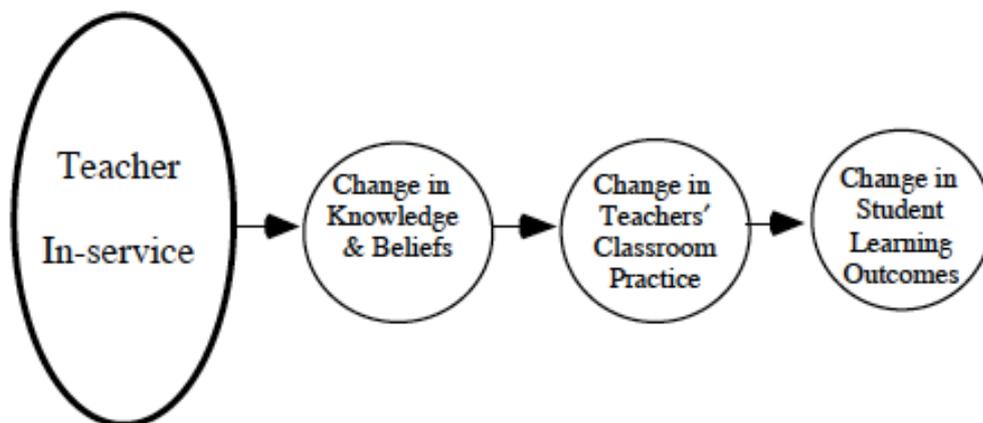


FIGURE 4. Model of the purpose of teacher professional development. From Clarke and Hollingsworth, 2002, p. 949.

Thus, in order to bring about the professional development of teachers, there was a need to focus on strengthening existing practices by catering to a teacher's personal goals through action and reflection; making learning, engagement, and improved practice the three main characteristics of effective PD programs (Bredeson, 2002).

The major focus of any form of PD should be engaging the learner creatively and fostering their reflective capabilities as PD is more about the participants than the program itself. While learning new skills and content is crucial for PD, there should be more or equal emphasis on the journey of development.

A significant development in the conceptualization of PD came with increased emphasis on reflection and collaboration. As cited in Hargreaves and Dawe (1990), Schon (1983, 1987) mentioned that constant reflection of ongoing practices helped practitioners solve recurring problems and even prevent similar situations from arising. Furthermore, it was imperative to create a sense of common purpose amongst the members of the educational community in order to respond effectively in times of rapid change and adversity to bring about sustainable educational reforms. This could be achieved through collaboration as a shared sense of purpose and absence of isolation would lead to ongoing teacher development and improved efficacy (Hargreaves, 2000).

It is thus evident that PD programs have changed from being university or institution dependent courses focused on merely raising the intellectual abilities of teachers to school-centered reforms which focus on acknowledging, collating and building on the practices and skills that the teachers already have. Therefore PD went from working on teachers to working with them. A major strand of PD now focuses on harboring reflective and collaborative practices through long term inquiry and learner-centered structure to support teachers as develop the professional knowledge and apply it to their existing context, which would have a profound effect on student outcomes. Hence, effective PD's are highly engaging, collaborative and reflective in nature and have their architecture embedded in the school's culture providing teachers with continual opportunities to refine their practices (Hargreaves & Dawe, 1990; Bredeson 2002; Borko.et.al, 2010).

As an overview, teacher professional development can be simply described as a process of change through three interlinked dimensions: personal, professional and social (Bell & Gilbert, 2005; Eisenschmidt, 2006). Herein, the professional dimension is concerned with learning skills and knowledge and gaining the expertise to confidently apply it to the school's context and the personal dimension has a direct impact on the professional dimension as a teachers self-confidence and self-esteem determine the motivation to implement or engage in new practices. It is the social dimension which brings together teachers from different setups and makes them a part of a larger educational community, it is here that teachers through support and collaboration understand and accept the new as well as old nuances of their organization as well as education as a whole. This synergy between these three dimensions is what leads to professional development (Geeraerts.et.al, 2015).

Recent studies conducted in Finland actually talk about an emerging peer-group mentoring program (PGM), where teachers from diverse educational communities are coming together and learning from one another. This program creates a collaborative learning space for the mentees as well as the mentors as there is no hierarchy involved. Moreover, this program is optional, making sure that teachers are intrinsically motivated to be a part of such spaces. Studies revealed that PGM contributed mostly to the personal dimension of PD as teachers felt more appreciated and confident about themselves, which in turn improved their practices. Hence, it could be stated that the PGM program is highly engaging and facilitates the development of new skills and knowledge through action and reflection in a collaborative environment (Geeraerts.et.al, 2015).

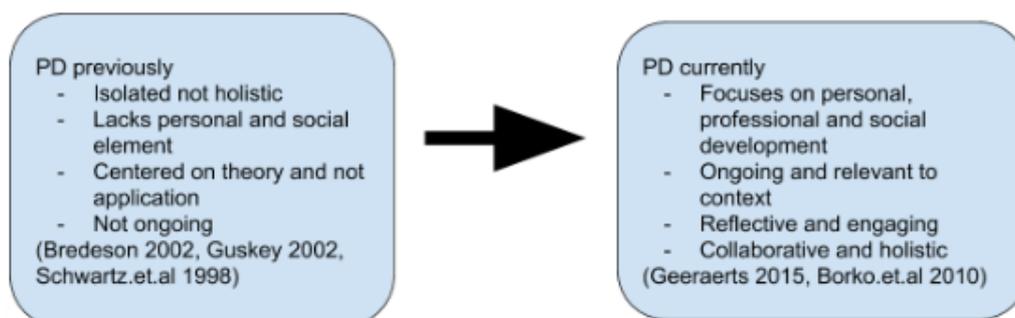


FIGURE 5. Graphic representation of the evolution of PD

## 4.1 Conducting High-Quality PD

The evolving definitions of PD provided in the previous section highlight the shift in ideology and general practices associated with PD. However, this section aims to provide an insight into the concept based on the above ideologies of learning, engagement, reflection, and collaboration, as well as, applicable methods and strategies to bring about PD with unambiguous justification.

Stein, Smith, & Silver (1999) gave a concise summary of traditional professional developmental practices. Table 1. Is used as a starting point to draw comparisons to the current structure of PD. The proceeding literature explains high-quality PD by providing examples of specific methods and strategies used to bring about PD.

Table 1. Key characteristics of PD in 1990's

Strategies used to conduct PD	<ul style="list-style-type: none"> <li>• Focused on providing ideas, techniques, and materials to the participants.</li> <li>• Workshops, courses, and seminars were preferred formats of execution.</li> <li>• Short durations with a limited personal commitment from participants.</li> </ul>
Knowledge and beliefs on which PD is designed.	<ul style="list-style-type: none"> <li>• The leader/teacher educator sets the schedule.</li> <li>• Implementation of theoretical knowledge to practical application in the classroom is usually the teacher's responsibility.</li> <li>• Learning theories are based on the psychology of an individual.</li> </ul>
Context of the PD	<ul style="list-style-type: none"> <li>• The context of the program is not aligned with the context of the participants.</li> <li>• Generally, this does not even happen in the school.</li> </ul>
Critical issues with this kind of PD	<ul style="list-style-type: none"> <li>• Focus majorly only on teacher development (isolated development)</li> <li>• The leadership of the educational institute is not a major problem in teacher development.</li> </ul>

As opposed to the PD structure in Table.1, Borko.et.al. (2010) drew light upon the features of high-quality PD, which are in synergy with the aforementioned theories of professional development. Firstly, PD should be situated in practice and should have some part of this program focus on student learning outcomes without making it the matter of prime attention. The reason behind having PD's designed to suit the ongoing practices is to enable teachers to take away relevant learnings regarding teaching, assessment, observation, and reflection. Incorporating teaching practices which are based on clear goals, provide a supportive learning environment and frequent reflection and feedback are often linked to positive student outcomes (Thoonen et al., 2011). Moreover, high-quality PD's equip teachers with skills to help elicit and interpret student's ideas, evaluate student work and incorporate the learnings from these into their classroom instructional practices. The inclusion of student reasoning sets a foundation for collective analysis and amendments regarding contextual knowledge and pedagogy.

The process of achieving the required standards of high-quality PD revolves around modelling, engaging through an active learning space, and bolstering a professional learning community. When teacher educators model effective instructional strategies, it creates an opportunity for the participants to experience these strategies and align it to the schools goals. Reflection helps to evaluate the effectiveness of these strategies from the participants perspective. These practices are imperative in the age of educational reform where teachers are often asked to cater to the needs of the changing world and alter their pedagogical practices accordingly.

Active participation is intellectually stimulating and allows the teachers to collaborate, which makes problem solving and decision making easier, as it builds trust. A collaborative community gives depth to the active learning process, as it allows the learners to collaboratively inquire and reflect on their practices. Trust and respect are the strong pillars of such communities, wherein teachers are both support and challenge each other, all of which results in improved self- efficacy, self-confidence, better perception and control of practices and more accountability (Thoonen et al., 2011).

Finally, PD practices should be sustainable. The structure of PD should be continual and cyclical, engaging teachers on multiple occasions with experimentation and reflection. Teachers are given a chance to enact and re-enact their lessons, keeping the student needs in mind. Individual and collaborative reflection helps them make sense of their practices and make the required changes. Teachers presented with such PD opportunities are able to support their ongoing learning and become propagators of change (p.550).

Table 2. Characteristics of effective professional development based on Borko et al., (2010).

	Characteristics of effective PD	Ideology
Content (What)	<ul style="list-style-type: none"> <li>Engagement of teachers in concrete tasks of teaching, assessment, observation, and reflection to illuminate the process of learning and development.</li> <li>PD is connected and derived from the teacher's work with the students.</li> <li>The content always should build on the teacher's existing pedagogical knowledge.</li> <li>PD content centers around high-quality student learning and ways to support teachers in achieving these standards.</li> </ul>	Teacher education should be centered around their classroom practices. Teacher practices and experiences should form the foreground of ameliorating their own practices.
Pro- cess/struc- ture (How)	Preferred instructional practices should be modelled in classrooms as well as adult learning workshops/spaces.	Teacher educators should treat teachers as students. They should create a space which the teachers are expected to create for their students.
	Active teacher learning and inquiry, helps teachers identify their needs and participate in PD programs accordingly. This is achieved through reflection, experimentation, and collaboration and these programs are participant driven.	Teachers are active learners capable of constructing their own knowledge and understanding. Empowering teachers and treating them with the respect they deserve as professionals.
	Building professional learning communities and collaborative learning environments. These collaborative spaces become sharing grounds for teachers and build trust within the teacher community while harbouring a professional discourse including critique.	Teachers need opportunities to participate in supportive professional learning communities in order to be successful in constructing new roles or changing their practices.
	Goal-based PD programs wherein the goals are aligned to the other aspects of school change.	Situating teacher education in classroom practices to inculcate a deeper understanding of new practices and their implementation.
	Sustainability of the PD model, wherein the process is continuous and there are follow-ups for future learning through internal and external resources.	There should be rigorous, cumulative learning opportunities for teachers over a period of time.

Based on the above research by Borko et al. (2010), Table.2 provides a comprehensive list of what an effective PD should focus on and ways in which it can be achieved. (p. 551).

## **4.2 The process of professional development**

The previous section outlined the concept of professional development and its evolution, as well as the features or characteristics that are attributed to effective professional development today. This section focuses mainly on the process of change which leads to professional development.

Originally the process of professional development was based on a hypothesis that changes in the attitudes and beliefs of teacher precede the actual implementation of new practices and strategies (Jones & Hayes, 1980). As opposed to this Guskey (1986) introduces an alternate model of change in the process of professional development, wherein a significant shift in the attitudes and mindset occurs after collecting substantial evidence of improved student achievements due to the implementation of new practices. The fundamental point to notice here is that it is not the learning of new skills and strategies but rather the implementation of new practices that lead to a mindset change. Attitudes and beliefs are largely derived from classroom experiences. If a certain teacher has been unsuccessful in ameliorating the learning standards of a particular group of students belonging to a certain stratum of the society, the teacher is more likely to label the students in a particular manner. In such a situation, if a new pedagogical practice leads to a reversal of previously experienced student behaviour, there is a change in the teacher's mindset (Guskey, 2002).

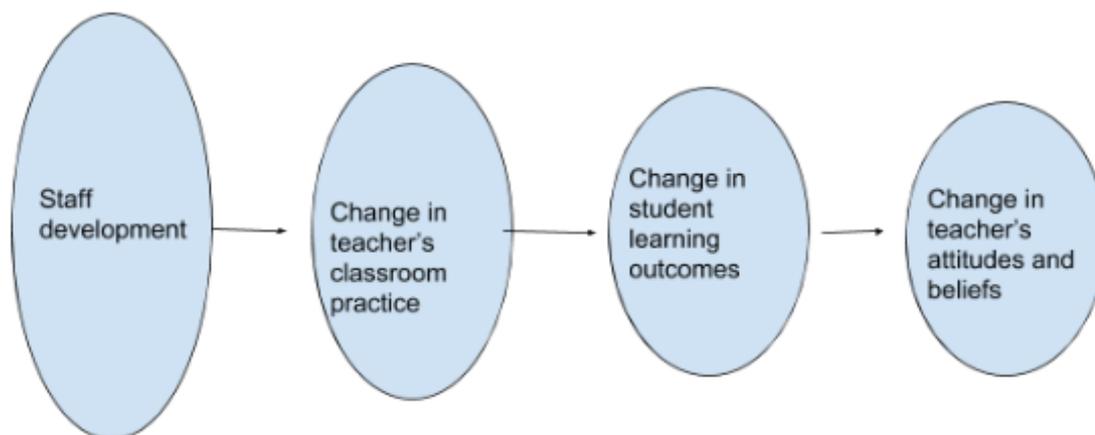


FIGURE 6. Guskey's model of the process of teacher change. (Guskey, 1986, p. 7)

Mindset change is a result of improvements, which manifest due to the new practices that the teachers have incorporated into their instruction. Thus, Cobb, Wood, and Yackel (1990) as cited in Clarke and Hollingsworth (2002, p.950) described the need for teachers to attempt a change in their classrooms. Johnson and Owen (1986) suggested that teacher change occurs in phases, where teachers go from recognition of their current practices to refinement, to re-examination and renovation and finally renewal. Similar to this process, Lewin's model recognized three phases of teacher change; namely unfreezing (where the teachers are motivated and prepared to incorporate changes into existing instructional practices), changing (where new strategies and skills are learned), and refreezing (where new strategies are finally integrated into existing instructional practices).

Elaborating on these theories of teacher change, Clarke and Hollingsworth (2002) talk about the Interconnectedness model which implies that change is mediated through action and reflection across four distinct domains which directly influence a teacher's world: the personal domain (knowledge, beliefs, and attitudes), the practice domain (professional experimentation), the domain of consequence (outcomes), and the external domain (sources of information, support, and motivation). This model discusses the non-linear process of learning which is continuous in nature. It also identifies reflection and enactment as mechanisms which mediate change between these domains (p. 950).

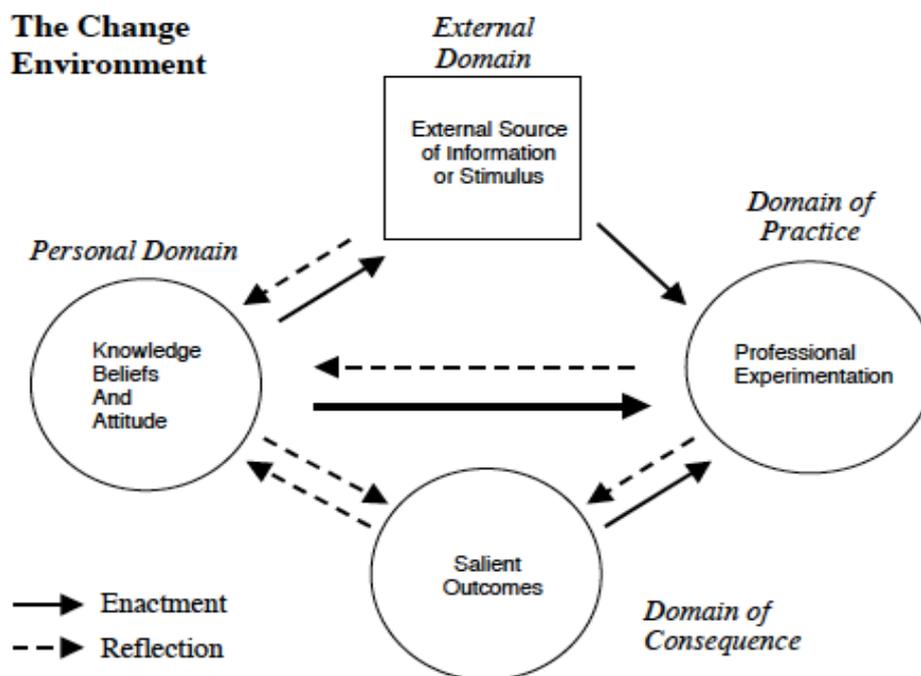


FIGURE 7. The interconnectedness model of professional growth from Clarke and Hollingsworth, 2002, p. 951

The external domain comprises of any source that provides new information and stimulus to the teachers. The many alternative external resources of information are in-service sessions, professional development programs and courses, professional publications, and conversations with colleagues. The domain of practice comprises of any new practices integrated into the routine classroom practices, as a means of professional experimentation as a result of an external stimulus. Changes due to experimentation lead to a change in a teachers knowledge and beliefs (the domain of knowledge, attitudes, and beliefs); studies have shown that a change in attitudes and beliefs as a result of professional experimentation increase the value of new pedagogical practices. Substantial improvement in student outcomes as a result of new pedagogical practices comprises the domain of consequences.

As represented in figure 8 and 9 these domains are interlinked and mediated through the processes of enactment and reflection. Enaction involves implementing a new idea or a practice in relation to ameliorating the existing ones as compared to simply implementing something in total isolation. Learning new strategies and skills in in-service sessions leads teachers to enact them in their

classrooms, linking the external domain to the domain of practice. Additionally, a teacher's belief in a certain practice leads to the increased implementation of a particular technique, linking the domain of knowledge and beliefs with the domain of practice. Lastly, outcomes contrary to expectation leading to a positive change lead to continual experimentation, linking the domain of consequence with the domain of practice.

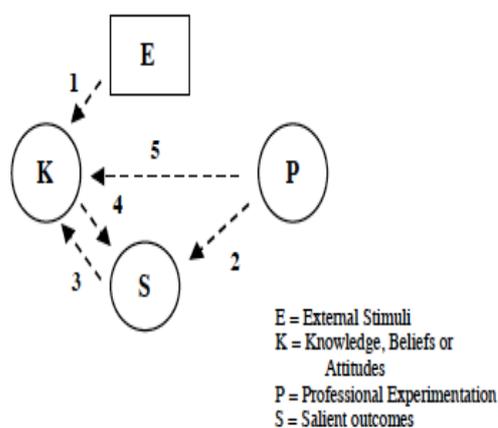


FIGURE 8. Reflective links (p. 954)

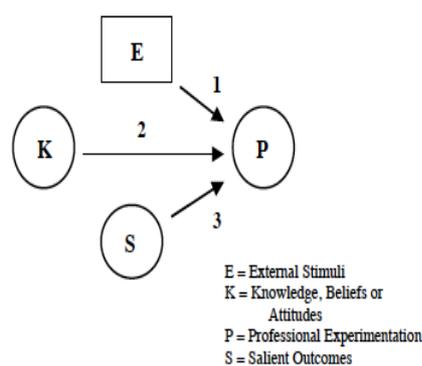


FIGURE 9. Enactive links (p. 954)

Reflection is a method of active and careful consideration of new and old practices. Reflecting on actions and experiments and observing the outcomes of these actions in the classroom helps teachers draw conclusions in relation to the salient outcomes as a result of new practices. Thus there is a prominent reflective link between the domain of practice and the domain of consequence. Similarly, there is also a reflective link between the domain of consequence and the domain of knowledge, attitudes, and beliefs because of the positive outcomes leading to increased student motivation and better class management, a teacher's knowledge and beliefs related to pedagogical practices evolve. This could also be the other way round, where the evolution of knowledge and beliefs leads to a re-evaluation of desired student outcomes. For example, if increased student interaction was previously only tolerated but is now valued.

In addition to these domains, the environment of change plays a pivotal role in bringing about professional development. An ideal environment conducive to change has a community of colleagues who share their consequences of

experimentation and learn from one another. Administrative encouragement of teachers to experiment with innovative teaching strategies and structural provisions providing opportunities for personal and professional growth are ideal environments of change. Spaces which allow the participants to enact change in a variety of forms resonating with their individual styles and interests contribute to sustainable change. Thus this non-linear model of teacher change both personal and context-dependent in nature; focuses not only on the change in teacher practices but an overall growth: an individual amalgam of practice, meaning, and context (p. 965).

The interconnectedness model represents the process of change, evidenced by empirical data, through growth networks and change sequences. While the term change is attributed to something fleeting and temporary occurring in a particular domain; the term growth is reserved for a lasting change. Studies suggest that though many professional development programs may foster a change sequence, seldom are able to nurture a growth network. Change sequences could mean the implementation of a new practice and its effect on student outcomes, following these changes teachers often reflect solely regarding one domain. In order for a change sequence to culminate into a growth network, there needs to be a lasting change such as ongoing refinement of practice, continually seeking new strategies to make learning an intriguing process for the learner and most importantly a long term change in the knowledge and beliefs of the teacher. Drawing from the above statements, it would be rather beneficial to explore ways to stimulate change sequences and practices which aid the transformation of change sequences into growth networks (Clarke & Hollingsworth, 2002).

The pathway of growth network in the Interconnectedness model as depicted in FIGURE.6 is similar to the first cycle of action research; where a practitioner makes informed modifications to practice, implements these new modifications and observes its outcomes and reflects on these outcomes to make further modifications to practice. Hollingsworth (1999) observed that like action research, teacher professional development is often a cyclical movement between the four domains mentioned in the interconnectedness model. In figure 10, the arrows (2,3,4,5,6,7) show that there is continual reflection and enaction between

practice and personal beliefs, which would lead to repeated modifications in practice or a subsequent change in beliefs and attitudes. These modifications occur even before the practitioner is able to observe and reflect on the plausible consequences of new practices (arrow 8 & 9). Thus it is clear that the process of teacher change/professional development is nonlinear but rather cyclical, consisting of a lot of back and forth between these analytical domains of teacher change (Clarke & Hollingsworth, 2002, p. 960-961).

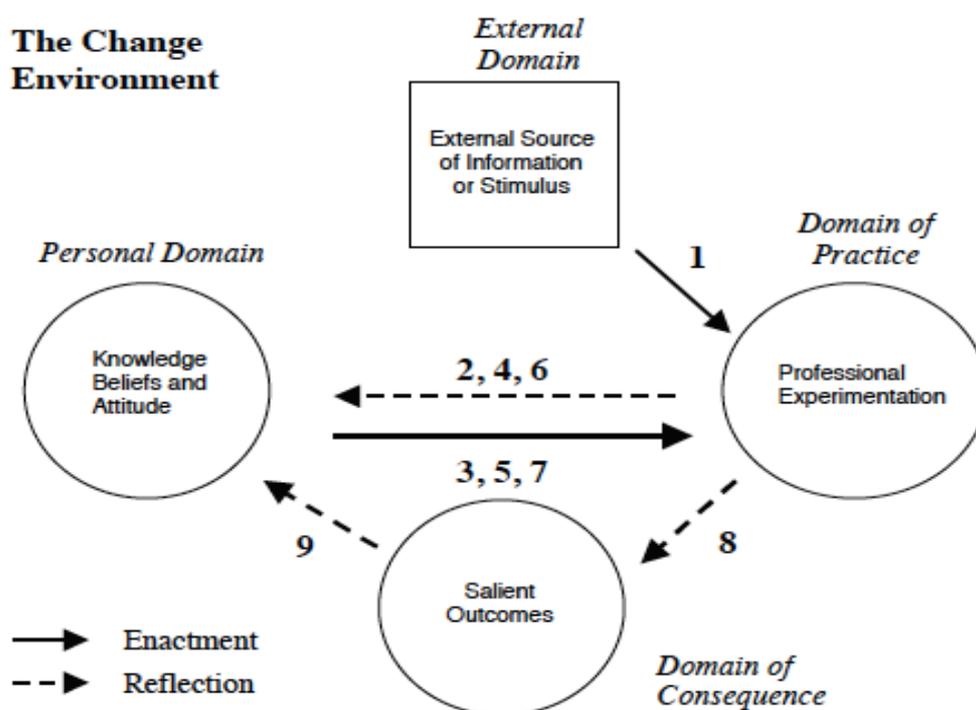


FIGURE 10. Sample growth network (Hollingsworth, 2002, p. 962)

While FIGURE.9 is explicitly highlighting the pathway of teacher professional across the four analytical domains, it does not highlight the causes for these changes. Clarke and Hollingsworth (2002) through the interconnected model have spoken about the process which mediates change and results in the professional development of teachers, but this model fails to describe in detail the cause for this change. For example, the causes of this transformation which eventually helps the professional development of teachers is something we need to look deeper into.

The pathway of change consists of variables. These variables share casual relationships which are dependent on particular situations and events. Salmon

(1984, 1989, 1998) as cited in Maxwell (2004) refers to a realist approach which sees these casual relationships as the main cause for change. Hume's fundamental idea of causality (cause of change) was to find regularities among the observed casual relationships and thereby leading to the unification of these regularities. However, each situation and event is different from the other and looking for regularities often misdirects the researcher from actually observing the peculiar nuances in these casual relationships independent of generalization. Thus the realist approach emphasizes the need to look beyond quantitative sets of regularities and explore the impact of social relations to understand the causes of change (Sayer 1992).

While exploring these casual relationships, any indication that a certain variable which influences/ changes/ transforms/ influences the other variable can be considered as a causal claim. However, these causal claims have to be backed up by appropriate evidence to support the causal claim. There are many strategies that could be used by qualitative researchers to help develop causal claims. Some specific strategies relevant to this study; include long term involvement and rich data, narrative and connecting analysis and intervention (Maxwell, 2012).

Repeated observations and interviews with the participants create a varied data set enough to provide a fuller and revealing picture of the situation and the processes involved (Becker, 1970 in Maxwell, 2012). Generally, qualitative data is codified and categorized and these categories become the premise to study the cause of change. However, these methods fragment the casual relationships embedded in the data. Local causality can be explored by keeping these links intact and identifying and interpreting actual instances which led to change. Lastly, the need for intervention, wherein an external perspective led to a reevaluation of practices and outcomes, thereby bringing about change. The explicit process of intervention highlighted in relation to the participants allows the local causality to be explored and inferences to be drawn (Maxwell, 2012).

## 5 RESEARCH PROBLEM

My research problem, thus, is focused on exploring individual pathways of professional development through the 4C framework in an Akanksha context which has a set of existing pedagogical and teacher professional development practices. In doing so, I was trying to compare and develop a pedagogical framework based on the 4C's to suit the pedagogical standards at Akanksha. My main interest was to explore the various local causes of change that lead to professional development. Thus I used CLIL and the 4C framework as a pedagogical development tool and outlined the process of professional change for each participant while they adapted their practices to the 4C framework or vice versa. A detailed understanding of the process of change would draw light to the various internal (personal) and external (professional) factors which either have a positive or a negative impact on the process of professional development.

My research questions are;

1. What are the intrinsic (personal) and extrinsic (professional) factors affecting the professional development teachers in the Akanksha context?
2. How can these factors be used to plan professional development programs?

## 6 ACTION RESEARCH

### 6.1 What is action research?

Carr (2006, p.433) defined, “it (action research) as a form of inquiry that recognized that practical knowledge and understanding can only be developed and advanced by practitioners engaging in the kind of dialogue and conversation through which the tradition-embedded nature of the assumptions implicit in their practice can be made explicit and their collective understanding of their praxis can be transformed”.

In simpler terms, action research involves action and reflection leading to improvement of ongoing social and educational practices, alongside the transformation of the practitioner/participants understanding of the practice as well as the conditions under which the practice is observed. The aim of action research practitioners is to explore new ideas of doing things and their related outcomes followed by a process of reflection, evaluation, and transformation of practices to meet the demands of the changing world (Kemmis, 2010).

Kemmis and McTaggart (1988) introduced the action research spiral. The model comprises of three phases: plan, act and observe, reflect. Once the research objectives have been established an action plan is created. Upon implementation, the new action steps are observed and critically evaluated. Subsequently, by reflecting on these new practices and their consequences, changes are made and reimplemented.

This process could simply be described as plan-do-review. The planning phase is preceded by careful assessment of ongoing practices pertaining to the area of inquiry. Once the key area of improvement is identified and expected outcomes are decided; a hypothesis which would produce these desired outcomes is created. The hypothesis becomes the foundation of a detailed action plan which is implemented by the practitioner/participants. These new actions are evaluated and reflected upon. This could be followed by re-planning or by redefining the research problem altogether and the process is repeated (Baumfield et al, 2008).

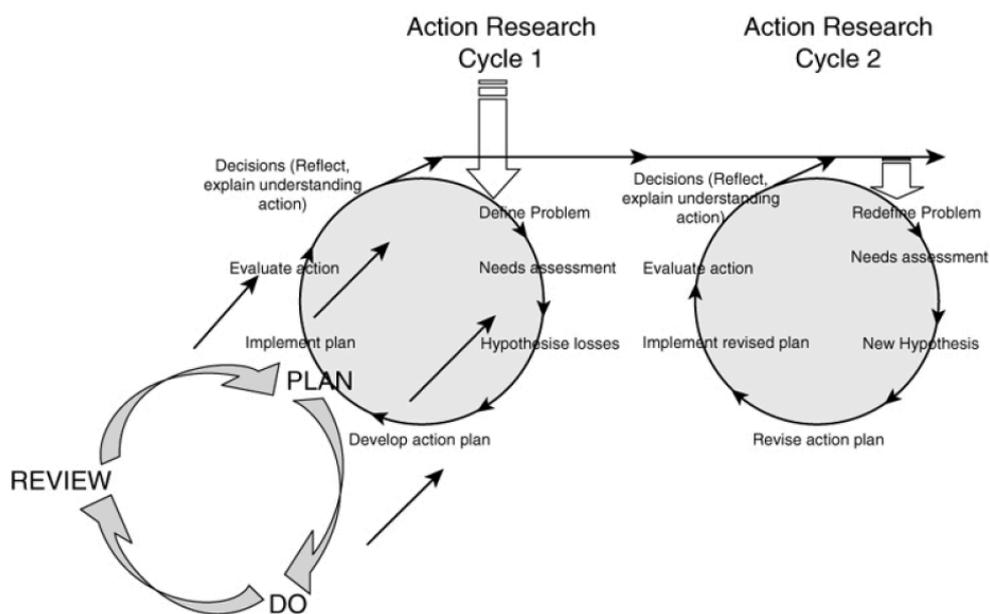


FIGURE 11. Adaptation of Kemmis & McTaggart's action research spiral (1988) complementary to plan-do-review (Baumfield et al, 2008)

## 6.2 Why action research?

Since the objective of action research is to identify a certain problematic situation and make necessary modifications leading to improvement in practice, the process of change in action is as important as the result of this change (Vogric & Zuljan, 2009). It is somewhat systematic and disciplined in nature, whilst offering a considerable amount of contextual flexibility. Also, it not only leads to the transformation of practices but also brings a shift in individuals thinking process through reflection (Kemmis, 2009).

Action research starts with the inquiry of a certain indeterminate situation. Inquiry involves making observations and transforming these indeterminate situations into new situations by implementing carefully thought out practices. One must remember, that there is no end to inquiry and that one can keep improving their practices. Evidence collected during a process of inquiry leads to further

questions, which sets the basis for formulating the question to conduct action research (Baumfield et al, 2008; Biesta & Burbules, 2003).

Hence, action research is context and action dependent process. It allows the research practitioner to examine a situation critically and hypothesize and test theories to solve the identified problem. Since reflection is a major operation of action research, it enhances the application allowing the research practitioner to modify actions to suit the needs of the participants and the overall context of the study. While reporting the findings of an action research study, the facts and ideas used are communicated clearly to the audience, which makes it possible for others to learn and adapt from the study. (Kemmis, 2009; Biesta & Burbules, 2003).

### **6.3 Why action research for this study?**

As mentioned by Kemmis (2010), action research leads to a transformation of practices through the process of action and reflection. Carr (2006) emphasizes the appropriateness of action research in terms of the type of study being conducted. This section will aim to justify the need for action research in the context of this study.

Action research was a suitable means to conduct this study as the 4C framework was being implemented to aid the professional development of the teachers. Being a part of The Akanksha foundation enables teachers to attend myriad professional development sessions on pedagogy, curriculum management, student management, self-development, and so on. However, most of these programs fail to achieve maximum impact as a lot is lost between the process of learning and implementation. This often reflects on the teacher's personal capabilities and little thought is given to the nature of support offered in order to assure professional development. Thus when I decided to introduce the 4C framework (which fits seamlessly with the Akanksha curriculum) to the Akanksha teachers, I wanted to ensure that it would lead to teacher professional development.

This required me to make changes to certain practices previously observed by the teachers as per the needs of the school and create a support system to enable the teachers to implement the 4C framework in their classrooms. The only way to achieve this was through action research, as it would provide in-depth knowledge of the process as well as pave the way to create systemic changes, all of which would support the ongoing professional development of teachers. Being a teacher myself, I also know from experience the best way to enable change in teachers is through action. The tacit knowledge attained through action and then the subsequent reflection of this action commences the process of sustainable change.

Moreover, the interaction of the 4C framework with The Akanksha Foundation will allow the utilization of this model across all the schools under the Akanksha umbrella. Relevant data collected through this action research will serve as proof of the compatibility of the 4C framework with the Akanksha curriculum and will also outline a pathway for the professional development of teachers.

## **7 IMPLEMENTATION OF THIS STUDY**

### **7.1 Research partners**

#### **7.1.1 The school**

Natvar Nagar Mumbai Public School (NNMPS) is a school run by the Akanksha Foundation. The school was started in 2013 and follows English as the medium of instruction and functions in collaboration with the Brihanmumbai Municipal Corporation (BMC). The school currently has 1 division of each grade, ranging from junior kindergarten up to grade 5. The number of students in each grade is between 35-40. There are a total of 270 students in the school, with 12 teachers, a school leader (SL), and an assistant school leader (ASL), 4 helpers (clerks), a social worker and administrative personnel. The school timings are from 11:15 to 17:15 from Monday to Friday and from 9:00 to 12:00 on Saturdays. The Akanksha foundation provides quality education free of cost with the support of the BMC, hence the students do not need to pay any educational fee. The uniforms, notebooks, textbooks, and other important school items are also provided by the BMC.

The study was conducted across grades 1 to 5. There were 3 participants, each of whom was a class as well as a subject teacher. The students come from the community nearby and seldom speak English at home. Their mother tongues are Hindi, Gujarati, Marathi, Haryanvi, & Bhojpuri. However, all the academic subjects are taught in English and Hindi and Marathi are taught as separate subjects.

NNMPS follows the Akanksha curriculum, which is mapped to the state board curriculum. The students have to appear for mid-year and end-year summative assessments conducted by the government as well as the ones conducted by the Akanksha Foundation. It is imperative and sometimes mandatory for the teachers to attend the in-service PD sessions organized by the Foundation.

NNMPS also conducts its individual PD's which are aligned to the vision of the school.

The school year at NNMPS is divided into four units based on the state board curriculum and textbooks. The English content differs from the one specified in the state board textbooks (Balbharti), but other subjects such as Math, Science, History, Geography, Hindi, and Marathi are similar to the Balbharti textbooks. Akanksha curriculum further subdivides these units: such as unit 1 is divided into 1a and 1b, and so on. Each of these units lasts for 2 months and the teachers divide the content specified in the textbooks into part A and part B for each unit. They also are expected to plan formative and summative assessments at the end of every subunit.

### **7.1.2 The Participants**

There were 4 participants in the study and I will be referring to them as teacher 1 (T1), teacher 2 (T2), teacher 3 (T3), and teacher 4 (T4) respectively during the course of this study. All the teachers have been working at NNMPS for over 2 years and teach across grades 1 to 5. All these teachers are language as well as subject teachers. T4 was a part of this study when it commenced but due to unforeseen reasons, she decided to drop out of the study and concentrate on integrating herself with the school culture and focusing on classroom management with extensive support from the ASL.

I had previously worked as a primary school teacher with NNMPS and had worked with T1 and T2 during my tenure at NNMPS. Having worked with these teachers, I was able to build a relationship of trust faster than I was able to with T3. All the teachers were aware of the nature of participation prior to the commencement of the study and were given a choice to drop out of the study at any time in case the study did not meet their expectations. They were also aware of the method of data collection and readily agreed to be audio recorded as well as share their plans and reflections with a larger audience. At any time where they wished not to be recorded, their concerns were validated and hence some parts of the conversations were not recorded.

Their attitude towards learning with my constant support is what kept them motivated throughout the study. During the two months of this study, we were able to create a collaborative community based on open communication and trust, which also was instrumental in facilitating the process of change. These aspects are clearly visible in their conversations with me, as well as the other data collected in the form of classroom observations, personal trackers and verbal reflections.

## **7.2 Research methods**

### **7.2.1 Setting up an inquiry**

Each class in NNMPS had its own culture and the teaching standards would vary with the teacher. Thus, you could say that a teacher's personal style was a major driving force of instruction in the classrooms. Hence, the professional development sessions did not benefit everyone equally. For a very long time, I felt that this lack of translation of newly learned skills into the classroom was entirely teacher dependent. However, once I was able to leave the setup and during my Master's studies, I realized the actual role of PD sessions.

Just like the PD definitions above I also felt that a teachers learning is their own personal responsibility, however, that is not the case. I noticed that PD sessions which actually bring about change actually focus on creating awareness in a teachers mind through reflection and equipping the teacher with transferable knowledge and skills to make their classrooms better learning spaces.

NNMPS was the best place to test this hypothesis, as I had a personal connection with the Akanksha Foundation and the school. I had experienced their practices and was now able to identify the gaps which hindered a teacher's professional development. In order to conduct action research which would allow me to these my hypothesis regarding PD, I needed to find something that would benefit the existing practice of the teachers. After detailed readings about CLIL, I could clearly see the similarities in the 4C framework and Akanksha curriculum;

I could also identify how the 4C framework would ameliorate the current teaching and learning standards of NNMPS.

While my inquiry did not lead to any physical action at NNMPS just yet, I engaged in verbal communication with the Foundation to structure my study to suit their requirements. This correspondence helped me shape my research questions in synergy with organizational practices and standards. Thus my action was very context dependent without compromising on my research theory and methodology.

### **7.2.2 Mapping the Akanksha curriculum to the 4C framework (PLAN)**

After having decided to conduct an action research study, which would facilitate the professional development of teachers and help them with the planning and implementation of the curriculum. The next step was to identify a pedagogical tool that would resonate with the values and vision of the Akanksha Foundation and more importantly align with the Akanksha curriculum. The 4C framework of the CLIL model fits seamlessly with the existing Akanksha framework because;

- Like CLIL, even Akanksha schools teach content through a second language (English).
- The Akanksha planning template focuses on the integration of content, language, and skills (cognition).
- Youth development is an integral part of the Akanksha ethos, just like culture building an integral part of CLIL.

However, although there are many similarities, the planning template used by Akanksha was different and after careful comparison of CLIL based lesson plans and the lesson plans shared by the NNMPS team, I was able to highlight the missing component of communication. Even though the Akanksha planning template requires teachers to integrate content and cognition, little or no focus is placed on the explicit integration of communication, which would eventually build the communicative and language skills of the students. The NNMPS team

was emphasizing on creating a culture of collaboration in each classroom through myriad group work activities such as think pair share, shared reading, presentations, dramas, and so on. Thus, my focus was to integrate communication into their already existing framework.

### **7.2.3 Planning for the focus group meetings.**

The focus group meetings were the first introduction sessions into understanding CLIL, the 4C framework, and majorly what does communication look like in classrooms. The focus group meetings lasted for 2 hours. These meetings were audio recorded as they would serve as evidence to get a better understanding of each teacher's initial understanding of CLIL and 4C framework and also provide a better insight into their journey of PD.

The objective of the first focus group meeting was to critically analyze their lesson plans using the 4C framework, identify the role of language in their classrooms, identify and analyze tasks related to student engagement and finally create an image for themselves as educators. Through this meeting, the teachers would be able to view their plans using the 4C template to help them identify the similarities and gaps between their own planning template and the 4C's. The emphasis on the role of language was to let the teachers understand and explore the myriad skills that are built through communication and the role of language support in harbouring active student engagement. Lastly, the reason to create an image was to help teachers set a personal vision for their classrooms and themselves, this vision would be pivotal in driving the future practices these teachers were going to engage in. (Coyle, Hood, & Marsh, 2010; Moate, 2011; Palmer, 2010).

The objective of the second focus group meeting was for teachers to identify the various forms of talk happening in their classrooms and the skills built during talk time, exploring various strategies and methods to incorporate meaningful talk into their lessons and build a plan around talk. Since the missing component in the Akanksha curriculum was communication, I emphasized on incorporating communication the most. This session was going to help the teachers reflect

deeper into the verbal communication in their classrooms and its everlasting impact on student engagement and learning. All this reflection was to direct the teachers into modifying their teaching methods to enable students to engage in a meaningful talk which would lead to the construction of knowledge and development of skills (Dawes, 2014; Gibbons, 2002).

The objective of the third focus group meetings was to apply their learnings from the previous meetings. The teachers were finally going to plan using the 4C template while focusing on instilling the communication framework into their planning styles. This was for teachers to engage with this style of planning and modify it according to their personal needs. It was a collaborative practice to help each teacher share their understanding of the 4C and communication framework (Coyle, Hood, & Marsh, 2010).

#### **7.2.4 Implementing the plan (DO)**

The first phase of the study involved conducting focus group meetings with the teachers to familiarize them with the 4C framework and the nuances of planning. I also wanted the teachers to reflect and observe the similarities between their practices and the 4C framework. It became evident to them at this point that communication was a missing piece in their pedagogical practices, thus all the participants decided to focus on communication. These focus group meetings also provided the teachers with a clearer understanding of how to integrate and build communication through simple and consistent practices. The teachers together were able to create a whole class and a group communication structure for their classes.

Table 3. Whole class dialogue structure

Purpose	To build reasoning and listening skills, promote sharing of thoughts, build decision making capability and help students reflect.
Organization	The whole class is divided into smaller group seating's
Teacher and student dialogue	When the teacher/student is talking everyone is listening. Everyone raises their hand seeking permission to speak to avoid chaos and make sure everyone's opinion is heard. The students also take ownership of their own learning by listening and also making sure that their friends are also listening.
Talk tools	In my opinion... I believe... I think...because Let's discuss... I agree... I disagree... I would like to share...
Ground rules	Wait for your turn. Track the speaker. Always provide a reason for your answer/opinion. Nonverbal clues to show agreement and disagreement. Make a conscious effort to listen when someone is talking. Give everyone a chance to finish speaking.
Outcomes	Students will get a clear understanding of the topic due to the sharing of ideas. Healthy discussions supported by reasoning. Students will learn to support and respect each other's opinions.
Notes	Students will abstain from following these ground rules. Listening could be difficult to achieve.

Table 4. Group talk structure

Purpose	To support students share their ideas with each other, express their thoughts, listen and reason, build a collaboration with each other (team-work)
Organization	Same as whole class talk
Dialogue amongst students	Everyone participates, everyone waits for the speaker to finish, everyone listens to one another, take notes while opinions are shared, assign roles amongst group members.
Talk tools	I think... In my opinion... I agree/ disagree... Why do you think? That's a great point! Wait a minute... Can we also look at...? I would like to add to this...
Ground rules	Wait till your friend has finished talking. Listen to each other's opinions. Disagree without being rude. Support everyone to participate in the discussion. Take notes.
Outcome	A clear understanding of the topic and each other's opinions amongst the students. Children support and enrich each other's learning. Children think, learn and make decisions together, creating a culture of collaboration.
Notes	All children may not follow the ground rules. Children may be mean to each other when there is no adult intervention. Children may divert from the topic.

This was followed by personal planning sessions with each of the participants. These sessions required me to create mind maps with the teachers, to help them break the content into 40-minute lessons with a clear objective and skills aligned with the content. A mind map is a simple way to manage your content. It offers structure and flexibility to help with analysis and understanding. The non-linear graphical layout of a mind map allows you to build an intuitive framework around the central idea and explore themes and combinations. In the context of

this study, mind mapping was used to help break down a topic into the 4C's, each subtopic would then become a 40-minute lesson plan.

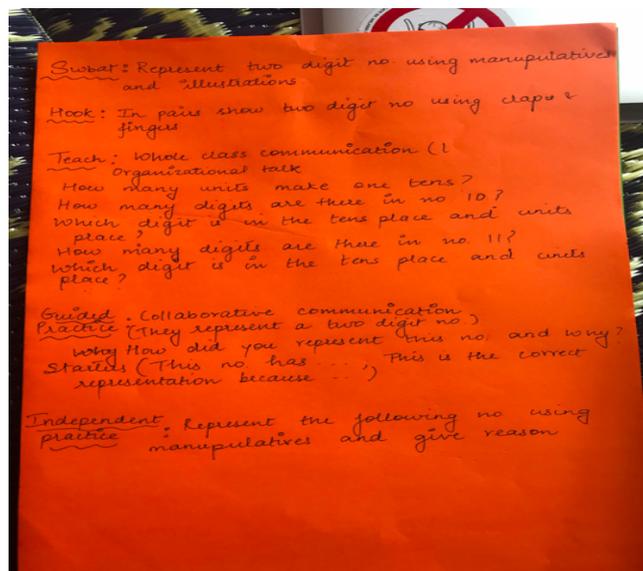


FIGURE 12. Breakdown of Number sense into the 4C's

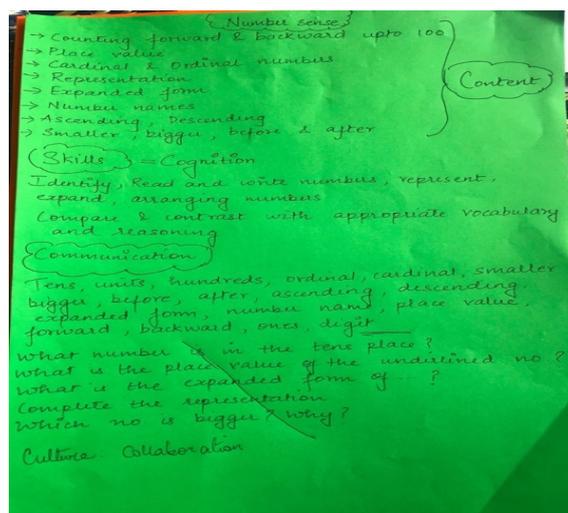


FIGURE 13. Detailed lesson plan

We also thought partnered to explore and understand various ways of integrating this communication structure into each lesson. Thought partnership is collaborating with someone who challenges your thinking, causes you to modify your actions and plans, and provokes you to add creative value to your work. The process of thought partnership allowed the teachers to share their understanding and expertise, and thereby drive the discussion in a way which would result in

increased accountability. During this time, I also got a chance to observe and learn more about their personal learning styles, which helped me cater to their needs better. Thus each participant adapted the 4C framework to their own personal planning and teaching style, which was to later show in their classroom practices.

This was followed by a review-observe-feedback cycle, wherein I would observe the classes and look for the 4C's, mainly communication and give them feedback about the same. Prior to observing their classes, I would review a plan with each teacher (which I would observe later) and give her feedback to ensure alignment of the 4C's and ways to enhance student's communication skills.

### **7.2.5 My reflections (REVIEW and REPLAN)**

The individual planning sessions with the teachers had been productive. However, I got a sense that the teachers considered this process as a mere intervention and not collaboration. My focus was to collaborate with the teachers to implement the 4C framework in their classrooms which would lead to teacher professional development and better student outcomes. Also, the schools' vision was to improve the student's communicative skills. Thus, it made sense to focus on the communication within and outside the classrooms.

I reflected on my actions and realized that I needed to provide support centered around building communication through scaffolded questioning. Thus, where I was focusing on the breakdown of content matter using the 4C's, I now focused precisely on providing spaces and strategies for communication. Scaffolded questioning would help the teacher design a clear progression of content in a lesson plan and these since it was through questioning, it naturally led to a lot more active participation and communication from the students. Thus, while reviewing plans with the teachers, we started to break down content using questions and mentioning the expected student response. Mentioning expected student response was important as it gave the teacher a clear idea as to what she wanted the students to explain or elaborate on through their answers, which in

turn helped her formulate the next question, thereby creating a gradual progression to build content and cognition.

Another area of focus was to create a better support system for teacher development. The teachers had already developed a brief understanding of the 4C's but I wanted them to take more ownership and support them in achieving their personal goals. I decided on creating individualized professional development trackers for each teacher. The tracker comprised of 4 domains: issues related to planning and implementation, personalized support structure, progress made, and areas of improvement.

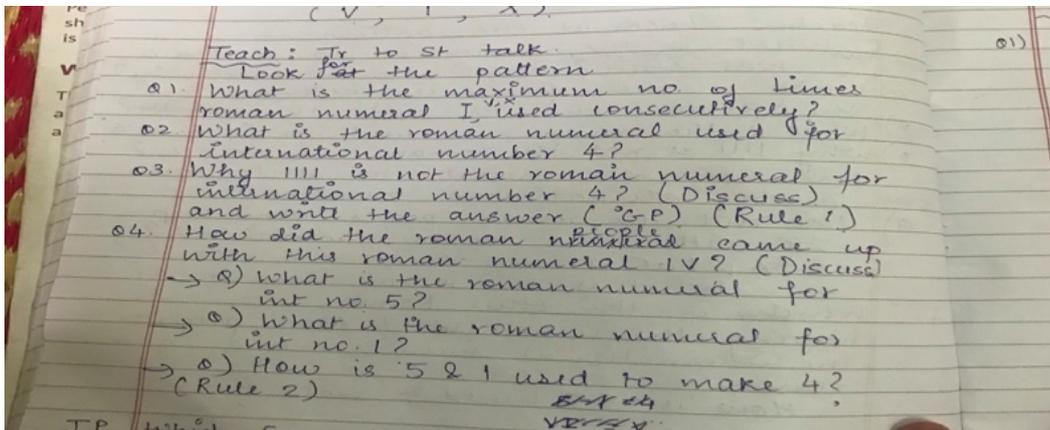


FIGURE 14. Detailed lesson plan with a focus on questioning

Whole class talk	
1] Why is whole class talk important?	<ul style="list-style-type: none"> <li>★ Everyone will get a chance to talk.</li> <li>★ Students share their ideas.</li> <li>★ Opinions are formed.</li> </ul>
2] What should it look like?	<ul style="list-style-type: none"> <li>★ Turn by turn everyone speaks.</li> <li>★ Listen to the speaker.</li> <li>★ Be silent.</li> </ul>
3] What sentences can we use when we want to talk to whole class?	<ul style="list-style-type: none"> <li>★ I think.....</li> <li>★ In my opinion.....</li> <li>★ Yes I agree.....</li> <li>★ We do not agree.....</li> <li>★ I disagree.....</li> <li>★ I would like to share my idea.....</li> </ul>
4] What are the ground rules?	<ul style="list-style-type: none"> <li>★ We track the speaker.</li> <li>★ Speaker provides reason.</li> <li>★ We give chance to everyone.</li> </ul>
5] What will happen if we have good whole class talk?	<ul style="list-style-type: none"> <li>★ Class will be interesting-discussion.</li> <li>★ Listening more attention.</li> <li>★ Class will be engaged.</li> <li>★ New ideas.</li> <li>★ Healthy communication.</li> </ul>

FIGURE 15. Whole class communication display in grade 4

Alongside all these changes, I also reflected on the review-observe-feedback cycle. I found the word 'feedback' had a counterproductive impact on teacher motivation. The teachers always felt critiqued rather than supported when given feedback, especially if the feedback had a negative intonation. Thus I revised this into review-observe-suggestion with reason cycle, where I would suggest a different approach to an observed practice and support it with reasoning. This was primarily for teachers to understand my ideology behind a given suggestion. Most importantly, I gave the teachers a choice to counter argue my judgment with reasoning and evidence, which helped the teachers reflect on their practices and show increased accountability towards them.

Lastly, I wanted the teachers to collaborate, as this would help them learn from and support each other through this process. The school had existing PD meetings once a week and they also encouraged peer observation. Based on these practices and in collaboration with the SL and ASL, I started cluster meetings and mandated peer observations. The cluster meeting was going to be a platform for the participants of the study to share their learnings as well as their struggles and come up with plausible solutions. Peer observations would be a source for them to observe and learn from each other's teaching styles, leading to collaborative improvement.

### **7.2.6 Implementing the revised plan (DO)**

The second phase of the study focused on creating personalized teacher trackers to monitor their professional development, incorporating scaffolded questioning with expected student responses, practice the review-observe-suggestion with reason cycle, and conduct cluster support meetings. Each teacher expressed her concerns regarding teaching and planning. A support structure was created based on these concerns. The support structure consisted of a list of my actions as well the teacher's actions, and this list was decided through mutual collaboration. Based on this support structure, I would observe the teachers lessons and provide suggestions, solely on the areas we decided to work on. I would make

detailed observations and track the teacher's progress as well as her areas of improvement after each class observations.

In FIGURE. 16 the teacher expressed her concerns regarding the incorporation of communication and questioning in her lessons. Based on this we decided that we would lay major emphasis on integrating communication within her lessons through sharing effective ideas to do the same, breaking down content using questioning, incorporating expected student responses to help her set clear expectations for the questions, and exploring strategies which when integrated with content and skills, would effortlessly support communication and collaboration. I also decided to make more observations to understand her style of teaching, which helped me support her better, as I was able to use her strengths to leverage better outcomes.

As a result of these practices, the teacher was able to breakdown her content into achievable objectives and showcase ways to enable students communication. During the observation and feedback cycle, while giving feedback, the teacher and I started identifying areas of improvement to achieve better teaching standards. Based on which we would review and revise the support structure, and lens for observation would then focus on identifying these new practices in the classroom and work towards improving their execution.

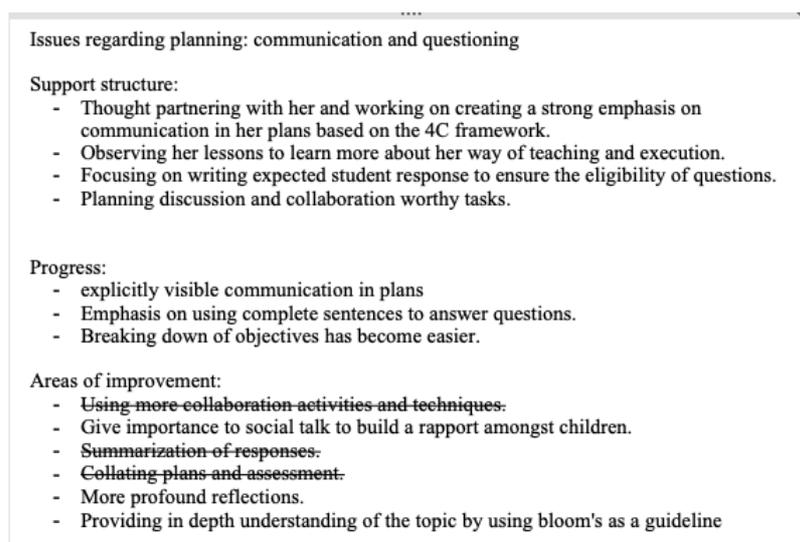


FIGURE 16. Example of a personal teacher tracker

As for the collaborative cluster meetings and peer observations, I examined each teachers timetable in order to find the free slots. I was not able to find a slot where all the teachers would be free at the same time to conduct the cluster meeting. However, the teachers always came to school an hour before the students arrived. Thus, I pitched the idea of cluster meetings, explained the reason behind them to the teachers and asked them if they could decide on a day where they would spend half an hour sharing and supporting each other. The teachers decided they would do this every Thursday and took complete ownership of being present and even facilitated these meetings by themselves.

As for peer observations, I again asked the teachers to choose the classes they would like to observe and state the reason behind the same. Thus, we would go and observe these classes together depending on the timetable of the teacher participants. I also ensured that the teacher participant observing the class would be present during the feedback phase. This was to make both the participants comfortable around each other and create a pathway for the exchange of ideas and solutions between the participants.

Comprehensive list of new practices initiated during this action research
---

- |  |
|--|
| <ul style="list-style-type: none"> <li>• Mind Mapping</li> <li>• Thought Partnering</li> <li>• Communication structure</li> <li>• Personal teacher tracker</li> <li>• Review-observe-suggestion with reason</li> <li>• Cluster support meetings</li> </ul> |
|--|

### 7.2.7 Reflection of the second phase

A month and a half into the study, the teachers were creating their first set of assessments after the CLIL intervention. The school leader mentioned that most of the assessments were focusing on testing the content knowledge with some questions which tested the application of this content, but there was no question to help communicate the students understanding and reasoning of a topic.

The review-observation-suggestion with reason cycle was proving to be beneficial and led to a teacher change, however, the teachers depended on me to evaluate their classes. I wanted the teachers to start self-analysing and evaluating their classes. As a result, I planned to stop doing any more observations and instead asked the teachers to collect visual evidence from their classrooms to support their sharing's in the cluster meetings.

Ultimately, I wanted this action research project to be integrated into the ethos of NNMPS. Thus I and the school leader started focusing on ways in which we could take the learnings from this intervention and introduce ways in which the change will be sustained.

### 7.2.8 Implementation of new changes

This marked the beginning of the third phase of my research. I conducted a workshop on integrating communication into these unit assessments. The teachers were asked to bring in their assessments and we spent time modifying some of their questions in a way which would require students to communicate their reasoning.

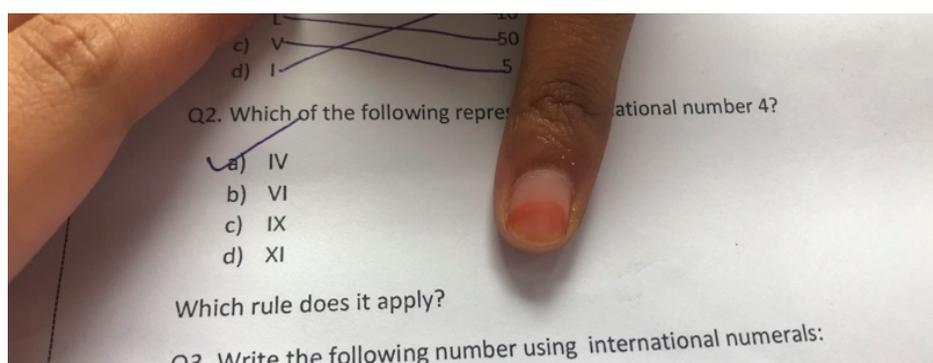


FIGURE 17. Grade 5 math assessment for unit 1a

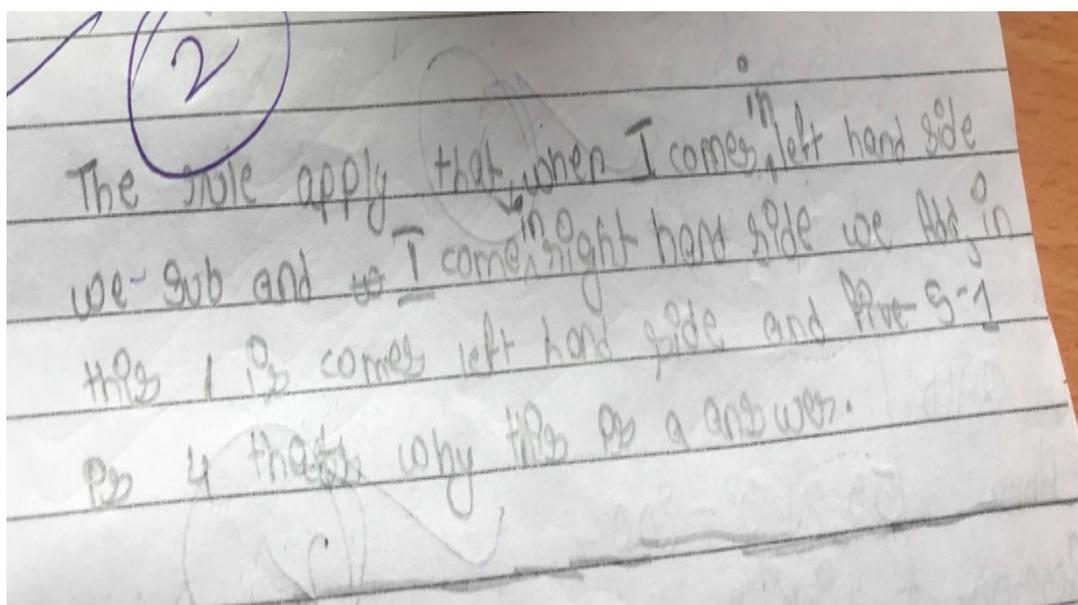


FIGURE 18. Student answer sheet for the question paper in FIGURE.13. The student explains the rule for Q2.

The question 'which rule does it apply' is a sub question for Q2. The purpose of this question is for students to explain their reasoning behind choosing a particular option for Q2. As for the review-observation-suggestion with reason cycle, I modified it by asking the teachers to review themselves as I stopped observing their classes. Each teacher participant and I would review a plan together and once the teacher participant conducted the class, she would also collect some form of evidence to support her reflection. This evidence was either videos, images, student classwork, and so on. This material was shared during the cluster meeting. The reason behind this shift was to encourage teachers to be fully aware of their practices and reflect deeply on their actions, the purpose of collecting evidence was to increase teachers awareness regarding her actions in the classroom.

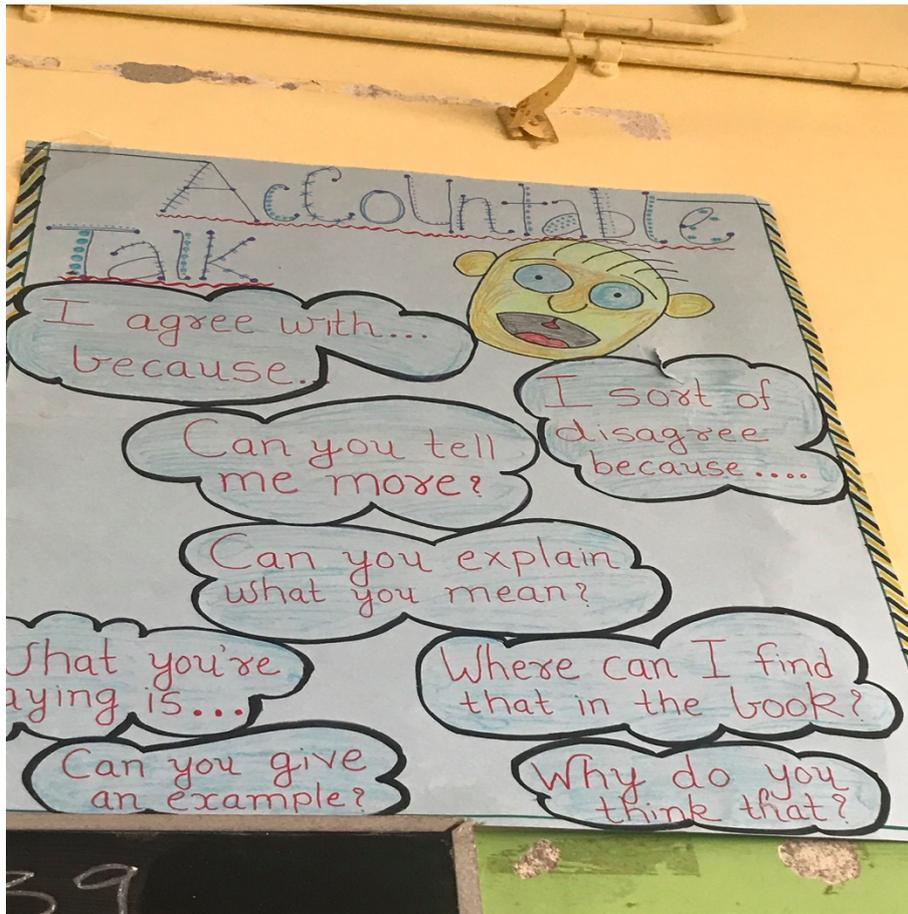


FIGURE 19. Accountable talk poster in grade 4 classroom

As for extending this intervention, the school decided to make the part of communication more profound. The SL and the ASL came up with a term called 'accountable talk' which was going to be a standardized set of practices across the school, to help students express themselves and their opinions effectively and ask questions and learn from each other.

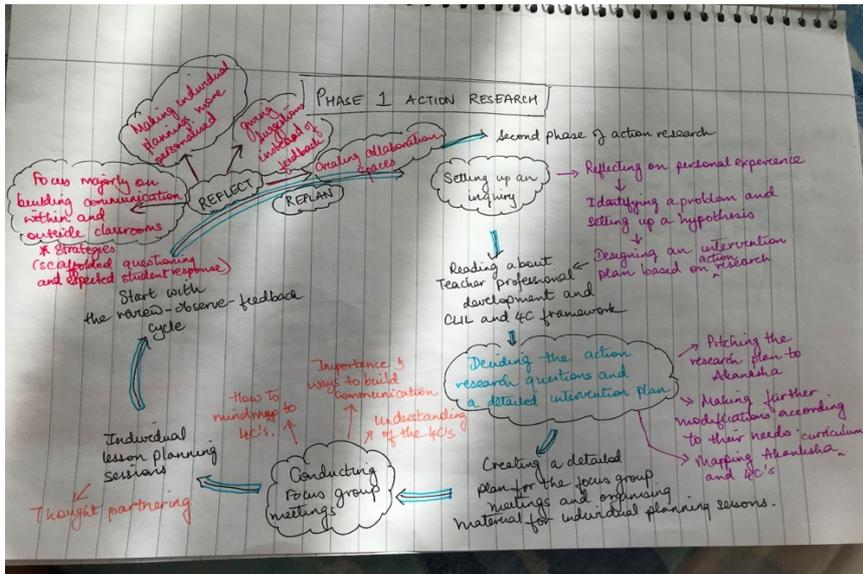


FIGURE 20. Visual representation of phase 1 of the above study

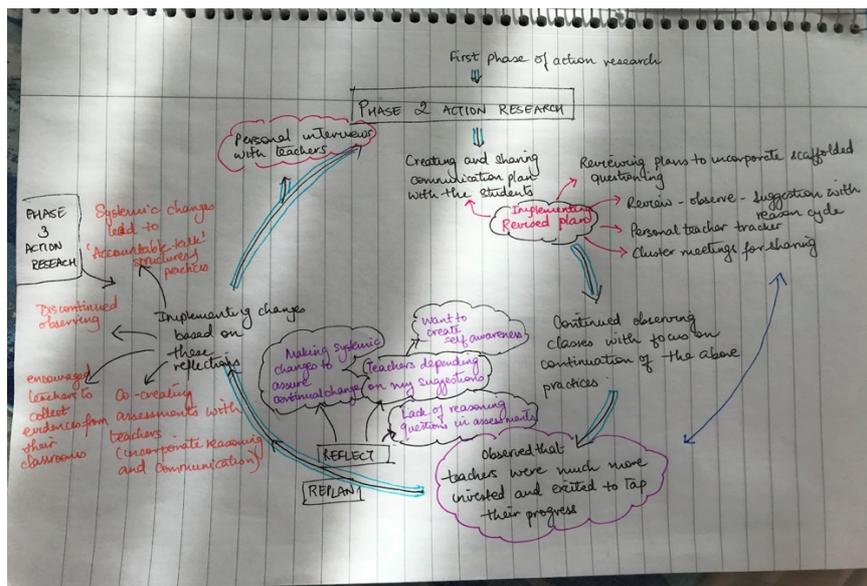


FIGURE 21. Visual representation of phases 2 and 3 of the above study

### 7.3 Summary of data collected in the study

For this study, I maintained a reflection and observation journal. This journal was to maintain a progress graph of this study and also to help me make changes to my approaches. Alongside I also collected varied forms of data to support my observations and learnings. The data collected below has helped me outline a detailed progress graph for each teacher.

Data type	Quantity	Details of data collected
Questionnaire	4	Each teacher was asked to fill out a questionnaire before the study commenced. The questionnaire required them to submit two lesson plans with their reflections of the same.
Lesson plans	6 - T1 8 - T2 7 - T3	These lessons were reviewed before the observation and suggestion cycle.
Lesson plans	6	Before and after lesson plans which were not observed.
Class observations	6 - T1 8 - T2 7 - T3	My notes while observing the classes.
Assessments	3	Unit 1a assessments. Each teacher shared 1 assessment.
Audio recordings	6	The three focus group sessions (at the beginning of the study) were recorded and so were the personal reflection interviews (at the end of the study).
Personal teacher trackers	3	Trackers showcasing each teacher's professional development journey.
Other written form of evidence	2	Some reflections from the teachers' diaries, my own reflections, and other classroom evidence.

## 7.4 Analysis of Data

The process of analysis involves acquainting yourself with the data set from the early stages of data collection, followed by defining the unit of analysis to developing categories and coding themes to eventually drawing conclusions based on the codes and finally reporting these findings (Zhang & Wildemuth, 2009).

The audio recordings were conversational and reflective in nature and I started by transcribing these recordings. During transcriptions, since the conversations were bilingual, I transcribed them as they were without any translations, later on, I added translations from Hindi to English. During the transcription process, I skipped the parts which were repetitive and some parts which were not clear to decipher. All the transcribed data was divided into 3 subsets, each representing one teacher participant. These subsets had conversations from the focus group meetings as well as the personal reflection interview. I also created another subset of my part in all these conversations.

The transcribed data were analyzed on the basis of the four domains mentioned in the Interconnectedness model (Clarke & Hollingsworth, 2002). Even though I had a defined theory for analysis, the data presented new trends and themes, which I then integrated into the interconnectedness model. Thus my data analysis process was deductive as well as inductive (Zhang & Wildemuth, 2009). While reading each teacher participants subset, I began to notice comments and ideas which would help provide a better explanation and understanding of each of the four domains in the interconnectedness model.

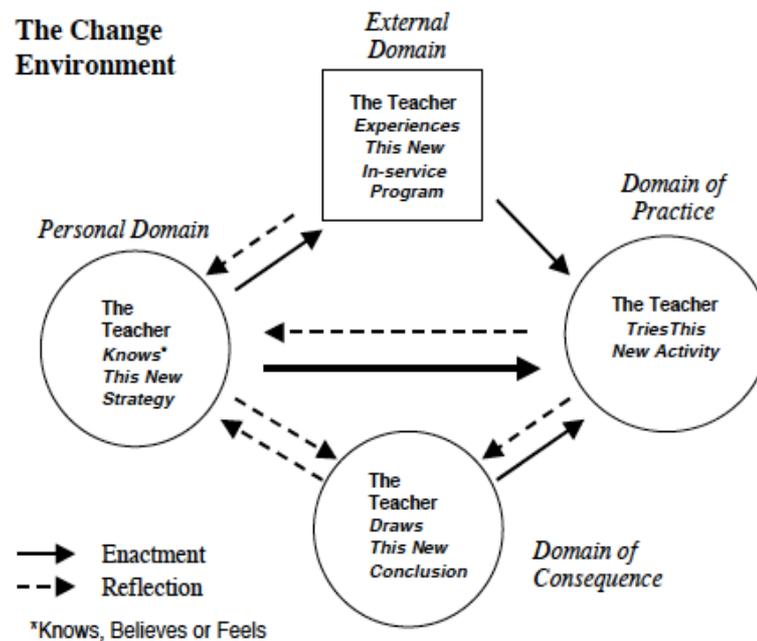


FIGURE 22. Interpreting each domain of the interconnectedness model (Clarke & Hollingsworth, 2002, p.957)

#### A detailed classification of each domain

Personal domain	External domain
<ul style="list-style-type: none"> <li>Teachers views of teaching and learning</li> <li>Teachers vision and aspiration for the students.</li> <li>Impact of the trainings on teachers mindset and values</li> </ul>	<ul style="list-style-type: none"> <li>Views regarding external and internal teacher trainings</li> <li>New practices introduced during trainings. (not necessarily implemented)</li> <li>Reflections regarding the training process</li> <li>Layout and execution of such programs</li> </ul>
<ul style="list-style-type: none"> <li>Teachers expectations before and after the intervention from self</li> <li>Teachers expectations before and after intervention from the students</li> <li>positive/negative outcomes of the trainings</li> </ul>	<ul style="list-style-type: none"> <li>New and old practices implemented by the teachers</li> <li>Reflections on these practices</li> <li>Factors that enabled teachers to implement new practices</li> </ul>
Domain of consequence	Domain of practice

FIGURE 23 Detailed understanding of the 4 domains based on the transcribed data

This made coding and analysing themes an easier process for me. The conversations were color-coded on the basis of the above understanding of the four

domains. The data was segregated based on these colour codes and each quote from the teachers was examined to create a set of primary codes. The primary codes were clubbed together to form broader themes. The observations made by me during the study were also included in the domain of practice alongside their personal quotes about their practices.

These primary codes were used to map the teacher's professional development. Each teacher participant's growth was tracked using these four domains and before and after charts were created. While coding helped identify prevailing themes across the data set, it is those themes which are not present in abundance but capture important moments of change in a teacher's journey are of extreme relevance in this study. These themes are explained in further detail in the findings section in the form of a narrative to explore the moments and causes of this change that lead to professional development (Braun & Clarke, 2008).

## **7.5 Trustworthiness in this research**

Based on Lincoln & Guba's (1985) evaluative criteria of establishing trustworthiness in research, this section explores the authenticity of the data collection process, the data analysis process and the reporting of results. Trustworthiness is established through ensuring credibility, transferability, dependability, and confirmability.

The data was collected over an extended period of time (2 months), giving me an opportunity to engage with the participants and the school and allowed me to understand my actions better and build a sense of trust with the participants. This also helped me collect varied forms of data, which enabled me to understand the various factors that were affecting teacher action, which had a direct influence on this study, thereby giving me in-depth knowledge of each teachers' professional development journey and ensuring credibility.

The data analysis report highlights the detailed process of analysing the data collected. The detailed account exhibits transferability as it allows the reader to understand and interpret the process freely. I have carefully included the

theoretical influences which shaped the process of data analysis to enable the reader to understand my perspective.

As for reporting results, I have taken utmost care to make the descriptions of each teacher detailed and supported my interpretation of the casual instances with evidence from the data set. I have also included figures, tables and flow charts to explain the process of categorization as well as representing the findings, thereby ensuring the dependability of my results.

I also maintained a reflective journal, which recorded my decisions regarding my actions and the reasons behind them, the logistics of this study, and the impact these learnings had on my own value and belief system. I also had my supervisor as an external inquiry who at all points helped me make refine this action research in order to bring about and see the change (Elo at al., 2014).

## **8 FINDINGS**

This section explores the individual professional development journeys of each teacher. As mentioned in the sections above, this analysis is based on the Clarke and Hollingsworth (2002) interconnectedness model as well as casual moments of change highlighted in conversation and observation have been explicitly mentioned for each teacher.

## 8.1 Teacher 1



FIGURE 24 Before and after progress chart for teacher 1

Teacher 1 is a language and subject teacher at NNMPS. She has been working in this school for more than 2 years. She has been a part of innumerable professional development workshops, all of which have enhanced her ability to implement the curriculum, build the social-emotional competencies of her students and achieve academic requirements.

As seen in the before chart, she has always been a strong proponent of holistic education, wherein all the needs of children are catered to.

---

*'it's a step where you need to create the space for the student and what all things you want in your learners. If these things are in place only then you can move and explain and participate the parents, colleagues, and administrators.'*

---

She even went on to describe herself as 'a pond' in the jungle (jungle being her classroom). She sees herself as a source of knowledge and facilitator, who is omnipresent at all times but never overpowering or overbearing.

---

*'I have many things and I will share one. I think my class is a jungle with different animals with different abilities and styles. I am like a pond in the jungle. Pond in the jungle where they don't always need me. So it's like a jungle and I am a pond and then I will provide them with water and things they need. Every time they don't need me but they reach out to me when they need me. So this is what I feel of myself in my class.'*

---

Even though she is aware of her struggles and is willing to try new methods to improve the teaching and learning in her class, her lack of confidence in herself acts as a major barrier towards achieving the goals she has set for herself and her students.

---

*'From the start itself, the planning part was very difficult for me. The execution was.... if I am confident about my plan only then am I able to do it.'*  
*'But the things started by trial and error because I am like let me try & I feel we should try'.*

---

In her personal tracker, she mentioned the areas that concerned her the most;

- Break down of content
- Connection to prior knowledge
- Supporting effective communication

My support structure centered around the following;

1. Mind mapping to breakdown content into achievable objectives
2. Integrating communication through the use of sentence starters

3. Scaffolding her lessons through questioning and expected student response
4. Focusing on the alignment of content, skill, action, and assessment as well as the 4C's.

While thought partnering we established trust through clear and open communication. This helped T1 try new strategies and be more accepting of my suggestions. Through the course of this study she started a few new practices in her classroom;

- Using a mind map to breakdown content, which also helped in connecting prior knowledge to the ongoing lesson objective
- Sentence starters to elicit expected student response and encourage communication and participation
- Setting expectations through organizational talk

On a personal level, the teacher participant was able to reflect on her practices and identify the areas of improvement. She also engaged in peer collaboration to share her ideas and plans with other teachers in order to receive constructive feedback, all of which would help her in planning and implementation of lessons.

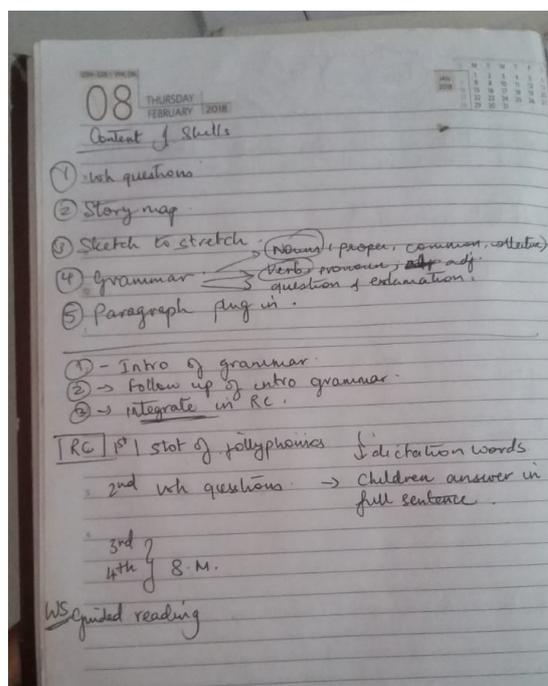


FIGURE 25. Rough mind map of English content and skills for unit 1a grade 2

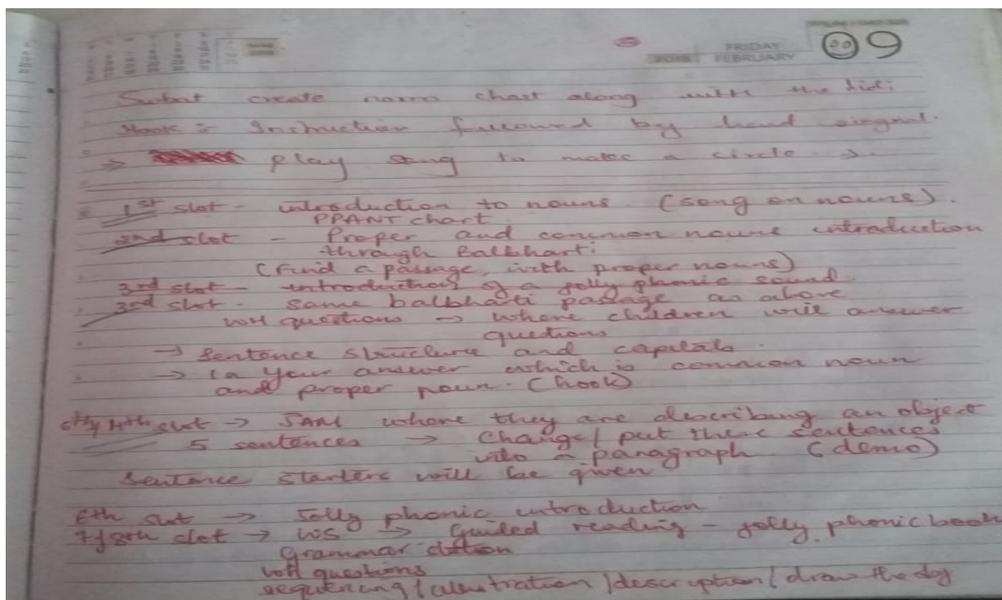


FIGURE 26. Slot Wise breakdown of English content grade 2

Breaking down the curriculum into content and skill, and then further dividing it in 40 minutes lesson objectives helped solve her problem of not being able to make prior connections. Planning for the expected answer served the purpose of asking relevant questions. Before, even though she was asking questions which probed the students to apply knowledge, the questions often lent themselves to vague answers which would eventually derail the lesson. Now with having explicit responses ready, she was able to frame questions appropriately.

---

*'When we start putting questions forcefully into content, we add random real-life questions just to make the plan flowery. This will change that'.*

---

While implementing these lessons, it was observed that the students would often communicate using incorrect vocabulary and sentence structure. Thus we decided to use sentence starters; where T1 would ask the students a question and write a sentence starter on the board. The students were asked to use this structure when they decided to speak in groups as well as to the whole class. This made the students much more confident about using the English language to communicate.

Providing sentence starters and mentioning the expected student response into her lesson plan, made T1 more accepting of unexpected student responses. While I do not know what exactly caused this change, one could assume that this could be attributed to her new found confidence in her practices. Previously T1 would often doubt her planning and practices and anything unexpected would easily create a sense of discomfort for her.

---

*'from this one month, I can see kids even trying my half (sentence starter) on their own. I can see that they are able to continue with that half... that much achievement is for me from grade 1.... that they are able to connect my half starter with their answer and they say in full complete sentence...'*

---

The organizational talk was a process, which was to make the students aware of classroom expectations as well as the activity or task planned for a particular lesson. The teacher would demonstrate her expectations verbally or through a role play. This investment of time enabled the students to be aware of their actions and communication throughout the lesson. All of this increased student participation in her classroom. She would just write 'organizational talk' in her lesson plan and it would be a reminder for her to invest time in demonstrating and communicating expectations. T1 was extremely satisfied with these results, as she was finally able to see the students take responsibility for their learning.

---

*'listening to any of the sentences and repeating 2-3 times its an achievement. So they (students) have the habit to listen and repeat once they are in the zone they will speak, next time I don't need to give half sentence also they will just speak'.  
'they sometimes give numbers but then I say is this the correct answer. Some child says we have to talk in a complete sentence. The children know that did wants that answer in a complete sentence.'*

*"Now I have just made it... where you see the organizational talk. When I write organizational talk I know what needs to be happening this time, so these words explain the 5 minutes for me".*

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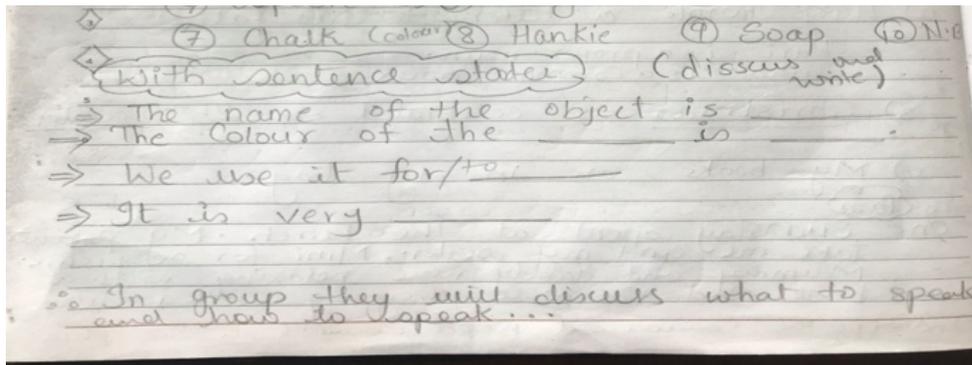


FIGURE 27 Detailed lesson plan for English writing with sentence starters.

T1 felt much more confident and at ease with the turnaround in the way students now participated in her classroom, her desire to conduct child-centered classrooms was finally visible to others as well. T1 was extremely motivated to learn and share from other teachers in the school. Since the school already encouraged peer observation, many teachers who were not participating in this study also began to notice the positive changes in her classroom. These changes made the teacher feel more settled with incorporating new suggestions, not only from me but from the other stakeholders as well.

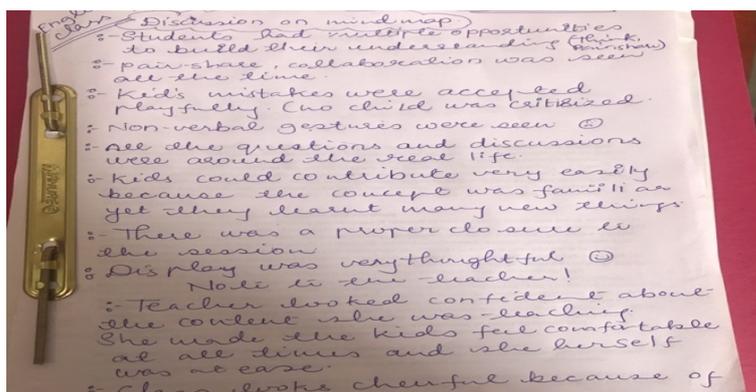


FIGURE 28. Peer observation feedback for T1

During the reflection interview at the end of this study, T1 shared her former understanding as to why in-service PD sessions failed to achieve the desired

results. Former PD sessions at NNMPS mostly lacked the ability to make these training sessions personal for the teachers. Moreover, there seemed to be a lack of alignment between old and new imposed practices, which made it a rather cumbersome process for teachers to translate their learnings into their classrooms.

### 8.1.1 Teacher's view about this intervention

T1 explained that whole intervention was presented more like a choice than a mandated structure.

---

*"The best part from this program was I felt it was like... a choice. If you want to do if you don't want you cannot".*

*'So we will do only what you want to work on, no mandate'.*

---

The study was also aligned with the ongoing pedagogical practices at NNMPS, which made it easier for her to connect with these new practices. The excerpt below, T1 is connecting the prior practice of creating alignment between content and real life with 'culture', which was a new term introduced during this study. Here she is able to understand how building a strong class culture is also going to improve the students understanding of content in the context of their real lives.

---

*'Anyways we have to relate the content with the students real life. So when we are connecting culture we are automatically talking about life and social talk will help build content'.*

---

The study helped her understand her role of planning and implementation better, alongside the goals she had set for herself, she could feel that she had improved as a teacher in a holistic manner. In the excerpt below, she is reflecting as to how important it is to understand the process of teaching and learning.

---

*"this process you all helped us to push our thinking. How can you put these things in your thinking being very mindful while planning a little goal.... student will be able to*

*write but how? That how part looks very small like you know 15 minutes how part but still you need to put so much effort to think how this process will look”.*

---

The review-observe-suggestion with reason cycle helped T1 understand my reasoning behind each of the changes I suggested. This is a practice that she imbibed as well, where she also counter corrected a suggestion with justification and evidence. This entire process was to help the teacher to make informed choices to encourage accountability towards her own actions. If the feedback did not resonate with her sensibilities she had the freedom to discard it.

*‘you make sure like you keep me there it's not just feedback..... you are doing something and we know the changes happening and why’.*

*‘Actually, this step gave us you know that chance to think whether we want or not. When you restrict it is not our decision. It's not from our side just because of others we have to do this and when you give them choices like it's your decision ... now you are in and you have to do it. So it's like that.... that was like I felt I was given a choice. They are not going to be like police on my head. So throughout this program, I have seen that it was not policing.’*

---

### **8.1.2 The process of change**

Based on the documented process outlined in the previous section, it can be suggested that a change in the teacher’s perspective of herself (personal domain) and her practices (domain of practice) was a product of the change in student action (domain of consequence). When she was able to see visual changes in student behaviour as a result of the new practices, it had a direct impact on her confidence. This confidence made her more flexible when it came to students making mistakes or in case of misinterpretation of content.

This study (external domain) proved to be beneficial for T1 because it was centered around working with teachers and not working on them. The study can only cause a change regarding practices. It is a futile effort to change a teacher’s personal beliefs through an action research intervention. Thus in order to encourage the enactment of new practices, PD programs need to align their vision to the vision of the institute and more so with the personal vision of the individual.

The flexibility and openness of this study led the teacher to mould her personal goals around these new practices. PD should be a platform for teachers to ameliorate their personal and professional skills, hence if the teacher is not able to see any personal benefit in a practice she/he would never implement it with utmost authenticity. As mentioned by the teacher, the importance of making choices cannot be negated. It is because the teacher had the choice to accept or reject the suggestions or even the study itself, did she show accountability towards her actions. Many times PD programs come with mandated practices and teachers' merely implemented them as an institutional requirement, without feeling the real need to.

## 8.2 Teacher 2



FIGURE 29. Before and after progress chart for teacher 2

Teacher 2 is a language and subject teacher and has been working at NNMPS for a little less than 5 years. She has former teaching experience of working in a government-run school as well. Just like T1, T2 also has been a part of numerous

professional development workshops within as well as outside of the Akanksha Foundation. All of which have helped shaped her ideologies as a teacher, enhanced her ability to implement the curriculum, build the social-emotional competencies of her students and achieve academic requirements.

T2 wanted her students to enjoy learning. She felt entirely responsible for students learning and achievements, making her actions of primacy in a classroom. She imagined herself as a source of knowledge and guide who would drive the students to make informed choices about their lives.

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*"I am the giraffe in my class because it has a long neck and he/she can see everything in the class. Whenever my child needs help I am able to help them because I can see each and everything in the class. Like the shy students, they are not able to tell freely that yes didi (teacher) I want help so please come and help me. By their actions, teachers should be able to understand that they need help. I think I am the giraffe and I am proud of that and I will try to be a giraffe in the classroom a good giraffe".*

---

From the above excerpt, it also becomes clear that she wanted the students to trust her in order to be able to share their struggles with her. All of this contributed to her vision of being a guide and source of knowledge to her students.

T2 was also extremely self-aware and freely communicated about her inhibitions regarding this study. She mentioned that she was generally resistant to change and did not adapt as easily as the other teachers' in the school. She was comfortable in planning her lessons using the template that was generally used by the NNMPs teachers and felt burdened at the thought of integrating anything new into her ongoing practices.

---

*"But I don't want extra headings of the 4c's".  
 "was pretty much against that, I was like I don't want to put this in my planning"  
 "One more point has been added to our planning tool"*

---

During one of the meetings, T2 expressed the reason behind these inhibitions and her aversion to experimenting with new practices. She had been on a maternity leave, which had diminished her confidence in her teaching practices. Moreover, to fit into the school culture she had been pressurizing herself to adapt

to the school culture as quickly as possible. In addition to all these things, the integration of the 4C framework into the existing planning style was nothing but a source of added pressure.

---

*"after a 7-month gap, I was like oh shit where I am going, what I will do"*

---

*"4c's were I was thinking that it is a pressure"*

---

In her personal tracker, she mentioned the areas related to planning that concerned her the most;

- Making connections to the student's prior knowledge
- Incorporating questions to build conceptual knowledge
- Integrating content and cognition

My support structure was based on the teacher's concerns as well as my observations of her current planning style;

1. Breaking down content to see a clear progression of content and skills in the 40-minute lessons (no mind map)
2. Incorporating scaffolded questioning with the expected response
3. Aligning content and skills in order to achieve a high level of rigor
4. Exploring methods to build a communication structure to provide language support

T2 used a planning template which included: objective (what to teach), hook (introduction), teach and guided practice (how to teach) and independent practice (assessment). We aligned the 4C's to this template.

Objective included the content, and cognition parts. Introduction, teach, guided practice, and assessment was mediated through communication (providing language support to build content) and collaboration (culture). In order to support her in implementing these changes, I created two lesson plans and helped her implement them in the classroom. These lesson plans showcased a clear objective with content that could be driven in 40-minutes and scaffolded

questions coupled with sentence starters. This plan was for grade 1 and I wanted to infuse high-rigor by asking questions relevant to them and providing support to build language and content both simultaneously. We reflected on the outcomes together and as a result of those outcomes, she felt more confident about implementing new practices.

New practices implemented by T2 during the course of this study were;

- Writing expected prior knowledge at the beginning of her lesson plan
- Providing sentence starters for the questions to help students communicate
- Create a word wall to help students communicate effectively
- Introducing vocabulary related to the lesson in the very beginning
- Uses questioning to direct students towards building conceptual understanding

While breaking down content (curriculum) T2 would often decide on teaching larger portions of the curriculum(content) in one lesson, although her lessons lacked rigor. Thus while breaking down content, we focused on teaching a small topic achievable in 40 minutes coupled with high-rigor, real-life based, problem-solving questions. Due to this detailed breakdown of content, it was important to keep a note of all the content the students were learning in the previous lessons. Hence, she started explicitly mentioning the expected prior knowledge, which only helped her track content progress. Her introduction questions were to assess the students' prior knowledge.

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*“So you told me this is too much of content go down to their level break down your goals so that helped me a lot”*

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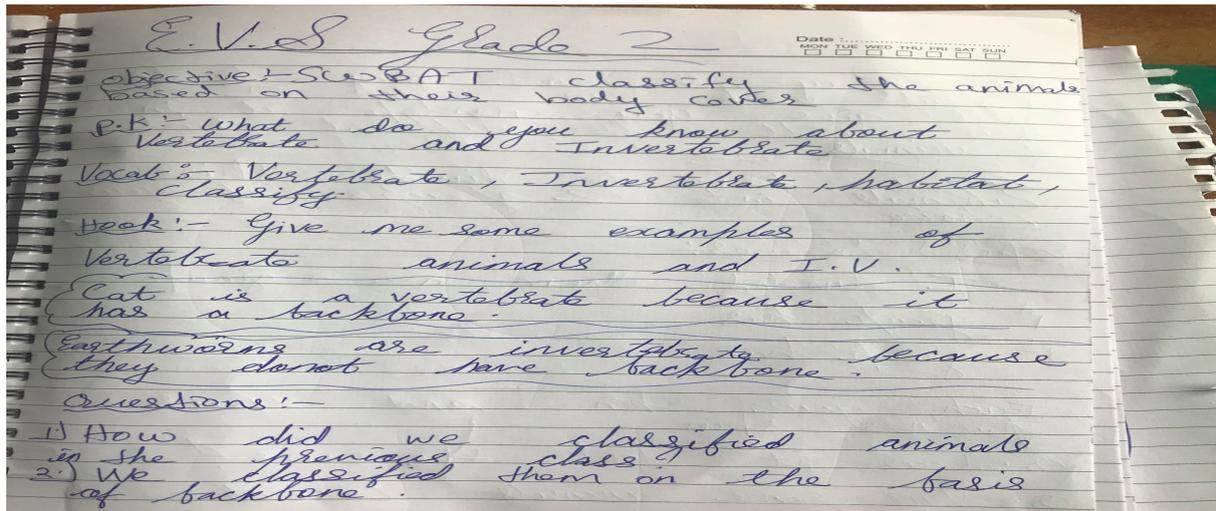


FIGURE 30. T2's lesson with explicitly mentioned prior knowledge (p.k) and vocabulary words students need to know in order to communicate

She would write the question and sentence starter to the question on the board and have the students use it to communicate. Introducing vocabulary words before the class started helped the students use it correctly in context to the content.

*"communication in the 4c's, giving them sentence starters and asking them questions related to their real life and introducing vocab to them is helping me a lot"*

*"like by giving them sentence starters they know exactly kya bolna hai (what to say). Pehle it was like didi pada rahi hai words yaad kar lo, jab time aata hai answer dene ka it's like what to say, but now they can read the sentence starter and they are able to give me the answer. (first, it was just rote learning where students did not know how to explain their understanding, but now because of sentence starters they are able to give answers)"*

Sentence starters helped the students communicate better as they provided language support. The students' also started following instructions more effectively, which lead to active engagement, which had been the teacher's requirement from the very beginning. Thus there were increased levels of rigor in her classroom.

*"See after 2 months now I am pretty much settled because now my grade 1 (students) are also able to follow the instructions and that was the main part"*

The word wall was a chart where T2 would write all the new vocabulary that was introduced during a lesson. Each subject had its own word wall. This not only helped students communicate easily, but also during independent assessments and while writing, their dependency on the teacher reduced substantially. They were able to refer to the word wall in order to identify the vocabulary they needed. T2 wanted to be the source of knowledge and the guide but seeing the students work independently made her feel more confident about herself. I believe this helped to understand the meaning of facilitation and she wanted the students to get even more independent with time.

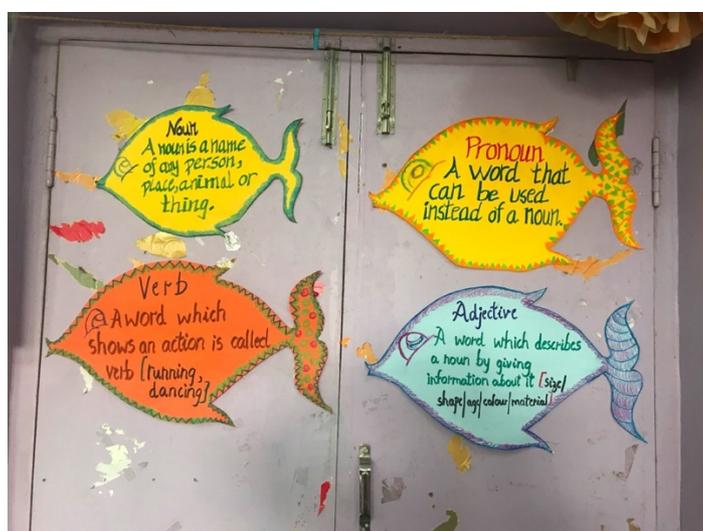


FIGURE 31. Word wall in T2's class for English grammar

*"whenever I am assessing them if they are not able to write they going to the word wall and check for themselves the spellings and sentence starters and coming and writing and if they are doing activity in the group and have to communicate with each other and if they are not able to find a word they are again going and referring to word wall and coming back and continuing the discussion. That is wow like they don't need me. I am just throwing the task to them and they are finding the way by their own self".*

While thought partnering we worked on creating questions which tested the knowledge and understanding of the students as well as questions which provided the students with an opportunity to apply their learnings to real life or to present their opinions and ideas with reasons. T2 incorporated similar questions in her assessments as well.

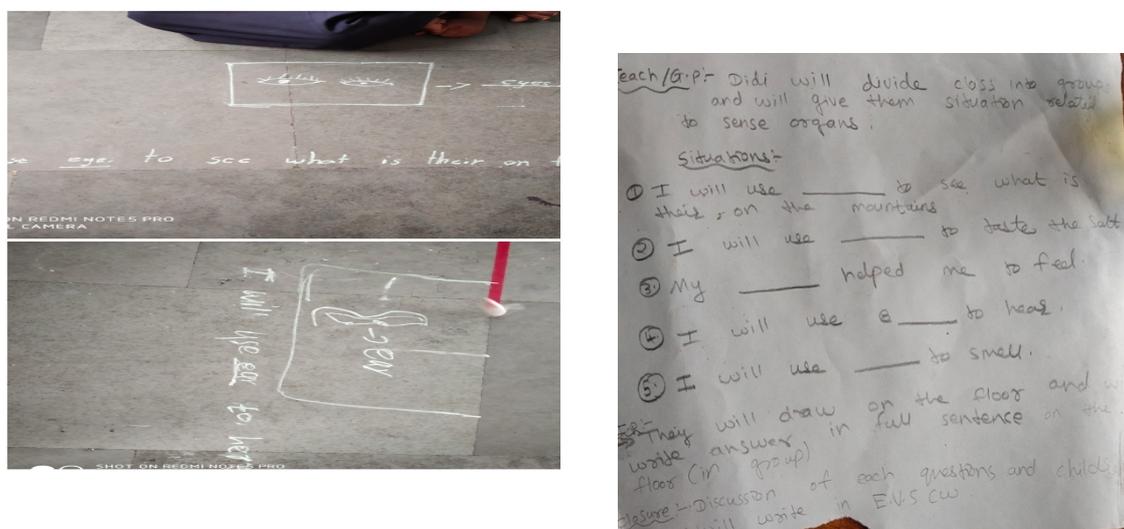


FIGURE 32. Lesson plan by T2 with sentence starters and students using these sentence starters during independent practice

All these practices, active participation from students and validation from other stakeholders had a positive influence on T2's personal and professional identity. She showed more confidence in her practices and also became receptive to learn new things in order to improve her practices.

---

*"Now I am confident and even today I shared my assessment paper with SL and she was like good question and wow question and I was like oh my God!"*  
*"I was like okay! I can improve on this"*

---

### 8.2.1 Teacher's view about this intervention

As mentioned earlier T2 was sceptical about planning using the 4C's and incorporating new strategies. Thus, I felt that creating plans keeping the 4C's in mind as an example would help her get clarity regarding the similarities between her current planning template and the 4C's. Also, she would understand ways to incorporate scaffolded questioning and sentence starters in order to facilitate communication while also building content knowledge.

---

*“when I joined Akanksha they gave me structure that you need to plan using these pointers like gp, ip, hook and all that. So like Akanksha gave me the pointers that you need to plan according to this it includes an introduction, hook, gp(guided practice), ip(independent practice) so I was doing that. So when you came and told us to put sentence starters that was creating a problem for me”.*

---

*“you gave me the plan on imagination and noun. You helped me in my EVS plans so I was over here you took me over here (hand gesture down to up)”*

---

She felt encouraged during thought partnering sessions, she was able to identify her strengths as a teacher through this study. While observing T2's classes I was able to identify key practices which were very conducive to learning. Thereon, I would bring it to her notice so that she could continue with those practices and make some additions to strengthen them further.

---

*“You brought it into our notice that we were doing things already.... Just do it here”*

---

As for feedback, T2 appreciated the way I would give suggestions with reasons. She liked that I was giving her space and not changing her plans entirely. Previously, observations meant interference and criticism and rarely did it translate into any teacher professional development. My major focus was to work synergistically with the teacher. I did not want T2 to feel compelled or overpowered with any suggestions or actions. It was very important that T2 would trust in me and understand that I was there to collaborate with her not force her to do things she did not believe or see value in.

---

*“I really liked the way you were observing without saying anything you were observing only writing in the book. I think that's a really positive point that without our permission you were not poking your nose in between the class you were not demotivating us. If you wanted to say something you were taking out permission first and then only you were saying, so that was one positive point. Second, after writing all the points only when we were free you were coming to us and giving us the feedback that this is what you did and I want you to improve on this. I was like okay”*

---

Lastly, T2 really appreciated having a choice. Previously PD sessions meant that the new practices needed to be implemented. Suggestions had to be incorporated irrespective of it resonating with the teacher's ethos. The fact that I did none of this, make the teacher more open to working with me.

---

*"if you are willing then only change if you are not willing then continue and go ahead. I was like wow she is giving us space to work in a positive way, so then we are also like she is supporting us so much then why can't we understand and support"*

---

### 8.2.2 Process of change

As the comments, reflections, and actions suggest, T2 really appreciated guided and personalized support (external domain). Her personal transformation (personal domain) was a product of seeing her practices (domain of practice) produce desired student outcomes (domain of consequence). Her personal transformation led her to experiment with new practice and instilled a desire to improve. Validation from the SL only affirmed her belief in her practices. This personal transformation also brought about a change in her desired student outcomes (domain of consequence). She went from being the source to the facilitator (personal domain), as she saw the benefits of making students responsible for their own learning.

This intervention (external domain) proved beneficial for T2 because it was personalized. T2 felt at ease when I was able to cater to her needs by aligning the planning template with the 4C's, providing her with lesson plans as examples and most importantly work on the areas she struggled with. Even though this study required the teachers' to adapt to the 4C framework, it evident that T2 has been successful in modifying the framework to suit her planning and teaching styles.

All these practices are instrumental in the process of enactment, which is the first step in the process of change. Constant reflections on self and classroom during the review-do-suggestion with reason cycle made it easier for the teacher

to develop an awareness of her own strengths and weaknesses. This eventually led to a desire to try and improve current practices.

### 8.3 Teacher 3



FIGURE 33. Before and after progress chart for T3

T3 is also a language and subject teacher. She has been working at NNMPS for more than two years and is a certified teacher. Being a part of PD training's has never been much of a learning experience for her, as it has never helped her translate any of her learnings into the classroom. Her teaching and planning style is comparatively different from T1 and T2. As for her vision regarding her students and her classroom, she believes in being a facilitator as she wants to build accountability and responsibility in her students.

---

*"I imagine my classroom with smiling and welcoming faces very open to learning. I am the light in my classroom and as the light, I guide them through a path and make them shine. I am very happy being the light but I want to give the students the power to use this light and make choices freely and also repair that light by giving me feedback"*

---

Unlike the other two teachers, she was not someone who planned her lessons in detail. She encourages student participation by providing opportunities for the students to question and inquire. Her plans are flexible and nature and very student-centered as well.

---

*"Thode (some) questions are there in my mind... the questions are already there but then many questions just come randomly..... that's because some of the kids' question and then you want to elaborate on that.... then I ask counter questions and that's how I drive the content. Thus detailed written plans in depth are never my style"*

---

Lesson planning can prove to be a tedious process and hence, T3 wanted support which would simplify this process for her. T3 also mentioned that she was resistant to any change and often felt more comfortable in continuing with the older practices. However, she did find new practices intriguing when she would observe her peers successfully implementing and benefiting from these practices.

---

*"I was really excited to figure out how will the workload become less. Let us see the formula"*

---

*"when something new is introduced I am the first person to say no. But then woh nayi cheez kisi aur ko karte hue dekh ke, to know advantages... laalach aa jati hai ki main bhi"*

*try karti hoon (but then when I see my peers trying new things and to know the advantages of those things... I feel motivated to try new practices)"*

---

T3 was adept at breaking down her content and during personal planning sessions, she mentioned that her major areas of concern when it comes to planning, were incorporating communication and questioning into her plans as she felt that her students struggled to express their understanding of content.

My support centered around;

- Using the 4C template to highlight the component of communication
- Integrating the 4C framework into her current teaching and planning style
- Incorporating task-based questions with expected student response.

New practices that T3 started;

1. Using a 4C mind map to break down the curriculum
2. Writing expected student response after each question
3. Writing questions to ensure a clear progression of content
4. Reflected on her practices

We used the mind map provided by Coyle et al., 2010 to break curricular topics. Using this gave T3 a clear understanding of the subject and helped her plan out the progression of the content. This also had a positive impact on incorporating questioning. T3 began to write down these questions which were appropriate for the content and skills being taught. Writing down these questions helped her incorporate higher as well as lower order thinking questions.

Another major issue was student response, as the students lacked the ability to effectively communicate their understanding. In order to deal with this issue, T3 started to write the expected student response. Even though she did not give the students any sentence starters, this helped her formulate the question in a way that it would elicit the desired response.

---

*"can I change my guiding questions so that they can you know more, relate to it more and answer what I want"*

---

*"So developing those kinds of questions so that the conceptual knowledge of the child is achieved"*

---

All of this had an impact on student action and participation. Firstly T3 felt her classes were much more productive and even though students were communicating more than before, it was not chaotic. Students started expressing their understanding and even building their own knowledge.

---

*"So communication and cognition, the strategies that you have shared with us, the types of questions we could ask, the types of starters to be given, how children can you know bridge that gap between what they know and how they can answer what they know. So that is what has helped. I think I will continue with this, whatever I have done now with you, I think I will continue because it makes my work easy".*

---

In the excerpt above T3 talks about the ways in which the 4C framework and new practices have helped her. Even though she was writing her plans in much more detail than before the clarity in planning made it easier for her. She was sure about continuing these practices even after the study was over.

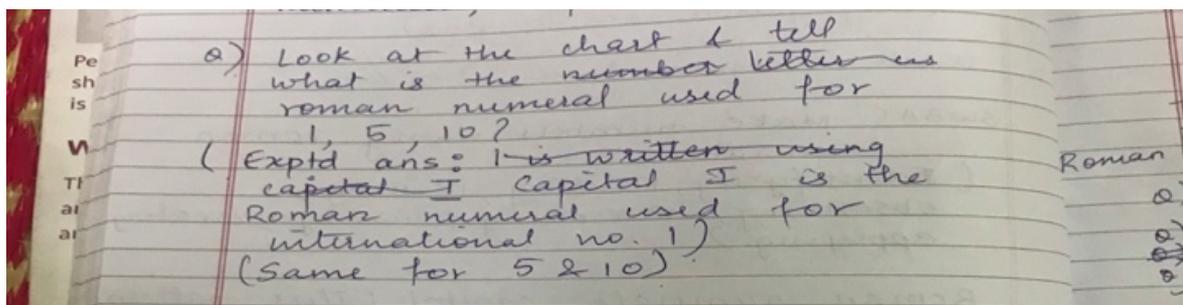


FIGURE 34. T3's lesson plan with expected student response

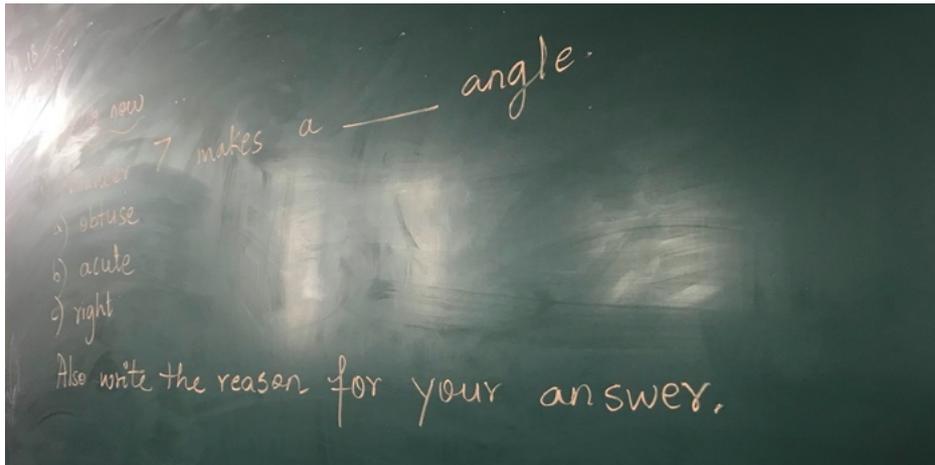


FIGURE 35. T3's class with a question for students to express their understanding

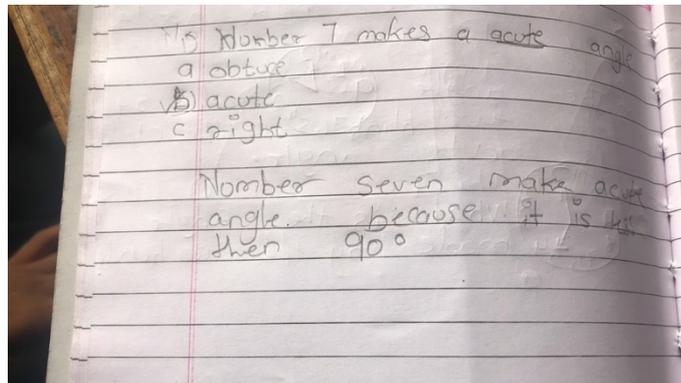


FIGURE 36. Student response to the above question

### 8.3.1 Teacher's view about this intervention

As mentioned previously T3 was sceptical about this study as she was generally someone who was averse to change. During our first individual planning session, we decided to use the 4C mind map template to plan out the content progression. The next step involved integrating the above-mentioned practices into her 40-minute lesson plans. This was followed by observation and suggestion with reason. T3 saw positive effects in her classroom due to these new practices and reflected on ways she could continue to improve.

---

*“The first lesson we sat together and integrated all these components in my lesson plan and that lesson went off really very well in my class. That’s when I thought this was going to work, but I needed to put efforts from my side as well. so it was mixed start”*

---

T3 felt that she often did not make connections to the students’ prior knowledge. However, while observing her classes to understand her practices better I noticed that she did align her lesson to the students prior knowledge. When this was brought into her notice, it assured her that she was practicing effective teaching strategies but was not particularly aware of them. Once she started reflecting on her actions, she only became more open to suggestions in order to improve and becomes a better teacher.

---

*“So initially I shared with you also. The connection of the previous knowledge. I was facing difficult there but then you started observing my lessons and I started linking the previous knowledge and I got a feedback that it was very much related. That was one thing for me that yes I am doing it right. Jo mujhe pehle lagta that main nahi kar paa rahi hoon (something I thought I was not able to do before), but someone else giving you a feedback that this is happening in your class was giving me satisfaction that I can go with this strategy”*

---

T3 attributed this change to the openness and flexibility of this study. She mentioned that I was very understanding and open about the criticism I faced regarding the 4C framework. This helped her openly talk about her challenges such as not planning in detail and being averse to change. Providing suggestions with reason gave her clarity regarding the changes she was asked to make in her lesson plans. This clarity built accountability in T3 as the implementation of my suggestion was totally her choice and in no way a mandate.

---

*“ I was quite comfortable with the kind of feedback that you gave me... and you had reasons why you wanted to change certain things in the lesson plan. So every time you made us change something.. I have a clear idea why we are doing this.... so that is very important because we are going to take the lesson and you are asking us to change something... it is very imp for us to know why we need to change that. I think that was quite good “*

---

*“so I think you were quite open, whether we liked it or we didn’t like it. whether it was going well or not. You were completely okay with whatever we were feeling. That was great, that built a space wherein we can work more effectively and so that was one of the plus points I think wherein I got that space wherein I can accordingly what I think and with you whatever you had come up with”*

---

### **8.3.2 Process of change**

Empirical data suggests that T3 really appreciated the personalised support (external domain) she received while planning her lessons. The openness and flexibility (external domain) of the study built accountability in T3’s case as she was making informed choices (personal domain) regarding the practices she would be implementing hereon. T3 began saw the value (personal domain) in the 4C framework and other new practices (domain of practice) before she saw any improvement in her classroom practices (domain of consequence). Her satisfaction (personal domain) regarding her lesson implementation was a result of elevated student response (domain of consequence).

Her desire to continue these practices was a product of her personal transformation as well as the improved student performance. T3’s change was a product of her personal motivation, which was hoisted after the personal planning sessions. I believe these though partnering sessions made her feel confident about her practices while also creating an awareness of her areas of improvement.

My support was majorly centered around helping T3 implement these new strategies. These strategies were not imposed on T3 but were informed choices she made, as she believed that it would help her become a better facilitator. This ownership not only initiates implementation of new practices but also brings about a mindset shift, all of which leads to sustained change.

## 9 DISCUSSION

This section focuses on answering the two research questions by summarising the key understandings, practices, issues and perspectives that arose during the action research study to **highlight the intrinsic and extrinsic factors** affecting teacher professional development and also creating a checklist to aid the **incorporating of these factors in designing PD sessions**.

### 9.1 Factors affecting PD

The findings section focused on mapping each teacher's professional development journey. It can be clearly seen that each teacher showed a change of mindset (personal domain) which could be attributed to her reflections related to her practices (domain of practice) or her expectations (domain of consequence) from her students and the classroom. As mentioned in section 3, psychological factors such as career motivation, autonomy, self-confidence and efficacy and self-reflection are major contributors to the process of professional development (Geeraerts et al, 2015). It is evident that they did have a profound effect on each teachers' professional development journey in this study.

Each teacher had her own set of strengths and weaknesses and they all manifested differently in each ones learning and teaching style. While being open to new practices and having the motivation to improve are traits that fasten the process of professional development; aversion to change and resistance to learning and incorporating new practices are traits that slow this process down considerably. Having mentioned this, it is quite intriguing to notice that not one teacher was completely motivated nor averse to implementing new practices. Each teacher showcased a certain degree of resistance which was a reflection of their personalities.

T1 and T2 were not very confident about their practices in comparison to T3, but T2 and T3 were intrinsically motivated to learn and improve were able to show a faster growth rate as compared to T2 who was comparatively resistant to

change. T1 and T3 wanted to be facilitators and encourage student independence by building their agency, were interested in implementing practices which would make their tasks easier and at the same time build more ownership amongst the students related to their learning. All the three teachers were motivated by peer collaboration, but in different ways. T1 found peer collaboration and communication to be a trustworthy space which would help her make informed choices related to her practices. T2 passively learned by observing her other counterparts. As for T3, she too learned by observation but was majorly stimulated by the success of a practice in a peers classroom. This stimulation would motivate her to apply the same practice in her own classroom.

Another important point to consider, is the journey of professional development. By now it is evident through this study as well preceding literature around empirical data that in order to sustain change and bring about growth, there has to be a shift in an individual's mindset (Guskey, 1986; Clarke and Hollingsworth, 2002).

While T1 and T2 felt that change by being more confident and open to experimentation only after seeing a marked difference in their classrooms as a result of the new practices. Thus the change in the personal domain was a result of action and reflection related to the domain of consequence. T3 had different journey, as she became more confident and open to new practices even before observing any substantial change in student behaviour and engagement. Thus change in personal domain happened due to reflection of her own practices, while planning and prior to implementation. Seeing a positive effect on student engagement only added to her self-confidence. At the end each teacher sustained either all or some of the practices they had begun to implement.

Expectations from students also played a major role in motivating the teachers to enact new practices. T3 was open to unexpected student responses was easily able to integrate them into her lessons as compared to T1 and T2 who found unexpected and unplanned student action unsettling. This could be directly linked to a teachers self -confidence and efficacy as well as her openness to student responses and action. These teachers were able to relate to the students interests and shape their practices accordingly.

Personal (intrinsic) factors

- Self-confidence
- Motivation to learn
- Personal vision for classroom
- Expectations from students
- Means of collaboration

As mentioned in the methodology section, the school did have ongoing professional development sessions for the teachers and also had a collaborative learning community. Teachers would often observe each other's classes and give each other feedback, all with the purpose of learning from and supporting one another. It is only valid for teachers to have certain expectations from other stakeholders and the larger school community.

All the teachers repeatedly mentioned that the professional development sessions they were regularly a part of, were;

- PD sessions generally lacked alignment between old and new practices
- New practices were generally enforced upon the teachers
- Trainings generally add to the workload instead of reducing it

Their expectations from PD programs were;

- Trainings should be open and flexible for teachers to be able to adapt it to their classrooms and make choices.
- Trainings should provide relevant and applicable strategies to improve student outcomes
- Trainings need to be aligned to the vision and practices of the larger school community (school)
- PD facilitators should create a space for communication and collaboration (Borko et al., 2010).

The findings from this study suggest that when teachers are comfortable and share their concerns openly it builds a bond of trust between me and the teacher (Thoonen et al., 2011). The option to make a choice and act upon practices which resonated with their ethos led to more accountability on the teachers part. This accountability translated into motivation for improvement. Informed choices were made as a result of personalised mapping of personal and professional goals. The personal tracker chart was a means for the teacher to visualize her professional development which would be an outcome of these new practices. As mentioned previously, collaboration plays a pivotal role in bringing facilitating the process of PD. While it enhances self-confidence and efficacy which impacts motivation levels of teachers, it also creates an environment for teachers to problem solve and make critical decisions together. Hence, cluster groups and peer observations proved to influence the personal and professional competencies.

Professional (extrinsic) factors

- Practices aligned to school and personal goals.
- Opportunities to make informed choices and sense of trust
- Professional collaborative communities
- Providing concrete tasks

## 9.2 Role of a PD facilitator

The factors mentioned above play a pivotal role in the professional development journey of every individual. As a PD facilitator it is important to understand that you can only influence the extrinsic (professional) factors. Based on the Interconnectedness model theory, a PD facilitator can impact the external domain directly and the resulting actions impact the other domains mentioned in the interconnectedness model.

As a PD facilitator in during this study I implemented new practices with sensitivity and flexibility. Even though mind mapping and thought partnering was done with each teacher, I had to bear in mind each teacher's psychological needs. Thus the nature of help provided was different for each teacher. For T1 reviewing of plans was important prior to observation, for T2 I had to create some plans initially highlighting the practices I wanted her to incorporate and as for T3, she was comfortable being observed directly and did not feel the need to have me review her plans.

While providing feedback also, I observed how each teacher reacted differently to it. For T1 I had to provide suggestions keeping in mind her low self-confidence and thus highlight the things that went well in her classroom and guiding her to make changes . For T2 I had to give clear and specific suggestions which she would be able to implement immediately, followed by a discussion regarding the outcomes. For T3, feedback was more about helping her reflect on her ongoing practices and that would motivate her to make further changes to her practices. This suggests that being sensitive to an individual's needs made a profound impact on the teachers' professional and personal identities.

As mentioned above, each teacher reacted differently to peer collaboration. I had to provide flexibility through this study to ensure that each teacher had a chance to collaborate and learn at her own pace. Not setting fixed timelines and not having set presumed outcomes, helped me to enable each teacher to explore herself and add value to this study. Peer collaboration also became a reflective space which gave teachers a chance to reflect on the practices in their classrooms.

While T3 shared visual evidences from her classroom, T2 and T3 preferred verbal anecdotes.

Thus all external practices were flexible enough for teachers to personalise them according to their sensibilities. Informed choices were made and hence teachers continued to practice the new ways of teaching that they learned during this study. I made sure that I would avoid commenting on the teacher's personal competencies and even though I cannot specifically identify how, but it did make them more open towards collaborating with me.

### **9.3 Ways to incorporate these factors to design PD programs**

This section combines the learning from the previous section with Borko et al (2010)'s ways to conduct high quality PD sessions as well as the interconnectedness model by Clarke and Hollingsworth (2002). It aims to answer the second research questions by exploring ways in which the extrinsic and intrinsic factors mentioned in the study can be taken into consideration while conducting and formulating PD sessions. In doing so, I have tried to create a checklist of action steps to support each domain that influences teacher professional development and have also provided a reasoning which is based on the earlier research on PD as well as this action research.

This checklist could act as a guide for planning and executing PD sessions. It is generic and flexible in nature, and can serve to meet the needs of any organization or educational community. However, it is the role of the PD facilitator to act with sensitivity and show flexibility. Above is a structured framework to help design professional development sessions.

Table.5. Checklist to design effective PD's

Domain	Checklist to cater to each domain	WHY
External Domain	<ul style="list-style-type: none"> <li>○ Aligning new pedagogical practices to the old ones</li> <li>○ Understanding the needs of the participants</li> <li>○ Explaining the flexibility of new practices</li> <li>○ Provide guided support to shape new practices to participant needs</li> <li>○ Create collaborative structures to ensure ongoing support</li> <li>○ Incorporating reflective practices</li> </ul>	<ul style="list-style-type: none"> <li>○ To ensure that PD programs are personalised and effective.</li> <li>○ To ensure active teacher participation</li> <li>○ To support ongoing professional development</li> </ul>
Personal domain	<ul style="list-style-type: none"> <li>○ Exploring each participants vision related to teaching and learning</li> <li>○ Analysing psychological factors</li> <li>○ How psychological factors impact teaching and learning outcomes and practices?</li> </ul>	<ul style="list-style-type: none"> <li>○ To develop an understanding of the participants personality</li> <li>○ To personalise PD in order to support the participants psychologically</li> </ul>
Domain of consequence	<ul style="list-style-type: none"> <li>○ What are the desired outcomes from the teachers perspective?</li> <li>○ How to shape new practices to help achieve desired outcomes?</li> </ul>	<ul style="list-style-type: none"> <li>○ To understand what does the teacher want</li> <li>○ Providing strategies to cater to these wants</li> </ul>
Domain of practice	<ul style="list-style-type: none"> <li>○ What are the various pedagogical practices within a particular educational community?</li> <li>○ How do these practices impact teacher efficacy and student outcomes?</li> </ul>	<ul style="list-style-type: none"> <li>○ To map new practices to the old ones &gt; personalised support</li> </ul>

## 9.4 Limitations of the checklist

Firstly, this checklist is formulated on the basis of a professional development intervention based in one school and focuses on three teacher participants. Designing a PD for larger groups could pose added difficulties while planning such programs. Secondly, I had the opportunity to get well acquainted with the teachers as well as the school community prior to planning the PD program. With lack of interaction and awareness of the school's ongoing pedagogical practices, creating an alignment could be difficult.

Thirdly, this checklist does not deeply consider the role of management and leadership in professional development of teachers. Management and leadership play a major role while setting up systemic reforms such as collaborative learning communities in order to ensure sustainability of change.

Lastly, an external PD facilitator may or may not have the privilege of working with the participants for an extended time period. Thus it would be difficult to build a bond of understanding with each teacher which would then lead to lack of personalized support. This could go completely wrong if the external facilitator and the leadership were to mandate the enactment of any new practices.

## 10 LIMITATIONS AND FUTURE SCOPE

### 10.1 Limitations of the study

Similar to the limitations of the above mentioned checklist, this study fails to understand and explore the impact of leadership on the professional development process of each teacher. Even though the interactions with the SL and the ASL were positive and certain systemic adaptations were made in order to ensure the continuation of new practices, it does not provide a clear view as to how these changes affected the teachers.

Even during the personal reflection interview at the end of the study, my questions as well as the teachers' reflections centered around their personal journey in relation to their classrooms. Hence, teachers' were not able to share their reflections regarding the impact of leadership and management on their personal and professional well-being and competencies.

This study was piloted on a school in Akanksha and had three participants and hence there were a lot of liberties in terms of time and investment. Teachers' were not constrained by time and were provided with continual support, which might be difficult to achieve in case there are more teachers and there is a certain time period allotted to PD.

The study lasted for a period of 2 months and I assume due to my absence certain practices have also been discontinued. Teachers' had mentioned that they would like periodic follow ups through video calls, but that did not work out after a few months of trying it out.

Even though the study maps the professional development journeys of the teachers', I had very little idea about various professional development studies conducted previously. I believe having explored previous studies, would have helped me design a better intervention structure and collect more insightful data in comparison to the dataset collected at present.

## 10.2 Future scope

As this is an action research qualitative study, it would not be feasible to apply it directly into another context. However, it can provide a guidance to action researchers seeking to explore the process of professional development. I would like to see different approaches to a similar study and the outcomes of the process.

The study resulted in the formulation of a checklist to design effective PD's. Thus, I would like to explore the various ways different researchers and professional development facilitators would use it, as well as the impact it had on their competencies. I would also like to test the sustainability of this checklist when it is adapted to the needs of various educational communities. Lastly, I would value suggestions and changes which would ameliorate this checklist and make it more user - friendly and sustainable.

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## APPENDICES

### Appendix 1 - Questionnaire for teachers

1. A lesson plan, that was planned and executed very well.  
(Insert the detailed plan in the space below)

2. A lesson plan, that was not planned or executed very well.  
(Insert the detailed lesson plan in the space below)

3. Mention briefly, the main reasons why your lesson went well?

|

4. Mention briefly, the main reasons why your lesson did not go well?

### Appendix 2 - Focus group meetings

FOCUS GROUP MEETING 1 - 2 hours

Objectives:

1. Teachers will be able to critically analyze their lesson plans using the 4C's
2. Teachers will be able to identify the role of language in their lessons
3. Teachers will be able to identify and analyze the tasks related to student engagement
4. Teachers will create an image for themselves as educators

How:

Time	Task
5 minutes	Ice breaker game - run and get your dairy and if time permits one personal item
10minutes	I will talk about 2 lesson plans <ul style="list-style-type: none"> <li>- 1 which was exemplar in my opinion</li> <li>- 1 which did not go as per expectations</li> </ul> I will reflect on "critical teaching moments" from both these plans. Critical teaching moment are the ones where, a teacher knows that the students have completely understood the concept or gone astray with it.
30 minutes	I will randomly pick 2 plans (a plan that went well and a plan that didn't) from the plans sent by the teachers. The teachers will sit in a group and identify the following in both the lesson plans, <ul style="list-style-type: none"> <li>- the main idea behind teaching this lesson (<u>content</u>)</li> </ul>

	<ul style="list-style-type: none"> <li>- the tasks the students were engaged in during the lesson and the skills the students used to perform this task (<u>cognition and culture</u>)</li> <li>- where and how language was used in this lesson (<u>communication</u>)</li> </ul> <p><b>Note:</b> The teacher to whom the plan belongs can offer clarifications about the plan. No teacher will critique these plans and talk about ameliorating it. The kind of questions asked related to both the plans could be as follows:</p> <ol style="list-style-type: none"> <li>1. What skills did you have in mind while planning this lesson?</li> <li>2. Did you think of the language you wanted to use explicitly?</li> </ol> <p>Why and when questions would also do. I will model these questions in the beginning and then the other teachers will come up with their own questions.</p>
10 minutes	This is for teachers to reflect on their plans and ask questions related to their plans. / how many skills are built through communication?
5 minutes	BREAK
15 minutes	<p>The teachers will again sit in a group. I will give them a few statements and the teachers will have to arrange the statements in the shape of a diamond.</p> <p>These statements are a reflection of what I want to achieve as a teacher.</p> <p>The statements are:</p> <ul style="list-style-type: none"> <li>• I want learners to confidently talk in the English.</li> <li>• I want my classroom to be a vibrant, interactive and motivating space. (top)</li> <li>• I want learners to achieve desirable academic standards in English language.</li> <li>• I want to be a part of a teaching and learning community, where we share ideas and resources.</li> <li>• I want to motivate my learners to use English language in many different ways (eg. For learning, chatting, organizing their learning, writing, conducting outside classroom work, etc)</li> <li>• I want to challenge learners and help them acquire new knowledge, skills and understanding.</li> <li>• I want to involve learners, parents, colleagues and administrators in my classroom and make them a part of the regular curriculum.</li> <li>• I want a classroom, where language is used as a means to understand different cultures.</li> <li>• I want to use resources and materials available to the best of their potential and keep it level appropriate.</li> </ul>

	The teachers will all reflect on these statements prior to organizing these into a diamond. The teachers will be free to discard any statement and add new ones, depending on their teaching expertise and preferences.
10 minutes	The teachers will now explain “ <b>how</b> ” did they create the diamond. The teachers will justify their thinking with reasons. Every teacher will be encouraged to participate.
20 minutes	Now the teachers will be asked to reflect on the following questions in a group, keeping the diamond in mind. (owl- Finnish symbol of teachers) Sheep dog - parker palmer <ul style="list-style-type: none"> <li>• What does my classroom look like? (draw)</li> <li>• Who am I in the classroom? (here, the teachers will be encouraged to think of an image. This image will then help them understand their role in the class)</li> <li>• What is my role in the classroom? (depending on the image they think of.. sheepdog example)</li> <li>• Do I like my role in the classroom?</li> <li>• How can I change my role in the classroom?</li> </ul>
10 minutes	Teachers will freeze on an image, that resonates with their role in the classroom. Each teacher will share his/her image with the larger group and provide the reasoning behind the choice. (write this in their reflection diaries)
5 minutes	Just a quick recap of the skills they used, while working in a group and a THANK YOU. (any thing in particular the teachers want to talk about?) – ask teachers.

#### FOCUS GROUP MEETING 2 – 2 hours

##### Objectives:

1. Teachers will be able to identify the various forms of talk that exist in a classroom.
2. Teachers will be able to identify the kind of talk in their classrooms.
3. Teachers will identify the skills developed through group talk and whole class talk.
4. Teachers will explore new strategies to encourage meaningful group talk in their classrooms.
5. Teachers will create a plan to build language through group talk and whole class teaching.

##### How:

Time	Task
5 minutes	Recap of the previous meeting.
7 minutes	I will show the teachers a presentation on the various types of talk that can exist in a classroom. The slides will be short and informative.
20 minutes	Now I will show the teachers two types of talk that occur in a classroom set up. Teachers will be asked to reflect on both conversations. The teachers will use the following questions to think and answer in a group: <ul style="list-style-type: none"> <li>• What kind of questions did the teachers ask?</li> </ul>

	<ul style="list-style-type: none"> <li>• What kind of responses did the questions invite in conversations 1 and 2?</li> <li>• Which conversation led to a deeper understanding of the topic?</li> <li>• What kind of responses did the teachers come up with to student opinions?</li> <li>• What is the importance of summarizing student responses? How does that affect learning?</li> </ul> <p>The teachers will reflect on both these conversations separately. At the end we will compare the two conversations.</p>
5 minutes	Teachers will reflect on their own style of using language in their classrooms and will write their thoughts down on a paper.
5 minutes	BREAK
20 minutes	<p>The second half of the session focuses on building talk in a classroom.</p> <p>I will show the teachers two examples</p> <ul style="list-style-type: none"> <li>- Talk between teacher and students</li> <li>- Talk between students in a group</li> </ul> <p>The teachers will be able to see the details of planning the structure of talk in a classroom.</p> <p>The teachers will share the following information after viewing the plans:</p> <ol style="list-style-type: none"> <li>1. What could be the benefits of using this kind of a talk structure?</li> <li>2. What bits of this plan could you use in your lessons?</li> <li>3. What challenges would you face in using/creating these structures?</li> </ol>
30 minutes	<p>Teachers will talk about the various skills they use, when they talk in groups?</p> <p>Role play. The topic will be about the importance of talk.</p> <p>How do you think will such a planned introduction of talk help your classroom? Will it/ will it not?</p>
30 minutes	<p>Teachers will work collaboratively and write a plan for whole class dialogue.</p> <p>They will decide the,</p> <ul style="list-style-type: none"> <li>- Purpose of this talk (skills)</li> <li>- What happens when someone is talking?</li> <li>- The phrases and tools the students will need to communicate</li> <li>- What are the class rules and culture?</li> <li>- Outcomes of this talk</li> </ul>

#### FOCUS GROUP MEETING 3 - 2hours

##### Objectives:

1. Teachers will be able to analyze content and divide it into smaller goals

2. Teachers will be able to integrate content and language
3. Teachers will be able to design questions to build higher order thinking skills.
4. Teachers will be able to use the 4C's framework and create lesson plans.

Time	Task
10 minutes	<p>A quick introduction of the 4C's.</p> <ul style="list-style-type: none"> <li>- Content</li> <li>- Communication</li> <li>- Cognition</li> <li>- Culture</li> </ul>
15 minutes	<p>I will put forth a CLIL lesson plan created by a friend for her thesis. Its for a grade 3 math class on number work.</p> <p>Teachers will be asked to ask questions regarding this plan and major emphasis will be given to understanding content, communication and cognition.</p>
35 minutes	<p>Now teachers will deal each of these components individually. They have been talking about these in the previous meetings, but now they will explicitly work on the 4C's.</p> <p>The teachers will be given handouts (the planning guide). The document includes the following questions and discussions will be based on the same:</p> <ul style="list-style-type: none"> <li>• Start with <b>content</b>. Define it. <ul style="list-style-type: none"> <li><input type="checkbox"/> What will I teach?</li> <li><input type="checkbox"/> What will they learn?</li> <li><input type="checkbox"/> What are my teaching aims/objectives?</li> <li><input type="checkbox"/> What are the learning outcomes?</li> </ul> </li> <li>• Now link content with <b>communication</b>. <ul style="list-style-type: none"> <li><input type="checkbox"/> What language do they need to work with the content?</li> <li><input type="checkbox"/> Specialised vocabulary and phrases?</li> <li><input type="checkbox"/> What kind of talk will they engage in?</li> <li><input type="checkbox"/> Will I need to check out key grammatical coverage of a particular tense or feature eg comparatives and superlatives?</li> <li><input type="checkbox"/> What about the language of tasks and classroom activities?</li> <li><input type="checkbox"/> What about discussion and debate?</li> </ul> </li> <li>• Now explore the kind of <b>thinking skills</b> you can develop according to decisions made above. <ul style="list-style-type: none"> <li><input type="checkbox"/> What kind of questions must I ask in order to go beyond 'display' questions?</li> <li><input type="checkbox"/> Which tasks will I develop to encourage higher order thinking- what are the language (communication) as well as the content implications?</li> </ul> </li> </ul>

	<p>❑ Which thinking skills will we concentrate on which are appropriate for the content?</p> <p>Culture is a thread what weaves through the topic. The culture can be culture of the subject, language or the school/classroom itself. I would recommend the teachers to build values as culture, something that would reflect in each of their CLIL lessons.</p>
60 minutes	<p>The teachers will create a CLIL lesson plan.</p> <p>Steps:</p> <ul style="list-style-type: none"> <li>➤ Choosing a topic and breaking it down into smaller objectives.</li> <li>➤ Deciding the lower and higher order skills, which can be built using this content (cognition). This also involves the kind of questions and tasks the teaches will plan.</li> <li>➤ Communicative and content language.</li> </ul> <p>Note: This is where, the teachers will integrate their “talk” plans with their content plans.</p> <ul style="list-style-type: none"> <li>➤ Teachers also decide and specify how all their activities build the culture of their classroom.</li> </ul>

**Appendix 3 - Consent letter for teachers**

Shweta Eidnani  
University of Jyväskylä  
Finland

Date: 1<sup>st</sup> June, 2018.

Subject: Permission for research

Dear Teacher,

My name is Shweta Eidnani and I am currently pursuing my Masters in Educational Leadership from University of Jyväskylä. I would like to conduct a research, for which I request your participation and collaboration. This research focuses on how teachers adapt to CLIL (content and language integrated learning) methodology within a teacher community.

I will not use any identifying information or your name anywhere. I will also try to make sure that my research does not pose any difficulties in your daily work routine. You have the complete right to not give me permission for this study and at any given point of time you can withdraw your permission.

I will be recording each of our meetings, interviews and classes for reference purposes and to better understand the challenges and benefits of introducing CLIL within a teacher community. This data will be carefully anonymized and safely stored for research purposes. You have the right to step out if you do not wish to be recorded. My thesis supervisor is Josephine Moate. If you have any questions, please ask. By signing this letter, you are agreeing to participate in this research study.

Name & Signature