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Exploring Primary School Teachers' Perception on Active Learning Methods: A Qualitative Study

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ABSTRACT
A few studies regarding active learning in primary schools exist. These studies have shown that primary school teachers seem insufficiently prepared for this role (e.g. Stephen, Ellis, & Martlew, 2010; Van Deur, 2010).The study focused on exploring primary school teachers' perception towards active learning methodsin Medebegna Konto school, southern Ethiopia. This qualitative study used the case study approach to gather information from three(two male and one female) teachers who have been directly identified as grade five teachers. The samples of participants were purposefully selected based on being identified as mathematics teachers in grade five. The study used a semi structured interview protocols as main sources of data collection. According to the analysis of qualitative data, seven important themes were identified. The study revealed that active learning methods bolstering interaction and motivation among teachers and students. Teachers also perceive that classroom environment, teachers overload and students background difference as challenges in the implementation of active learning methods in maths class. Eventually, conclusions, recommendations and areas of further research were forwarded based on the major findings.

Keywords: active learning, teachers' perception, maths teacher, primary school

I. INTRODUCTION

Medebegna Konto primaryschool is one of the recently opened schools under Sodo town administration, Southern Ethiopia. The school was founded in 2010 in the city of Sodo, one of the oldest cities in the region. Currently,the schoolrun over 1076 students and more than 45 teachers and staff. Among the 45 plus full-time teachers, 50% have Bachelor degrees and50% teachers have completed diploma for first cycle of primary education, With the school motto of " quality education", the school has adhered to the development philosophy of "competent citizens overall progress and individuality development."

Twenty-first century skills include teamwork, communication, innovation, and creativity and have as outcomes, creating, evaluating and analysing, challenging the learner, promoting active participation, argumentation, problem solving, conducting investigations and tackling subject matter that is complex (ATCS, 2010). It involves a new classroom culture that caters for learners being at the canter of learning and being fully involved in social and active learning.

Active learning is one of the most popular and important educational innovations of recent years. Nowadays many teachers focus more on the creation of creative and positive learning environment through the student-centered active learning process within which teacher is merely a guide as the focal point of contemporary education systems. Since students participate actively in the learning process, they are more likely to grasp and understand the covered material in a more meaningful way. In addition, active learning allows the student to connect the learned knowledge to the real-life contexts. (Alharbi Awatif Abdullah M.and Cuihong Yang, 2019).

Moreover, the key goals of active learning is to enable students to use higher levels of cognitive functioning through cognitively deeper and richer learning experiences. Learners are able to combine prior knowledge and engage with abstract concepts that require problem-solving, collaborative discourse, critical thinking and

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reasoning skills (Lumpkin 2015).Interms of problem solving, to make the teaching of mathematics more relevant to the immediate needs of the learners, the societies, and the nation at large. (Medinat F. Salman, 2009).

One of the most difficult tasks in teaching mathematics is assisting students whose confidence has sunk to a level where they wallow in failure or where they do not believe that they can do mathematics or where they do not see its relevance. The personal and social families are consistent with enhancing confidence/self-esteem emphases on holistic learning and the development of human potential (Steve Warnera and Abtar Kaurb, 2017).

Teachers have to consider different aspects when they prepare how to teach their students. Amongst various teaching styles, there are different methods that emphasize the students' active participation in their learning process. Therefore, this study will focus on teachers' perception towards active learning and important aspects in connection to it. Various methods, ideas and researches from different scientists are discussed in order to acquire information about the concept of active learning and its implementation.

1.2 Statement of the Problem

Learning can be divided into various types, with active learning being recognized as a key component that may result in better math achievement. The active learning is a learning process in which the learner takes the responsibility of his/her learning and s/he is given the opportunity to make decisions about various dimensions of the learning process and to perform self-regulation (Açkgöz, 2003).

A few studies regarding active learning in primary schools exist. These studies have shown that primary school teachers seem insufficiently prepared for this role (e.g. Stephen, Ellis, & Martlew, 2010; Van Deur, 2010). Teaching in today's primary schools is very much a matter of teachers talking and children listening. Classroom practices in primary schools are intense and more teachers controlled. Pupils are less autonomous in their use of space and time and in their choice of activities (Pollard et al., 2000:60).

The study reported that large class size, shortage of instructional material, lack of skills in selecting a variety of methods and lack of awareness on what active learning is, are the major factors that affect the implementation of active learning. However, none of these studies were actually intended to examine teachers' perceptions of their practices and challenges they encountered on the implementation of active learning.

Different research studies were conducted on active learning at various educational levels and tried to show their findings. For instance, Taye (2008) and Bethel (2011) conducted their research on practices and perceptions of school communities in implementing active learning and the result of the study revealed that school communities' perceptions and practices in the implementations of active learning still require further sensitization. It is with this intention that the researcher is initiated and motivated to conduct a research in Medebegna Konto primary school.

Therefore, the central question of this research project is: how can primary school teachers perceive the implementation of active learning in mathematics class? This central research question is broken down into the following research questions:

1. What are primary school teachers' experiences on using active learning methods of mathematical concepts?
2. What do primary school teachers perceive as the successes and challenge of using active learning methods in teachingmathematics?

1.3 Purpose of the Study

The main purpose of this study was exploring primary school teachers' perception towards active learning methods.

1.4. Significance of the Study

This part of the research explains the reasons why the study is conducted and the values of the research findings. Due to this reason, it is expected to identify the people or institutions that may benefit from the research results (Best & Kahn, 2003). Accordingly, this research is thought to be significant in the following arenas.

The finding of this research can serve as a base line to develop training manual on the implementation of active learning methods to give training for teachers' so as to update their skills and practices in the implementation active learning methodsand finally in order to help them overcome the challenges they face in relation to their active learning methodspractices.

In addition, the result of this study also adds to the existing literature on perceptions of primary school teachers towards the implementation of active learning methods, skills, practices and challenges. This research also serve as a foundation for further research that benefit researchers in the educational settings and study might also help as a stepping stone for those experts who want to carry out further investigation

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in similar arena or for those who want to design and implement intervention action.

1.5 Theoretical and Conceptual Framework

The theoretical base relevant for this study is constructivism. It is possible to argue that constructivist theories are emerging as distinct and dominant approaches to learning today. These theories consider knowledge as a constructed reality and contradict the view that knowledge is given and absolute. Thus, constructivist theories are subjectivist philosophies of science which assume that reflection on experience constitutes the basis of understanding the world. For constructivists, learning is a search for meaning and it must be based on active engagement or interaction that leads to discovery and personal interpretation of experience.

Constructivist learning theory emphasizes that individuals learn through building their own knowledge, connecting new ideas and experiences to existing knowledge and experiences to form new or enhanced understanding (Bransford et al., 1999). The theory, developed by Piaget and others, posits that learners can either assimilate new information into an existing framework, or can modify that framework to accommodate new information that contradicts prior understanding.

Constructivist learning theory is a kind of theory that focused on cognitive constructivism and social constructivism and examines different classroom practices that indicates about how teaching and learning process carried out.

2.2.1. Cognitive Constructivism

Constructivism is based on the idea (Snowman & Biehler, 2000, p. 291) that "meaningful learning occurs when people actively try to make sense of the world—when they construct an interpretation of how and why things are—by filtering new ideas and experiences through existing knowledge structures.It emphasize that individuals build new meanings upon previous meanings that they have acquired through life experiences (Cox-Petersen & Olsen, 2000) .Cognitive theorists also understand that teachers cannot take what is in their heads and plop that information into a student's head, because the student's life experiences are not identical to anyone else's—including (and perhaps especially) the teacher's.

Cognitive constructivism, one form of constructivist learning theory, rests on theoretical arguments that some educators and psychologists find controversial as well as several methodologies that enjoy popular support regardless of the theories they reflect (Gage & Berliner, 1998, p. 276). Cognitive constructivism rests heavily on Piaget's (1952) view that people have "an intrinsic drive to resolve inconsistencies and contradictions—that is, to always have a view of the world that makes sense in light of what we currently know" (Snowman & Buehler, 2000, p. 294). Piaget's notions of assimilation (i.e., taking in new information), accommodation (i.e., adjusting to the new information, and equilibration (i.e., being satisfied or comfortable again) come into play in explaining cognitive constructivism. To help understand Piaget's ideas about cognition, you can think of the biological term "homeostasis," a state of physiological balance.

2.2.2 Social Constructivism

One version of constructivist learning theory, social constructivism, emphasizes consideration of the ways a culture influences its people's mental constructs. One major assumption about social constructivism is that "learning is collaborative with meaning negotiated from multiple perspectives (Smith & Ragan, 1999, p. 15). Those holding this view of constructivism, according to Snowman and Biehler (2000), believe that meaningful learning occurs when people are explicitly taught how to use the psychological tools of their culture (like language, mathematics, diagrams, and approaches to problem solving) and are then given the opportunity to use these tools to create a common, or shared, understanding of some phenomenon (p. 295). Individuals learn, as members of a group, to think like other members of the group. That is, the groups they belong to heavily an influence person's thinking.

2.2.3. Vygotsky's Socio-Cultural Theory

Lev Vygotsky (1978), who is considered as the father of constructivist and active learning theory, was convinced that social interaction plays a fundamental role in the development of cognition. For him, culture determines individual development and what a child learns emanates from social interaction. In this sense, both the content and means of cognition or thinking are acquired from cultural interaction. Thus, learning is essentially social.

The two main gist of Vygotsky's socio-cultural theory is the Zone of Proximal Development (ZPD) and scaffolding (Karpov, 2014). The ZPD is a level or skills that are not yet mastered by children alone and this skill can be achieved with the help and guidance from adults or peers (Vygotsky in Mohd Zuri & Aznan, 2015).

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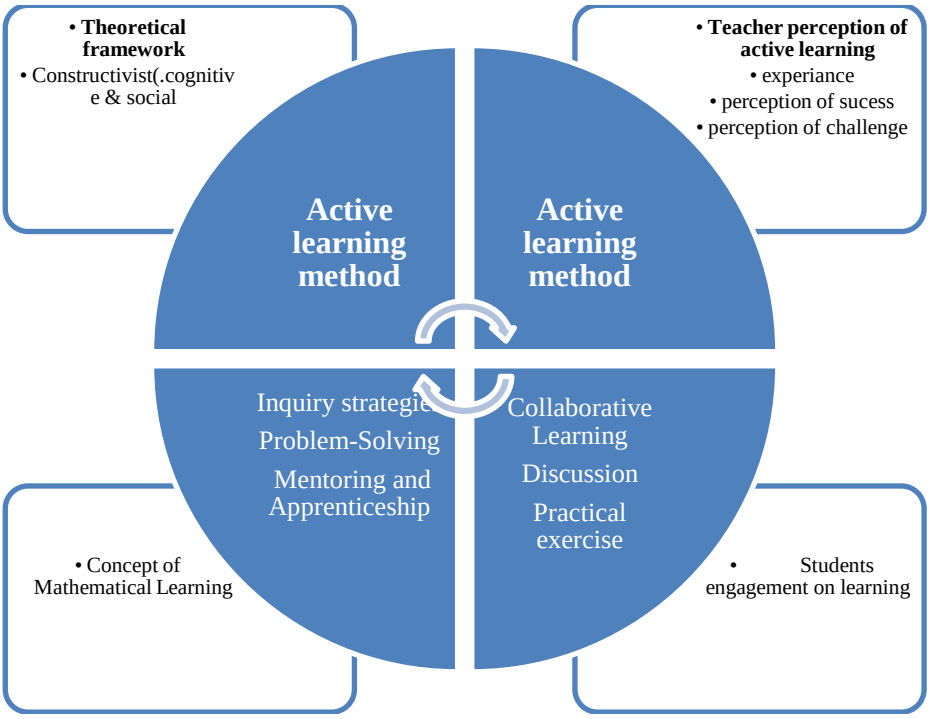
Scaffolding is a method of adapting teaching based on the individual needs of students in the classroom (Pauli, 2015). Providing immediate guidance as to whether the student shows weakness or mistakes is very effective in the process of building a student's understanding (Wischgoll, Pauli, & Reusser, 2015). Guidance should be carried out taking into account the ZPD of each pupil in a class; the ZPD identification of pupils is very helpful in their learning process, especially for low achieving pupils in certain subjects (Pesco & Gagne, 2017).



II. LITERATURE REVIEW

Teaching Approaches that Emerge from Constructivism

Inquiry strategies

Some educators suggest that the teacher's role is to facilitate learning by creating an environment that promotes inquiry, while others contend that teachers must continue to transmit facts and traditional concepts to students through direct teaching. Both kinds of teaching/learning have their place in educating students. Inquiry strategies enable students, working alone or in groups, to engage in research activities as they pose problems; seek, analyze and evaluate information; and report what they learn about topics of interest to them. "Thus," says Tower (2000), "inquiry means allowing students to become much more involved in the decisions about what to study and what sources and activities are necessary" (p. 550).

Problem-Solving

It is obvious that students are surrounded by life's problems. Some problems are easy to resolve, but others are not. Some of the understandings, skills, and attitudes that students attempt to learn in school are easy, but some are not. We can help students learn to solve problems by helping students define problems, making apparent the models and strategies we use to solve problems and helping students build their own capabilities through solving problems as part of their learning experiences.

Mentoring and Apprenticeship

The constructivist approach emphasizes the importance of providing expert support for learners and opportunities for learners to interact with one another to gain alternate ways to accomplish tasks. Teachers can use scaffolding to mentor students, and they can, in some cases, have students act as their assistants (apprentices), giving them opportunities to see how they approach learning tasks. Students help other students, too, and they use of cooperative or collaborative strategies in their room can help students work with the mentors they need.

Collaborative Learning

In recent decades, more and more teachers have embraced collaborative or cooperative learning as their major classroom strategy. In cooperative learning, small groups of students work together to accomplish tasks, and (Snowman &

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Biehler, p. 359) "cooperative structures lead students to focus on effort and cooperation as the primary basis of motivation."

2.3 Teachers Perceptions of Active Learning

Habók and Nagy (2016) conducted a study to determine teachers' perceptions of active learning. A total of 109 teachers completed a questionnaire that gathered data on the preference for using active learning and how teachers' perceive their role in the classroom. The researchers' analysis determined that teachers prefer to use methodologies such as active learning because it is collaborative in nature. The researchers also found that teachers perceive themselves as motivators, personality shapers, and value transmitters. This is important when considering the teacher's role in active learning as a facilitator and guide, not a ruler as is the case in most traditional classrooms. Overall, the students and teacher in these studies had positive perceptions of active learning as a language learning methodology.

Teachers' perceptions of active learning reflect their perceived positive impact of this mode of learning on students' understanding of the content, skill development and learning styles. This perception and agreement support Taylor's (2003); Anderson's and De Silva's (2007) and Wilke (2003) argument that active learning support different learning styles by providing multi delivery system that helps learners to understand the content and develop skills. Teachers suggest that active learning has a vital role in providing students with constructive learning opportunities, especially for learner involvement, responsibility and opportunities for making decision about their learning and this supports Blidi's (2017) and Aytan's (2017) arguments.

Teachers also believe that not any learning activity can serve the purpose of active learning and that active learning is only based on specially designed learning activities. Debbek (2015) in her study suggests that strategies like student-led discussion and group-work can be easily adapted to serve active involvement from the side of the student and can raise students' interest who reported eagerness in using such strategies.

Although teachers strongly believe in the advantages of applying active learning in their classes, they still think that it cannot be applied every day or in every lesson. This is echoed in the interviews, claiming that such learning opportunities may be time consuming. Selecting active learning strategies, preparing them and applying them take too much time from teachers. This justifies their reluctance to adopt it as a mode of learning. The time constraint attributed to the heavy burden formal learning involves, with much focus on content that needs to be covered. Time constraints are the misperception that teachers have even though reviewing literature proves that learning opportunities are available everywhere (Crabbe, 2003) for students so teachers need not to create or prepare them. This time constraint was one of the reasons behind instructors' hesitance in applying active learning in their classes as reported by Debbek's (2015) study.

Teachers highly believe in the role active learning plays in creating excitement in classroom, motivating students, increasing their participation and changing their attitudes to learning positively. This perception correlates with findings from previous researches suggesting active learning effectiveness in changing students' attitudes, raising their satisfaction and motivating them to learn (Demirci,2017 and Blidi, Chaou & Al Ajmi, 2018).

Teachers believe in the essential role of active learning in providing learners with constant feedback on their learning. They also believe in the importance of giving students time to think and reflect on their learning. This aligns with teachers' perceptions in Zamel's (2006) study, who positively perceives providing constant and constructive feedback to students as an important role that should take place for active learning to be effective.

Statistical evidence and agreement values prove teachers' perceptions of their essential role in active learning. Teachers view that negotiating ideas, opinions and information, providing feedback on learning, creating collaboration and opportunities for efficient involvement are their major roles in active learning. This can be attributed to teachers' awareness of their role in active learning as facilitators of learning rather than controllers. Neimi (2002) in her discussion indicated that teachers are facilitators who give more space for students to take over the responsibility of their learning.

Teachers believe that students play an essential role in active learning. Students need to search for information, collaborate with each other in doing activities, reflect on their learning and provide feedback to each other. However, teachers are not sure if self-evaluating own assignments is one of the student roles in active learning. This uncertainty is believed to be related to teachers' lack of trust in students' abilities in handling this work. Teachers also have positive perceptions towards verifying the types of active learning

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strategies to be used in classroom. They view, as suggested by interviewers, this verification of strategies as a chance of giving students more time to spend on tasks and creating a favourable environment for active learning. This perception echoes Blidi's, Chaou's and Al Ajmi's (2018) argument that the variation of opportunities and environment leads to better development.

2.4 Concept of Mathematical Learning

Due to its transcendental nature, i.e. dealing with abstract conceptions and formal accounts, math has previously been recognized as somewhat problematic and challenging subject for students to grasp. This difficulty may be contributed partially to the traditional way of teaching, where students did not receive as many stimulations, approval, support, time and challenging tasks, group support and group competition and also cooperation to engage them authentically, that should be carefully designed as to flair their curiosity (Alharbi Awatif Abdullah and Cuihong Yang,2019).

Math is often exercised in isolation from other courses, which creates a loss of motivation for some learners and then becomes an obstacle to master math (Nikitina and Mansilla 2003). Mathematical theories should be taught with real-life connections. To promote students' interest and produce authentic relationships, multidisciplinary themes can be used (National Council of Teachers of Mathematics 1995).

Some academics aimed at demonstrating how to structure a goal, support the students academically, and what teaching techniques, materials, and practices to implement, as well as how to direct teacher's beliefs (Wentzel et al. 2010). Math achievement is related to education methods significantly according to experts. Mainly, the instructor's responsiveness, behaviour, and assistance play an essential role (Patrick, Ryan, and Kaplan 2007). Teacher's supportiveness and experience in teaching are also critical factors (Bagaka's 2011)

Active learning strategies can play an essential role in facilitating teachers to adopt the student to the active learning environment. There was a lack of student interaction in the traditional learning environment. Thus, nowadays many teachers use active learning strategies that pay attention to the creation of a positive learning environment (Morgan 2007). Positive learning environment enables the students to interact positively with the teacher and with each other. Positive learning environment enables the students to perform better.

2.5 Challenges of Implementing Active Learning

Practicing and promoting active learning methods pose enormous challenges in the classroom. According to Alexander (2000) and UNESCO (2004) four broad categories of challenges can be identified: teacher training, material conditions, curriculum and culture.

Issues related to teacher training revolve around the quantity/quality of pre-service preparation and the effectiveness of in-service professional development that teachers receive. Leu (2005) points that in many countries pre-service teacher education is based on traditional models while the curriculum is changing to constructivist approaches based on child centred pedagogies. While this mismatch between the level of teachers' prior education and training represents a challenge to efforts to promote the use of active-learning, research indicates that such challenges can be overcome. Actively engage participants in learning and doing – can develop the commitment and knowledge of even less formally educated teachers that is a pre-requisite for implementing active-learning, student cantered pedagogies (Abd-El-Khalick et al., 2006 and Amare Asgedom et al., 2006).

Material conditions (poor facilities, equipment, and number of students) in classrooms where teachers are asked to implement active-learning pedagogies may certainly be significant determinants of learning. According to a study in Uganda by Siraj-Blatchford et al. (2002) the utilization of childcentered pedagogy was more sporadically implemented both because of the inadequacy of the furnishing and equipment in the classroom and because of large classes.

Another source of challenge for implementing active learning methods emanate from the mismatch between the information-memorization orientation of the curriculum and examinations and the constructivist notions of knowledge and understanding associated with active-learning (AIR and AED, 2006). Parents and other key stakeholders may not believe that the use of active learning would enable their children to succeed in their schooling given the demands of the curriculum and examinations for memorization and rote learning. As Hopkins (2002) observes from case studies in Uganda, Kenya and Tanzania, one of the threats to child-centered learning is the narrowing of the definition of effective student learning to test scores. Teachers in these countries are subject to significant expectations and pressure to ensure student success on national examinations rather than understanding their lessons.

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III. DESIGN AND METHODOLOGY

3.1Qualitative Research Approach

A qualitative research approach for this study was chosen because qualitative methods are especially useful in discovering the meaning that people give to events that they experience (Merriam, 1998).

3.2 Research Design

The method used for the present study was the case study as described by Beverley Hancock (2002). Case study research is used to describe in depth the experience of one person, family, group, community, or institution. Case studies are to be used when the researcher wants to focus on how and why, and to further understand a given phenomenon. This approach assumes that investigating cases leads to better comprehension and enabled a deeper understanding through more powerful descriptions and explanations.

3.3Participants and Context

This study was conducted at the mathematicsteacher,Medebegna Konto primary school to measure the teachers' perception on the use of active learning strategy on math's class.The participants were 3teachers who worked in the fifth grade in the school.One school was selected using purposive sampling technique because of the feasibility to the study and the familiarity to the researchers to have access of information.

All of the teachers involved practised the concept of active learning when teaching mathematics. The domain of mathematics was chosen because it is the domain in which active learning is most often implemented in primary schools. Schools have chosen active learning as a means to develop students' metacognitive and social skills, in addition to reaching the national attainment targets for the domain of mathematics studies.

3.4Method of Data Collection

Interviews

For this study, a qualitative interview was the primary method of data collection for three reasons. Qualitative interviewing is appropriately used when "studying people's understanding of the meaning in their lived world" (Kvale, 1996, p. 105). In fact, interviewing is the best technique to use "to find out those things we cannot directly observe…feelings, thoughts, and intentions" (Merriam, 1998, p. 72). Qualitative interviews result in thick descriptions of the subject being studied (Rubin & Rubin, 1995).

Semi-structured interviews was used to get a deep insight into teachers' perceptions and perceived outcome upon implementation of active learning sessions.Itgave participants more room to answer in terms of what was important to them.An individual semi structured interview allowed for the exploration of reflections, perceptions and feelings. The semi structured interview seems best suited for garnering descriptive insights (Bogdan and Bicklen, (2003). The interview took place in a quiet location free from distractions. Each interview followed a data recording protocol and lasted 25 to 30 minutes in length.

The protocol outlines the purpose of the study, how the information has been kept confidential, how long the interview lasted, and the interview questions. The participants were asked open-ended, researcher-created questions followed by probes. The interview questions addressed the research questions to explore the teachers' perception towards the implementation of active learning. Follow-up probes were used enabling the participant to clarify and provide more details about their perceptions regarding the implementation of active learning.

With participant approval, the interviews are audio-recorded to ensure a complete transcript (Merriam, 1998; Rubin & Rubin, 1995). Typed notes are taken during all interviews, enabling the researcher to track key points to return to later in the interview and for use during data analysis. This information garnered from the data collection was carefully organized as it is collected. I gathered and analysed the data providing for a deeper understanding of the research problem.

3.5Method of Data Analysis

Interviews

Data collected that was conducive to a qualitative method was coded using themes.Themes and coding wasused to parse the interview. The researcher used fixed themes to code this data.All interviews would be recorded and carefully transcribed. Transcriptionswere compared allowing for categories and themes to emerge.

3.6 Ethical Consideration and Procedure

This research was undertaken based on the full consent of agreement of all the teacher participants. To explain this more, letter of permission was taken from the school of education, Shaanxi normal university and was given to the school director. Then, the principal directed it to their teachers, then the teachers were convincing by the purpose of the research and they consent for the research to be undertaken. Then, they clear the objective of the research to the teachers of the school. Finally, participant teachers were willing to engage themselves in the research. Being

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anonymous, all their informationwere kept confidential and used only for academic purpose.

IV. RESULTS

4.1.1 Introduction

This research focused on understanding primary school teachers' perception of active learning methods. This qualitative study used the case study approach to gather information from teachers who have been directly identified as grade five teachers. The sample of participants was purposefully selected based on being identified as mathematics teachers in grade five. The results and discussion of this study were presented based on the research questions and major focuses of teachers' perception about active learning methods. The three teachers who participated in this study answered interview questions using a semi structured interview protocol with open ended questions. In responding to the semi structured interview questions, participants described their experiences, success and challenges on using active learning methods of mathematical concepts.

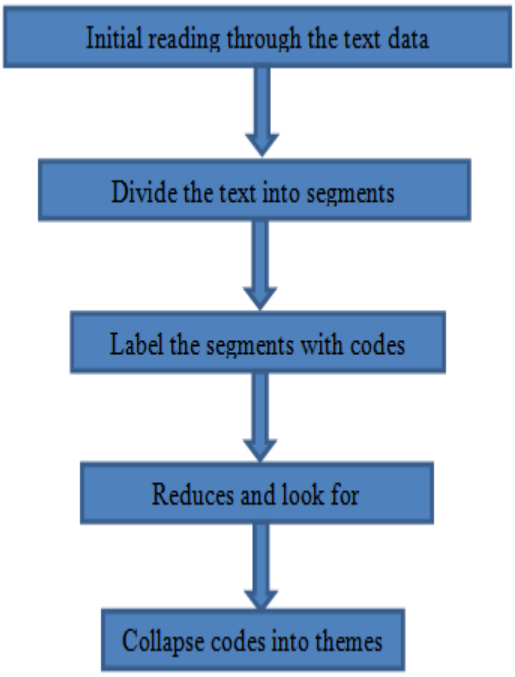
Research Questions

The research questions that guided the focus of this study were:

1. What are primary school teachers' experiences on using active learning methods of mathematical concepts?
2. What do primary school teachers perceive as the successes and challenge of using active learning methods in teaching mathematics?

Three interviews were conducted. Each interview lasted between 15 and 20 min. Participants were given an opportunity to review their interview transcripts for approval. The qualitative data obtained through interview was analysed using thematic approach. The sources were coded for analysing data. In this case numeric coding for participants were used. The study participants were assigned identifiable codes in order to organize, store, and report research findings and are identified as T1, T2, and T3.

4.1.2 The coding process



4.1.3 Interview analysis

All the three teachers mentioned that they had experiences of active learning in teaching mathematics. According to the analysis of qualitative data, seven important themes were revealed. Teachers described their experience on active learning in teaching mathematics

Analysis of the interview data indicated that teachers felt they learned and gained six important themes. Here the researcher provides more detail to support this finding.

1.1 Instructional planning leads active learning:

For effective instruction, planning for the classroom is an important part of educating and behaviour management. Proper classroom planning will keep teachers organized and on track while teaching, thus allowing them to teach more and manage less. A good lesson plan might include an objective or goal, the steps of the lesson, the expected outcome and room to make changes along the way. Once the aims and objectives are in place, it is important to make sure that the planned lesson is understandable by the students. Some examples of teachers' opinions are described as follows:

''What I meant to say is that it is important to set up the classroom is an intricate part of classroom planning. In the beginning of class, I am cheeked that my planning is where I can see as many the students as possible at the same time. I may want to consider grouping the student's desks together for ease in small-group activities. Think

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about having an area of the room that can be used for quiet reading or just a general time out.''(T1andT3)

''My instructions are quite clear and easy to understand, so it is not difficult to follow the steps to do activities. Because I spent more times on what I will do in the classroom and thus it is easier to just help students to engage effectively in teaching and learning process in classroom. I accomplish all the activities during the class hours in order to finish the lesson according to the plan. Everything including explanation, examples, and activities has to be timed in a manner that the lesson is not extended for the next class.''(T2)

1.2 Teachers as facilitator in active learning:

In an active learning classroom, students must think, create and solve problems rather than passively listen to lecture. Active learning techniques and strategies can be used to develop quick activities that punctuate lectures. They can also be used to completely fill the class time. It has strongly drawn the attention of teachers who are concerned with awakening and keeping their students' interest and creativity. In most cases, teachers direct and guide the learning process. This idea is supported by teachers' response as follows:

''Yes of course, because, I can help my students in their learning difficulties through assessing before, during and after the instruction. During group activity time, I am observing my students and giving additional clarity, if they are faced a challenge.'' (T1)

''When I am using active learning approach, I will give directions to the students have to practice or share the information what they comprehend or get from a text and guide book, so I have given a clue to the students in order to improve their ability.'' (T2)

''Yes, in my experience of active learning method, I will consider students backgrounds in terms of gender, disability and academic achievement variation (high, medium and low) differences. And creating equal opportunity for these students will help to improve their understanding on mathematical concepts.''(T3)

1.3 Active learning increases the interaction:

Teacher- student interaction is the mutual process where there is no dominant party leading another, instead, both are taking part in contributing to the issue being handled through active learning. These suggest that communication in the classroom is not one-way, but that the students take the initiative by asking questions and expressing their ideas, which are sometimes accepted by the teacher. The teacher to student encounter is believed to be inherited from the notation of classroom pedagogy. The teachers' views in accordance with relevant codes are given below:

''I think active learning improves my collaborations. I mean, when I am having difficulties in understanding some concepts or in doing my task at home, I can use my colleagues to ask for help. It is different from traditional classroom in that I usually ask only when we are having a class meeting. With active learning, there is more time to communicate with everyone.'' (T2)

''In my experience, i viewed that the availability of discussion forums, presentation with students and project work improved our communication because we could continue exchanging information outside the classroom through active learning methods.'' (T1)

I have positive relationship with my students. For example, i help students develop warm, supportive relationships, experience enjoyment and excitement about active learning and feel comfortable in the classroom.'' (T3)

1.4 Active learning increase motivation:

Motivated students are easier to teach and that they learn more. As teachers, we hope that all of our students come to the classroom excited to learn for the sake of learning and that our teaching will inspire them to great heights of achievement. In reality, our students bring to the classroom with a variety of motivational drives and a wide range of demands on their attention, commitment, and time. Due to this, teachers' opinion described as follows:

''In my experience, it is easy to teach students who are initiated to learning **.**When I encouraging my students to do activities; they are effectively engaged on the lesson **.**I think it improves my motivation to learn because there is a variety so I don't feel bored. The students' participation is increased during active learning methods compared with teacher centred method. The students will be motivated to improve the ability of problem solving and it means active learning strategy makes the students' motivation improved.'' (T1)

''In my class, the students claimed that active learning improved their learning motivation. It helps to students more time to communicate especially with the teacher. Moreover, I can use different reinforcement mechanisms, like appreciation, saying very good and excellent. This helps students to participate in my class.'' (T2)

''In my opinion, active learning method is more related with students motivation; because it

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influence teaching and learning. However, not all students are not motivated to learn and complete. Contributing factors such as increasing student numbers and high teaching loads deny teachers the opportunity of fully motivating their students. '' (T3)

1.5 Large class size:

Physical environment in a classroom can make or break active learning. Class size concerns educators for various reasons because learning can only occur positively when lessons are under appropriate conditions both for the students and teachers. The classroom size has its own impact in facilitating or hindering activities of teaching and learning. Teachers made the following statements

"In teaching mathematics, I have too much homework to mark. It becomes almost impossible to give effective feedback for everyone."(T1)

''It is difficult to achieve rapport and building personal relationships with the students. Don't get an opportunity to get to know my students."(T2)

''Teaching in large classes is very difficult for both students and teachers. It's also hard to manage discussions in crowded classrooms. There are seventy three students in our class and it is very difficult to use active learning methods in the class.''(T3)

1.6 Teachers overload

All teachers were worried about the stress of time. They emphasised that the subject was overloaded, that they were working under time pressure, that the use of active learning increased the required amount of time, and sometimes (especially in theoretical lessons) lecturing was an easier and more efficient means of transmitting information. Respondents' stated that the biggest obstacles were as follows:

''I have spent almost all my weekend preparing activities and correcting too many homework and tests. I also repeat several times the subject i have been teaching because of the noise and the behaviour of the students.''(T1)

''In my opinion, the curriculum is overloaded and teaching contents are too vast and it is time consuming for both teachers and students.'' (T2)

''I have burdened and usually I set assignment for the whole class, and require them to hand in the assignment in time. I would mark half of the students' work this time and mark the other half next time.''(T3)

4.4 Finding

This study aimed to exploring primary school teachers' perception of active learning methods**.** The main findings of the current study were as follows: first, teachers perceived that they had experience on the roles of teachers and instructional planning leads active learning methods. Second, teachers perceived active learning methods bolstering interaction and motivation among teachers and students; and third teachers felt that there was not enough time and classroom environment in the curriculum for active learning methods or a lack of time for teachers' preparation.

4.5 Discussion

To answer the question of primary school teachers' experiences on using active learning methods of mathematical concepts, it was examined, interpreted and seen that teachers had experience on planning and facilitating teaching learning process through active learning methods. The two sub-themes captured the teachers' role and instructional planning leads active learning methods.

The results of this current study are very much in line with that which was conducted in Instruction at FSU Handbook (2011). The studies revealed that integrating active learning techniques into teaching is going to take more time to prepare. However, once active learning is incorporated into the class, they can use and refine the techniques relatively easily. Teachers must enter class prepared to use assigned teaching and reviewed material from past classes, etc. Teachers should be consider what will be done in the classroom and recognize that the students must be active and succeed in their learning.

Similarly, new research shows that teachers who are facilitators, collaborators, leaders, and organizers are having great success in helping students prepare for lifelong learning and making them more capable to work in fields where they must acquire new skills and knowledge regularly (Instruction at FSU Handbook, 2011).

Moreover, the learner is not expected to simply learn by themselves or in groups without the intervention of the teacher. Hattie (2009, p.243) distinguishes between the teacher as activator and the teacher as facilitator. As an activator, teachers are key agents in leading strategies which will include direct instruction and teaching metacognition.

Research on primary school teachers' perception as the successes of using active learning methods in teaching mathematics has shown that bolstering interaction and motivation among teachers and students. The current findings were also evidenced by Janice Fournier et al, (2014).

Teachers and students report greater engagement, participation, and interaction with peers and with teachers. All teachers interviewed reported high levels of student interaction and engagement in their active learning classes, higher than they had observed when teaching in a traditional classroom. Teachers also reported higher levels of student participation, noting that even shy students spoke up in group discussions. They also found that student discussions went deeper. As a result, teachers had a better sense of where their students were—what they understood, what interested them, what they were able to do. Nearly all teachers reported that students were more willing to work together and were open to critiquing or discussing each other's work activities that require a level of trust among group members.

Similarly, active learning methods increased interactions between students and schools; entire class periods are dedicated to conversations between the students as they complete the in-class activities. Using this strategy shifts the focus from the front of the room. It moves the school member from the stage to interacting one on one with the students (Bergmann et al, 2011).

Moreover, the findings of present study were similar with the findings of Johanna Pirker, et al (2014). The study results show, that students enjoyed their learning and achievement. They prefer getting points over grades and were motivated to finish further assignments to receive additional points. The students' motivation is strongly related to subjective experiences, specifically those related to the will and rationale for getting involved in academic activities and the social relationships that are established in the classroom context.Students who take an active role in using a variety of learning strategies and who are capable of "managing" their own learning are prone to be more motivated and perform better. They are stimulated to take responsibility when they study in active learning environments. (Brophy, J. 2004 and Van Den Hurk 2006).

According to the current findings of learning environment including large class size, teachers overload and students background differences are the challenges that teachers perceived. These findings are also supported by the research that has been done by N. Sasikumar(2014) and Beichner et al., (2007) found that large class size may restrict the use of certain active learning strategies (e.g., it is difficult to involve all students in discussion in groups larger than 40) but certainly not all. For example, large classes can be divided into small groups for discussion activities, writing assignments can be read and critiqued by students instead of the instructor, etc.

In terms of teachers over load, the use of active learning strategies reduces the amount of available lecture time that can be devoted to content coverage. Schools who regularly use active learning strategies typically find other ways to ensure that students learn assigned course content (e.g., using reading and writing assignments, through their classroom examinations, etc.) N. Sasikumar (2014). Other specific obstacles associated with active learning included the following: limited class time, the density of the curriculum, the potential difficulty of using active learning in large classes, the lack of materials, equipment or resources, and the conservative attitudes of fellow students who did not like taking part in active learning methods.

The present study also showed that in classroom diverse student learners are identified and the characteristics of learners are considered in the planning and instructional process. This finding consistence with the findings of Bender, (2008) found that active learning is a practical option that can accommodate diverse student needs in the inclusive classroom, meeting student and curricula challenges. Although general education teachers typically support the concept of inclusive education, they often find themselves unsupported and ill-equipped to provide effective instruction and support for diverse students in the inclusive classroom.

4.6 Conclusion

The purpose of this study was to understanding primary school teachers' perception of active learning methods.In conclusion; implementing active learning strategies in schools can help increase students and teachers' interaction, and motivation. The findings come up with several themes focused on their instructional planning leads active learning, teachers as facilitators, large class, teachers load and students background differences as a challenge that implement active learning in primary school.

4.7 Recommendations

Generally, this study was limited by only using data from one 6th grade class, the results showed that class size, teachers load and students background were the major factors, which were considered as to hinder the implementation of active learning approach in teaching mathematics in primary schools. It is important to give attention to the quality of instructions. Quality of instruction

should be the focus. The standard of accommodating limited number of students in one classroom may be used as a solution to reduce the problems of the implementation of active learning approach. School management should consider teachers load and teachers should also apply inclusive classroom.

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