INTERNATIONAL JOURNAL OF LATEST TECHNOLOGY IN ENGINEERING, MANAGEMENT & APPLIED SCIENCE (IJLTEMAS)

ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIII, Issue V, May 2024

A Gawp into Exploring Participatory Action Research in conjunction with Reciprocal Teaching to Enhance Students' Ability to Solve word Linear Programming Problems in Zambia: A Hermeneutic Approach

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DOI : https://doi.org/10.51583/IJLTEMAS.2024.130514

Received: 29 February 2024; Accepted: 19 March 2024; Published: 12 June 2024

Abstract: The study used a hermeneutic design and had a qualitative nature. The data was then subjected to a thematic analysis. The goal was to improve and elevate Zambian students' aptitude for solving linear programming problems. If all activities involved are monitored, students' ability to solve linear programming problems can be improved through the exploration of participatory action research and reciprocal teaching. The use of the approach can have an impact on how well students succeed when working together to solve linear programming word problems.

In class, teachers observed their pupils at work, but during their combined sessions, they discuss the issues they were having as well as any misunderstandings that periodically surfaced. The findings showed that when students collaborate, their performance on linear programming assignments can increase dramatically. The benefits of **cooperation** are illustrated by the teacher reflections' participatory action research. According to the study, participatory action research is a useful teaching approach in educational contexts.

The study found that using reciprocal teaching in secondary schools can increase students' proficiency with solving linear programming problems, which will improve student performance and lessen the workload for both teachers and students.

Keywords: Reciprocal teaching, linear programming, participatory action research.

I. Introduction

At all educational levels, one of the most crucial talents that needs extra care is problem solving. It contributes to helping students enhance their critical thinking abilities and skills (Kosovo, 2016). Additionally, it facilitates methodical, autonomous labour that fosters curiosity and the creation of new information. In order to utilize the "explain-practice-apply" skills, one must first master abstract concepts before moving on to problem solving (Van de Walle et al., 2016). In this manner, the focus of the lesson is on concepts that lead to issue comprehension, the development of linear programming procedures and beliefs, and the production of precise problem solutions. But most students find solving problems to be a challenging and intricate process, particularly when they get to word problems. Because word problems get more semantically complicated as students go to higher educational levels, it is crucial to begin honing problem-solving skills early in school (Boonen et al., 2016).

According to the findings, Munkuye secondary school students struggle with mathematics in general and linear programming solving in particular. These studies recommend focusing more on instructional strategies so that all students can advance their linear programming abilities. Given that many other nations experience similar difficulties with linear programming learning, the researchers of this study tried to look into both the methods of implementing excellent teaching strategies with students and the practices.

Teachers should work together formally to find out whether teachers devotion to improving their teaching strategies has an impact on students' performance on math word problem solving.

Significance

The study may draw attention to the difficulties faced by secondary school teachers when attempting to teach linear programming and to provide specific recommendations to address these difficulties at the operational and policy levels.

II. Review of the Ralated Literiture

3.1 Participatory Action Research

Participatory action research has multiple ways to improve linear programming performance. Active stakeholder participation in the study process is a requirement of participatory action research. This includes problem identification, data collecting, analysis, and decision-making. Including pertinent parties in the formulation and resolution of optimization problems, such as management, staff, and consumers, in the framework of linear programming encourages a sense of ownership and dedication to

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the solutions produced. This may result in higher performance outcomes and more efficient implementation (Reason & Bradbury, 2008).

Contextual Understanding:

Understanding the unique needs of the stakeholders and the local setting are key components of Participatory Action Research. Participatory Action Research assists researchers in gaining insights into real-world restrictions, preferences, and aims that may not be adequately captured by standard research methods alone by integrating stakeholders directly in the study process. This in-depth contextual knowledge in linear programming can help formulate optimization issues and model them more accurately, which will improve performance in the end (Checkland, 2001).

Iterative Problem-Solving:

Identification, action, reflection, and modification of problems are usually done in an iterative manner in participatory action research. Continuous learning and development based on stakeholder feedback are made possible by this iterative methodology. This iterative approach to problem-solving in the context of linear programming can help improve the formulation of optimization models, recognize and address implementation issues, and modify solutions in response to evolving conditions, all of which can contribute to long-term performance improvement (Brydon-Miller, Greenwood, & Maguire, 2003).

Empowerment and Capacity Building:

By including stakeholders in the study process and increasing their ability to comprehend and solve difficult issues, Participatory Action study seeks to empower its participants. Engaging stakeholders in the formulation and resolution of optimization problems within the framework of linear programming can enhance their ability to employ quantitative tools and methodologies, resulting in enhanced decision-making and performance enhancement (Leeuwis, & Aarts, 2011).

3.2 Reciprocal teaching

According to Hartman (1994), the essential elements of reciprocal teaching are collaborative learning and supports instruction, which aid in the growth of learners' conceptual and cognitive abilities. Reciprocal education can provide a setting that is rich in interaction and diversity (Meyer, 2014). Particularly beneficial in helping pupils adjust, and sufficiently flexible to accommodate a variety of learning levels (Pilten, 2016).

Reciprocal education aims to teach students particular strategies for improving their comprehension. Teacher-student discussions are the main means of facilitating this learning (Meyer, 2014). Under some circumstances, the reciprocal teaching strategy to help pupils develop the ability to self-regulate and learn (Lenchuk, 2021).

3.3 Collaborate Learning

In this cooperative learning approach, a small group of students co-construct the meaning of a written text by using the four reading strategies of questioning, clarifying, summarizing, and predicting (Tarchi & Pinto, 2016). Students collaborate to create a list of terms they are unfamiliar with, facts they already know, and information they need to ascertain using explanation and questioning techniques (Meyer, 2014). One of the additional techniques incorporated process is the students' use of pictures, diagrams, numbers, or words to express the word problem. The last strategy involves organizing the issue-solving techniques (Marshall, 2022). In the final phase, students participate in self-reflection, which involves justifying their answer, considering how they might improve their strategy if confronted with a comparable issue, and evaluating their contribution to the group.

However, extra consideration must be paid to educational approaches when it comes to problem-solving skills. It is imperative for educators to consistently evaluate and identify effective teaching strategies that enhance students' learning results (Fred Janssen, 2020).

It was made clear by Robutti et al. (2016) that teachers periodically work in cooperative settings incorporating research projects, taking part in cooperative activities for common aims and lending support by solving challenging difficulties. According to Moreno and Rutledge (2019), participation research is a potent pedagogical viewpoint that gives participants an argentic way to influence circumstances that change the way they teach.

3.4 Word problems

These exercises help students practice their mathematical skills in real-world scenarios (Pongsakdi et al., 2020). The relationship between linear programming concepts, everyday language, and mathematical procedures is facilitated by word problems. It is helpful not only for enhancing mathematical knowledge but also for developing more sophisticated reading comprehension abilities.

Numerous studies, however, have demonstrated that students and frequently teachers alike find it challenging to solve problems, especially those involving linear programming (Pongsakdi et al., 2020). Students find word problem solving to be a difficult cognitive exercise, especially when the problems appear as narratives or real-world situations. In these situations, there are multiple steps and tactics. It necessitates knowledge, the identification of pertinent data approaches for problem-solving (Vula et al., 2017).

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Instead of routine tasks, Zhu (2015) argues that tackling linear programming problems calls on students to use a range of abilities and critical thinking. Poor performance is caused by a practical incapacity to analyse the computation, a lack of competency with a range of problem-solving strategies, and a lack of comprehension of the concepts necessary (Nurhayanti et al., 2020).

Numerous studies have pinpointed several of the causes of these problems. The majority of them are connected to the word issues and understanding the problems' substance is typically what makes them so challenging (Vula et al., 2017). Pearce et al. (2013) shows that there is a correlation between students' comprehension and interpretation skills and teachers' perceptions of the challenges students face when completing word problems.

An impediment to problem solutions is frequently a partial comprehension of the requirements and problem information. According to other studies, word problem solving becomes more difficult when inconsistent language is used, which increases linguistic complexity (Boonen et al., 2016). The inability to grasp the reciprocal linkages in cognitive processes between reading and utilizing mathematics is what leads to gaps in this type of word problem (Vula et al., 2017). Moreover, students usually take a procedural approach to the problem. They perform computations without mentally representing the problem and transform words into mathematical expressions directly (Pape & Smith, 2002).

While students may be aware of the techniques for solving numerical problems, they may integrate different cognitive functions or even have restricted memory. Nevertheless, students who battle with challenging word problems throughout linear programming are able to handle numerical issues that are analogous, such as precise mathematical linear programming operations and precise linear programming computations (Jitendra et al., 2016).

Problems frequently arise due to the word problem solving process involving several different cognitive processes. Consequently, it is insufficient to focus solely on comprehending word problem in linear programming. It is also necessary for students to strengthen their skills for a deeper text comprehension of the word problems because variables must be considered while answering word problems involving linear programming before doing the appropriate computations (Boonen et al., 2016).

Research on word problem tactics and techniques that can assist students in overcoming their challenges with them has been conducted in recent years (Özsoy et al., 2015). Managing knowledge about the semantic connections to values might occasionally be problematic for most students. As a result, studies have concentrated on investigating reading comprehension-based classroom interventions (Kurshumlia & Vula, 2019).

Various scholars have utilized intervention programs that focus on strategic mental representation (Vula et al., 2017). Wright (2021) also emphasizes the continuous need for non-traditional teaching strategies that foster dialogue, original thought, and participatory learning. An effective method enhances comprehension of what is read.

III. Methodology

This was a completely qualitative, non-numerical investigation. In order to acquire non-numerical data for this study, interviews were preferred (Breda et al. 2022). The purpose of qualitative research approaches, according to Bhandari (2023), is to shed light on people's viewpoints, experiences, and behaviors. Shava and Nkengbeza (2020) define aqualitative research as a phenomenological study that uses a naturalistic approach to understand events under specific circumstances. Leavy (2017) Numerous philosophical schools inform qualitative research, which looks at a variety of facets of human existence, such as culture, expression, beliefs, morality, stress in life, and imagination (Wertz, 2011). Data sources are used by qualitative researchers to subject matter they are researching (Creswell & Creswell, 2017).

There were fourteen people in the sample. The research topic, data saturation, and study design can all have an impact on the sample size of participants in qualitative research (Miles, 2019). Compared to quantitative research, qualitative studies often use a smaller sample number of subjects—14 teachers on average—in their investigations. Thematic analysis is the study of patterns of meaning. Conversation analysis focuses primarily on interviews.

IV. Findings and Discussion

Consider the research questions or objectives when analyzing the research outcomes. Assess the results' applicability, validity, and generalizability (Denzin, & Lincoln, 2018). The study set out challenges Zambian secondary school teachers faced when attempting to help pupils become more adept at solving linear programming issues by means of reciprocal teaching.

Reciprocal teaching is the instruction that emphasizes shared accountability for learning and interactive conversation to improve students' comprehension skills. A study found that peer-to-peer tutoring enhances student performance, especially in reading comprehension.

According to T1observation

"Pupils' reading abilities are greatly improved by reciprocal instruction across age ranges and educational contexts. When students experience reciprocal instruction, they perform better" (T1, 05.02.2024).

This finding supports Kurshumlia's (2021) argument that the greatest method for raising student's proficiency in answering mathematical word problems is reciprocal teaching. According to studies, pupils' reading abilities are greatly improved by reciprocal instruction across age ranges and educational contexts. When students experience reciprocal instruction, they perform

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as follows. Reciprocal education aids better comprehension skills by including students in lively discussion and assisting them along the way (Jarvis & Clark, 2020).

T2 noted that,

"When students experience reciprocal instruction, they perform better because Reciprocal education aids comprehension skills by including students in lively" (T2, 06.02.2024).

This claim is consistent with the findings of Hall (2020)., who discovered that reciprocal teaching aids students in keeping track of material, providing clarification when necessary through questions, and summarizing key concepts. Additionally, it enhances students' metacognitive skills. Both effective reading comprehension and general academic competence require critical thinking (Hall, 2020).

It Increases Involvement and Participation: Reciprocal teaching, according to Duffy and Roehler (1989), motivates students to actively participate in discussions and support one another's learning. This greater engagement encourages content as well as greater motivation to study and learn. Students will do better on subsequent academic challenges when they are adept in understanding (Gordon, 2017).

Moreover, T4 noted that,

"Reciprocal teaching motivates students to actively participate in discussions and support one another's learning. This greater engagement encourages content as well as greater motivation to study and learn. In academic domains, students who receive reciprocal teaching training have enhanced critical thinking and understanding abilities" (T4, 06.02.2024).

This argument supports the findings of Gallagher et al. (2017), who said that students who participate in reciprocal teacher training in academic areas had improved critical thinking and comprehension skills. The initiative pushed teachers to re-evaluate their pedagogical strategies and implement fresh approaches based on their exhaustive, collaborative, and rigorous research (Wright, 2021). The changes were made in response to the way students learn, which involves documenting and discussing issues and gaps in knowledge as they are working (McTaggart, 1997). Two themes emerged which highlighted the teachers' disapproval of the Participatory action research methodological approach and the advantages provided for their students.

When utilizing the reciprocal teaching approach to cooperative learning, students benefit from taking turns acting out the roles of teachers and students. This method is useful in many fields, such as linear programming and mathematics.

Moreover, T10 noted that,

"Students that use reciprocal teaching strategies to tackle linear programming issues gain active Involvement. Students participate actively in debates and problem-solving exercises. As they go through linear programming assignments, students gain comprehension of topics and techniques, which increases their interest in the subject" (T10, 02.2024).

This assertion is consistent with the findings of Jao et al. (2020), who highlight that students who approach linear programming using reciprocal teaching methodologies become actively involved in discussions and problem-solving activities. Students' interest in linear programming grows as they complete tasks that help them understand concepts and methods without difficulties. By teaching one another and discussing approaches to problem-solving, students can gain from each other's perspectives and insights. In this cooperative learning setting, students are encouraged to support one another's learning, which fosters a feeling of community (Johnson et al., 2014).

Equivalent teaching promotes critical thinking and problem-solving skills. Students who assume the position of teachers are required to assess their peers' comprehension, offer explanations, and do situational analysis. This method improves their ability to think critically and apply mathematical concepts to real-world problems.

T9 thoughts were that,

"Cooperative learning promotes critical thinking and problem-solving skills. Students who assume the position of teachers are required to assess their peers' comprehension, offer explanations, and do situational analysis. This method improves their ability to think critically and apply mathematical concepts to real-world problems" (T9, 07.02.2024).

This claim is consistent with that made by Stoszkowski & Collins (2017), who argued shared structure fosters practice, reflection, and informal teacher learning. To engage in reciprocal teaching, students need to communicate in a clear and concise manner. Through reasoning and mathematical concepts, students enhance their communication skills, which are essential for success in the classroom (Hiebert & Carpenter, 1992).

Enhanced Self-Belief: Students who adopt a teaching role tend to feel more confident in their mathematics abilities. When students articulate ideas clearly and help peers to solve difficult challenges, they gain confidence, skills and expertise. Metacognitive Awareness: Through reciprocal teaching, students are prompted to keep an eye on their understanding and consider how they are learning. Peer interactions provide students with valuable insights into their strengths and weaknesses, enabling them to develop effective learning plans and hone their problem-solving abilities (Andriyani, Karim, & Fahmi, 2020).

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However, T8 said,

"Reciprocal Teaching Method could help pupils get better at solving linear programming problems; it could also affects how well students work together, improve skills and become competent problem solvers. The method would enable them to actively engage in the issue-solving process" (T8, 09.02.2024).

This claim is consistent with that made by Tarchi and Pinto (2016), who claimed that reciprocal teaching facilitates the analysis of interaction dynamics in the co-construction of textual interpretation. Furthermore, these strategies, according to Van Garderen (2004), assisted pupils in making predictions, explaining foreign vocabulary and idioms, and identifying unknowns and possible solutions. They assisted pupils in posing questions in order to comprehend the subject matter of the problem more thoroughly. Students' ability to organize and plan deeper problem-solving activities and to summarize the question's responses is impacted by the reciprocal teaching method.

The teachers feel that working together in small groups is a crucial component of the process. Students appear to be more focused on reading and making the correct word problem-solving decisions while they are playing their roles.

However, T1said,

"By using this approach, students would expand their comprehension of linear programming" (T1, 12.02.2024).

This finding supports the claim made by Salihu and Räsänen (2018) that individuals with mathematics learning challenges can nevertheless acquire mathematical skills. Working in groups, where each person was assigned a specific duty, added responsibility was occasionally viewed as an engaging learning environment. A simpler problem to solve is one that involves many minds. Students served as one another's facilitators. They supported one another. The students were able to comprehend the issues, and when they collaborated to find solutions, they were more logical.

T5 stated,

"Reciprocal teaching method's tactics allow students to assume several roles as they are highly appropriate for the level of students. The method serves as a clarifier, predictor, and summarizer to desirable function for every student and improve their accuracy when answering word problems" (T5, 09.02.2024).

This account concurs with Vula et al. (2017), who noted that students in smaller classes typically assume more, provide clarification, or provide ideas for problem-solving. Students reviewed the problem more carefully and paid more attention to the accuracy of the computations because they felt more at ease in the group discussions. Their involvement at every stage of the process—from clarification, which is frequently accompanied by visualization — to the justification of the answer has made them value their involvement in group, projects (Meyer, 2014). In contrast, teachers were worried that a smaller class size would make more assumptions, clarify, or offer suggestions when it came to handling more difficult issues, especially ones involving erratic language.

Teachers gain from collaboration when topics pertinent to achieving improved outcomes are addressed. Participating in Participatory action research programs can benefit teachers which is career advancement. Through Participatory action research, teachers can practice reflectively, and get educational ideas and approaches.

By actively participating teachers can acquire the courage, share their expertise, and issues that affect their instruction and the educational experiences of their students. By participating teachers can analyze and address specific issues or obstacles in their instruction. Collaborating to collaboratively develop treatments and assess their impact can improve student outcomes and teacher effectiveness.

T6 stated,

"Participatory action research encourages better collaboration and networking among educators, Apart from fostering beneficial professional connections, this cooperation could lead to the sharing of resources, ideas, and optimal methodologies. Teachers can help create curricula and teaching materials that are current, relevant, and culturally acceptable by using Participatory action research" (T6, 12.02.2024).

Regarding the Participatory action research project, all of the existing teachers observed a noticeable rise in student participation and group projects. Wright (2021) suggests that the project could improve current teaching methods and, consequently, lead to their transformation into more successful pedagogical teaching practices tailored for math word problem solving.

Additionally, T6 said that,

"Because the same goal in mind—closing the learning gaps in their students' classes—teachers may connect more freely about concepts and problems in order to find solutions" (T6, 11.02.2024).

Consequently, rather than only being interested in the study project, the teachers "participated" in every phase of it, as emphasized by McTaggart (1997). All of the teachers were new to working as a professional team, with the exception of one teacher who had experience working on solo action research projects. It was their first time working on a project like that.

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While the process has received positive evaluations, there have been times when it has been challenging to implement. Teachers are often prevented from participating more in these kinds of activities by their heavy administrative workloads. There are times when managing the students in the classroom also offers difficulties.

Additionally, T12 said that,

"The beauty of reciprocal teaching method to students in linear programming could be to provide solutions to, difficult arrange given words problems. One of the difficult obstacles to overcome is involving students who have learning difficulties in this process" (T12, 12.02.2024).

Researchers themselves occasionally provided guidance based on study sources. Most teachers' reflections focused on how poor their students' word problem-solving skills were. Consequently, the discussion was identifying the difficulties that their students encountered while trying to answer these kinds of problems (Boonen et al., 2016).

Consequently, teachers, as shown in numerous other research studies (Boonen et al., 2016; Pearce et al., 2013; Vula et al., 2017), mostly commented on their difficulties understanding the terminology used in the problems. The same difficulties were seen in both of the study's word problem assessments. Topics such as how to mentor students, what part each student should play, and how to approach problem-solving were thoroughly discussed during the combined conversations. The in-depth conversations on common problems, the sharing of thoughts and conclusions, and the solutions for raising students' ability levels all improved the teachers' own teaching strategies.

Furthermore, T11 said that,

"This was an innovative approach to engage in problem resolution usually worked together on initiatives. The better education was required to handle linear programming difficulties" (T11, 12.02.2024).

This finding is consistent with Moreno & Rutledge's (2019) claim that students engaged in dynamic math lessons experience a transformation of their sense of self instructional design. Collaborating on critical reflections might facilitate mutual assistance among individuals in overcoming obstacles related to problem-solving approaches that present challenges in their professional lives (Robutti et al., 2016). In their reflections, teachers highlighted its unique features in comparison to other conventional professional development initiatives. Initially, taking part in initiative promote increased collaboration.

Furthermore, T3 said that,

"Students work together, receive advice, and improve ideas with the students who felt motivated to find solutions to the difficulties. This collaboration is extremely crucial for us as teachers" (T3, 10.02.2024).

Teachers claimed that they gained knowledge from the reflective process. Written or spoken reflections forced them to examine their methods of instruction closely (Richter, 2016). Making changes to these classroom routines results in more empowered teaching that benefits teachers as well as students (Wright, 2021). Collective work achieved a number of objectives, including strengthening the bonds between educators, students, and researchers; enhancing the learning and problem-solving abilities of students; motivating educators to look for fresh materials that could aid in their professional development; fostering reflective practices; and enacting modifications in their day-to-day tasks.

Additionally, T13 said that,

"Collective work strengthened the bonds between teachers, and students by enhancing the learning and problem-solving abilities of students. It also motivated teachers to look for fresh materials that could aid in their proficient development, fostering reflective practices; and enacting modifications in their given tasks" (T13, 08.02.2024).

Robutti et al. (2016) state that there is increased interest in the partnerships and activities teachers engage in an efforts to comprehend the actions teachers take to enhance their instruction. Investigation was to determine whether reciprocal teaching method affects students' ability to successfully complete math word problems. This was included in undertaking.

Furthermore, according to Richter (2016), a kind of professional development for educators that involves cooperative partnerships with an action emphasis and research designs were discussions grounded in critical reflections and exploratory reasoning. According to the study, contacts with students and their ability to solve **linear programming** word problems can enhance performance. Additionally, the data shows that the teachers thought that in order to enhance performance, pupils needed to be held more accountable and involved. As may be observed, a group's members were inspired to help one another by employing reciprocal teaching method strategies and a clear objective (Jao et al, 2022).

According to T7

"The teachers' belief was that greater accountability and involvement from the students were necessary to improve the results. This was observed, by a group's members who were inspired to help one another by employing reciprocal teaching method strategies and a clear objective" (T7, 12.02.2024).

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However, tests done as part of an intervention show that students have a lot of trouble solving answers requiring a lot of arithmetic and when faced with more challenging word problems. According to Vula et al. (2017), students' word problem solving skills improve the metacognitive approach, increase performance (Boonen et al., 2016).

The majority of teachers are prepared to put into practice the suggestions for modifications that come from outside research that they might not be too familiar with (Wright, 2021). The study's teachers expressed a stronger willingness to change the way they teach. It is clear from their comments that Participatory action research gives teachers the opportunity to conduct independent research on topics relevant to particular students. More specifically, teachers can fill in the deficiencies in students.

Additionally, T14 said that,

"It is clear from their comments that Participatory action research gives teachers the opportunity to conduct independent research on topics relevant to particular students. Definitely, Participatory action research makes it possible for teachers to work together" (T4, 12.02.2024).

Moreno and Rutledge's (2019) study found that critically reflecting experiences greatly facilitated their ability to apply the examples and resources offered and enhance their comprehension of instructional strategies. It was incredibly helpful how they used exploratory reasoning to things they had tried in class. Research by Stoszkowski, & Collins, 2017) supports this conclusion by demonstrating that teachers were able to better understand RTM-based practices while discussing and creating new sessions utilizing this reasoning.

V. Conclusion

Understanding the text is key abilities in word problem solutions. Thus, selecting reading comprehension techniques carefully is essential. The study results support this emphasis and have implications for both teachers' authority to adapt their pedagogical approaches and students' performance and capacity for problem-solving.

The outcomes showed how the students' performance improved after taking part in every round. Additionally, they learned how to use self-directed questions, which are essential resources for resolving word problems (Meyer, 2014). However, the main benefits of implementing in a classroom were that it helped teachers develop into more capable teachers. Through processes of action and reflection, teachers acquired their professional knowledge (McTaggart, 1997). Teachers responsible for researching the challenges their students face and coming up with solutions through group discussions. Acknowledging their cooperative efforts in the study modifies their instruction to new pedagogical strategies in light of the deficiencies in students' word problem-solving abilities (Wright, 2021). This effort showed how effectively teachers collaborated to exchange experiences and make inferences about moves that could lead to changes in the methods employed.

Recommendations

Beyond improving reading comprehension, the study helps students gain a variety of skills, including teamwork capabilities.

i. Teachers to use the reciprocal teaching, more to help students fully comprehend the topic.

ii. Prioritizing the development of teacher-student relationships is important when implementing a collaborative intervention. This would enable more in-depth research on particular subjects, like linear programming.

iii. Schools should apply Participatory action research initiative to improve teacher empowerment and the connections between education experts and educators.

iv. Participatory action research ought to be implemented in schools as a kind of professional growth. Additionally, academic disciplines from other curricula may work together in schools.

v. It is imperative that instructional procedures integrate teachers' reflections to assess potential benefits of implementing strategies.

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ISSN 2278-2540 | DOI: 10.51583/IJLTEMAS | Volume XIII, Issue V, May 2024

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