



PEER ASSISTED LEARNING STRATEGY BASED ON THE LEARNING STYLES TO THE TECHNICAL SKILLS IN MENSURATION AND CALCULATION OF GRADE 7 STUDENTS

Girley Jane Altez Dequito

Laguna State Polytechnic University Sta. Cruz Laguna 4009 Philippines

ABSTRACT

This research intends to measure the Grade 7 students' technical skills in measurement and calculation using a peer-assisted learning strategy based on the learning styles. Specifically, it sought to determine the level of the student's learning styles and use peer-assisted learning strategies in teaching measurement and calculation. The student's technical skills will also be identified before and after using peer-assisted learning strategies and groups according to the learning styles. Also, the significant difference in the students' technical skills using peer-assisted learning strategies on their learning styles and the considerable effect of peer-assisted learning strategies on the students' technical skills as a group according to their learning styles were evaluated.

The researcher employed a quantitative research design, particularly the correlational method. The respondents were 90 Grade 7 students who were purposively chosen. The research locale was Binahaan Integrated School at Pagbilao, Quezon. The researcher used a standardized questionnaire adapted from B.J.U. Press by De Haven (2021) to determine the student's learning style profiles and developed a self-made questionnaire, a pre-test, and a post-test questionnaire as the primary research instruments used to gather data. The mean and standard deviation, paired T-test, and regression statistical tools were used.

The findings revealed students' great extent of learning styles in terms of auditory, interpersonal, verbal, and visual. The use of peer-assisted learning strategies in teaching mensuration and calculation based on the student's learning styles in terms of the jigsaw method, peer demonstration, peer-led-discussion, peer tutoring, and think-pair-share were to a very great extent, too. The student's technical skills were very satisfactory before and after using peer-assisted learning strategies according to their learning styles in comprehension, critical thinking, problem-solving, and spatial visualization. It was found that there was a significant difference in the student's technical skills using peer-assisted learning strategies as a group according to their learning styles, and lastly, it was found that peer-assisted learning strategies. The jigsaw method significantly affected the students' critical thinking strategies but had no significant effect on the student skills group according to their learning styles.

Based on the findings, it was concluded that there was a significant difference in student technical skills using peer-assisted learning strategies as a group according to their learning styles; therefore, the first null hypothesis was rejected. Furthermore, peer-assisted learning strategies in terms of the jigsaw method only showed a significant effect on the student's technical skills in terms of critical thinking, while other indicators did not affect students' technical skills as a group according to their learning styles; therefore, the second null hypothesis was accepted.

The researcher recommends the utilization of peer-assisted learning strategies as an alternative strategy to teach measurement and calculation. Teachers must teach the subject as it motivates and increases students' technical skills.

KEYWORDS: students' technical skills; peer-assisted learning; learning styles

1. INTRODUCTION

One of the most crucial aspects of life is education. It provides someone with the know-how and abilities needed to contribute to society usefully. The K-12 program's overarching objective demonstrated how important it is to teach TLE to achieve the curriculum's overall objective.

Students who use the peer-assisted learning strategy (PALS) assist one another in their academic endeavors. P.A.L. includes many student activities, such as group projects and discussions. It aims to enhance participating students' cooperative skills and academic skills. This novel approach to education is an euphemism for bilateral, reciprocal learning exchanges in which students learn under the support and guidance of their peers. These exchanges benefit all students by encouraging their active participation in the learning process.

Furthermore, there are numerous ways to define learning styles. These are typically broad trends that give instruction and learning a direction. Another way to think of learning style is as a collection of elements, attitudes, and behaviors that help a person know in a particular setting. It affects how pupils engage, learn, and work together. The students' diverse learning styles are essential to address to give the best learning experience for the students. Every learner has a unique preferred way of perceiving, organizing, and remembering information. The cognitive, affective, and physiological behaviors that characterize these learning styles show how students perceive, engage with, and react to the learning environment. They also show how students learn in different ways from one another.

Technical skills are the specific knowledge and proficiency needed to carry out particular tasks and use specific tools and



programs in practical settings. Mensuration and computation can be used in real-world scenarios in many workplace areas, so students must adjust their foundational knowledge and ideas. These issues are addressed in RA 10533, the "Enhanced Basic Education Act of 2013," which aims to improve the Philippine Basic Education System by offering various practical approaches and fortifying the curriculum, particularly in T.L.E. (Asuncion 2021). Other competencies will only improve if students acquire these abilities since incorrect measurements or calculations will result in subpar work. Since teaching students to apply fundamental mathematical operations is another mountain to climb, it becomes a challenge for all TLE teachers.

The researcher determines the students' profiles based on their learning styles and attempts to study their learning styles, the level of peer-assisted learning strategies in teaching measurement, and calculations based on the student's learning styles.

Primarily, this study also seeks out the level of the student's technical skills in measurement and calculation. Grade 7 students before and after using peer-assisted strategies and groups according to their learning styles that allow them to practice their social skills with peers.

1.1 Statement of the Problem

Specifically, it sought to answer the following questions:

1. What is the level of students learning styles in terms of:
 - 1.1 Auditory;
 - 1.2 Interpersonal;
 - 1.3 Verbal; and
 - 1.4 Visual?
2. What is the level of using Peer Assisted Learning Strategies in teaching mensuration and calculation based on the students' learning styles in terms of:
 - 2.1 Jigsaw Method
 - 2.2 Peer demonstration
 - 2.3 Peer-led- discussion
 - 2.4 Peer tutoring, and
 - 2.5 Think Pair- Share?
3. What are the students' technical skills before and after using peer-assisted learning strategies and groups according to their learning style in terms of:

- 3.1 Comprehension
- 3.2 Critical thinking;
- 3.3 Problem Solving, and
- 3.4 Spatial visualization?

4. Is there a significant difference in student technical skills using peer-assisted learning strategies as a group according to their learning styles?

5. Do peer-assisted learning strategies significantly affect the student's technical skills according to their learning styles?

2. METHODOLOGY

This study used a quantitative research design, particularly the correlational method in nature that aims to determine the profile of the students based on their learning styles, determine the level of students' learning styles, determine the level of using peer-assisted learning strategies in teaching mensuration and calculation based on the learning styles, and the level of student technical skills before and after using peer-assisted learning strategies and group according to their learning styles of Grade 7 Students'. This research method was correlational since it involved collecting data and interpreting it to determine the relationship among the variables and the study's desired results.

3. RESULTS AND DISCUSSION

This chapter enumerates the different results and discusses the results yielded from the treatment of the data gathered in this study.

Level of Students' Learning Styles

Awareness of students' learning styles and preferences will eventually lead to more effective learning experiences. In this study, the level of students' learning styles was described in terms of auditory, interpersonal, verbal, and visual, and this was determined by weighted mean and standard deviation.

Level of Students' Auditory Learning Style

The data in Table 1 illustrates below the level of students' auditory learning style

Auditory learners tend to believe they retain information heard in the class better (M=3.07, SD=0.70). Furthermore, they tend to listen to oral instruction from their peers effectively for learning rather than themselves (M=2.87, SD=0.75).

Table 1 Level of Students' Auditory Learning Style

STATEMENTS	MEAN	SD	REMARKS
I remember things I heard in class better than I remembered what I had read.	3.07	0.70	Agree
I learn better in class when my peers teach us orally.	2.88	0.63	Agree
I can remember the lesson much better by listening to my peers, who provide information, explanations, and discussions.	2.91	0.74	Agree
I understand how to do something if someone tells me, rather than having to read the same things to myself.	2.87	0.75	Agree
When I hear about new ideas or lessons. I immediately start working out how to apply it in practice.	2.90	0.67	Agree
Weighted Mean		2.92	
SD		0.43	
Verbal Interpretation		Great Extent	



The level of students' learning styles in terms of auditory attained a weighted mean score of 2.92 and a standard deviation of 0.43, which was a great extent, as viewed by the respondents. This means that auditory learners possess strong listening skills, allowing them to comprehend spoken information effectively.

Thus, they enjoy discussion group activities that are more interactive or when they can listen and participate actively. They are more engaged in the lecture method of teaching and learning.

Table 2 Level of Students' Interpersonal Learning Style

STATEMENTS	MEAN	SD	REMARKS
I learn best when I work with groups and pairs.	3.24	0.48	Agree
I am usually open to getting to know people's ideas and establishing relationships with them.	2.91	0.74	Agree
I learn by helping and teaching others through a collaboration approach.	3.04	0.69	Agree
I enjoy building good and healthy relationships with my classmates and team members.	2.93	0.75	Agree
I learn easily when I am with my peers and classmates.	2.96	0.75	Agree
Weighted Mean		3.02	
SD		0.41	
Verbal Interpretation		Great Extent	

Table 2 illustrates the level of students' interpersonal learning style. Interpersonal learners tend to believe they learn easily when working with their groupmates and peers (M=3.24, SD=0.48). Furthermore, they tend to understand other ideas from their peers, which leads to good relationships (M=2.91, SD=0.74).

The level of students' learning styles in terms of interpersonal attained a weighted mean score of 3.02 and a standard deviation of 0.41, which was a great extent, as viewed by the respondents. Interpersonal learners possess good communication skills and can efficiently work and interact with other groupmates and pairs. Thus, they have more fun learning through collaboration and peer interaction, building good connections. Learners with this learning style have a strength of good leadership in leading others.

Table 3 Level of Students' Verbal Learning Style

STATEMENTS	MEAN	SD	REMARKS
I enjoy giving tutorials and sharing knowledge with others.	3.07	0.65	Agree
I find it more useful and effective when I read aloud.	3.07	0.65	Agree
I learn easily when I share and speak my ideas to others.	3.03	0.76	Agree
I learn well by demonstrating particular skills.	3.14	0.70	Agree
I can explain things through discussions and debates.	3.07	0.63	Agree
Weighted Mean		3.08	
SD		0.34	
Verbal Interpretation		Great Extent	

Table 3 illustrates students' verbal learning style. Verbal learners believe they learn well by demonstrating particular skills through discussion (M=3.14, SD=0.70). Furthermore, they tend to speak and share their ideas with others (M=3.03, SD=0.65).

The level of students' learning styles in terms of Verbal attained a weighted mean score of 3.08 and a standard deviation of 0.34 and was Great Extent as viewed by the respondents. This means verbal learners excel in language-based activities, using words to learn and communicate. They also enjoy reading, writing, speaking, and listening activities.

Table 4 Level of Students' Visual Learning Style

STATEMENTS	MEAN	SD	REMARKS
I prefer to see information written on a board and supplementary materials.	3.21	0.63	Agree
I prefer to use pictures and spatial understanding in learning the lesson.	3.11	0.76	Agree
I understand the concept quickly by looking at the diagrams and graphs.	3.06	0.68	Agree
I remember better when I read between the lines.	3.13	0.72	Agree
I learn easily when I watch video presentations.	2.97	0.66	Agree
Weighted Mean		3.10	
SD		0.39	
Verbal Interpretation		Great Extent	

Table 4 illustrates the level of students' visual learning style

Visual learners tend to believe that they prefer to learn when the information is written and the supplementary materials are



viewed (M=3.21, SD=0.63). Furthermore, they tend to remember when watching video presentations (M=2.97, SD=0.66).

The level of students' learning styles in terms of Visual attained a weighted mean score of 3.10 and a standard deviation of 0.39 and was a Great Extent as viewed by the respondents. This further means that the respondents learning styles in terms of visuals can learn best when they see supplementary materials like pictures, diagrams, graphs or even video presentations. Learners with this learning style are more interested in learning the content through visual thinking using different graphics.

Level of Using Peer-Assisted Learning Strategies Awareness of the level of using peer-assisted learning strategies in teaching mensuration and calculation is important for the students'

learning process. This study described the jigsaw method, peer demonstration, peer-led- discussion, peer tutoring, and think-pair-share, which was determined by weighted mean and standard deviation.

Level of Using Peer-Assisted Learning Strategies in Teaching Mensuration and Calculation in terms of Jigsaw Method

Table 5 illustrates below the level of using Peer-Assisted Learning Strategies in teaching mensuration and calculation in terms of Jigsaw method. Jigsaw Method auditory learners tend to analyze the discussion after listening to the discussion during class (M=3.50, SD=0.51). Furthermore, learners tend to lessen their pressure when listening and working as a group (M=3.18, SD=0.50).

Table 5 Level of Using Peer-Assisted Learning Strategies in Teaching Mensuration and Calculation in terms of Jigsaw Method

STATEMENTS	MEAN	SD	REMARKS
Auditory			
I can follow activities more efficiently when I hear my classmates share the information verbally.	3.23	0.43	Agree
I can easily grasp the idea I listened from the discussion of my classmates.	3.32	0.65	Strongly Agree
I feel less pressure working together when I listened to my classmates discussion about the topic mensuration and calculation.	3.18	0.50	Agree
I can understand the process of computing the problem when I concentrate on my classmate’s explanation.	3.27	0.55	Strongly Agree
I can give insights or clarification about the topic after listening to my groupmates/classmates discussion.	3.50	0.51	Strongly Agree
	3.30	0.53	VGE
Interpersonal			
I can easily understand the topic about mensuration and calculation when I listened with my classmates.	3.27	0.60	Strongly Agree
I can finish the task easily on time when I engaged myself with the discussion of my groupmates or classmates.	3.19	0.69	Agree
I can learn the formulas in mensuration and calculation when I worked with group.	3.38	0.64	Strongly Agree
I can easily identify my errors in the problem solving when I asked and worked with other people.	3.27	0.72	Strongly Agree
I feel confident with my answer in a certain problem solving if I discuss and ask other people about it.	3.42	0.58	Strongly Agree
	3.31	0.65	VGE
Verbal			
I am comfortable talking with my groupmates about the topic in mensuration and calculation.	3.37	0.60	Strongly Agree
I know how to solve a certain problem about the topic when it is discussed in group.	3.21	0.79	Agree
I often talk with my classmates about the lesson in mensuration and calculation.	2.89	0.88	Agree
I feel more comfortable asking for clarification to my groupmates whenever I don’t understand the topic.	3.21	0.79	Agree
I communicate with my group every time I want to clarify something about the topic.	3.11	0.74	Agree
	3.16	0.76	GE
Visual			
I more comfortable in understanding the formula when my classmate shows and explains it well.	3.14	0.35	Agree
I can easily recognize and understand the operations when it is surrounded by a lot of signs and symbols.	3.14	0.71	Agree
I take a short period of time to understand the topic in the collaborative work	3.00	0.76	Agree



when it is explained using the visual materials.

I can easily notice and understand the errors in the activity when I see the visual representation of the activity. 3.27 0.55 Strongly Agree

I can solve the problem in mensuration and calculation if I see the formula if it is written and discussed in group. 3.41 0.59 Strongly Agree

3.19 0.61 GE

Weighted Mean

3.24

SD

0.64

Verbal Interpretation

Very Great Extent

The level of using peer-assisted learning strategies in teaching mensuration in calculation based on the students auditory learning styles jigsaw method attained a weighted mean of 3.30 and standard deviation of 0.53 and was a very great extent as viewed by the respondents. This means that learners tend to easily understand the learning discussion through the help of their classmates by sharing their ideas and thoughts through listening with collaboration.

Interpersonal learners tend to believe they are confident in answering problems when they are with peers (M=3.42, SD=0.58). Furthermore, they tend to finish the task on time when they are working with their groupmates and classmates (M=3.19, SD=0.69). The level of peer Assisted learning strategies in teaching mensuration and calculation based on the students' interpersonal learning styles.

The jigsaw method attained a weighted mean of 3.31 and a standard deviation of 0.65, which was a great extent as the respondents viewed. This means the learners are more confident with their groupmates and peers while answering the activities. Thus, they quickly learn and finish the task with their peers and group mates.

Verbal learners feel more comfortable talking to their peers and groupmates while learning (M=3.37, SD=0.60). Furthermore, learners tend to discuss the lesson with their peers to deepen their understanding (M=2.89, SD=0.88). The level of using peer assisted learning strategies in teaching mensuration and calculation based on the students' verbal learning styles jigsaw method attained a weighted mean of 3.16 and standard deviation of 0.76 and was very great extent. This means learners are more comfortable talking and communicating with their peers and groupmates while learning. Thus, they learn through interaction and brainstorming with others.

Visual learners believe they can quickly solve the problem by viewing the written formulas and discussing them in groups (M=3.41, SD=0.59). Furthermore, learners tend to shorten their

time learning the topic when working together as a team or group and by explaining the topic using visual materials (M=3.00, SD=0.76). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the visual learning styles jigsaw method attained a weighted mean of 3.24 and standard deviation of 0.64 and was a very great extent as viewed by the respondents. This means that the learners effectively learn when they see the actual materials or use supporting visual aids that help learners to visualize and understand a particular topic easily.

The level of using Peer-Assisted Learning Strategies in teaching mensuration and calculation based on the students' learning styles Jigsaw Method attained a weighted mean score of 3.24 and a standard deviation of 0.64 and was Very Great Extent as viewed by the respondents. This means that this method helps the learners exhibit a good and positive learning process, and cooperative learning improves the students' skills and learning.

Level of Using Peer-Assisted Learning Strategies in Teaching Mensuration and Calculation in terms of Peer Demonstration

Table 6 illustrates the level of using Peer-Assisted Learning Strategies in teaching mensuration and calculation in terms of Peer demonstration.

Auditory learners tend to believe they can demonstrate the lesson when they are listening and interacting with their groupmates' explanation (M=3.50, SD=0.51). Furthermore, the learner tends to understand the lesson when the demonstrator has a clear tone of voice (M=3.09, SD=0.61). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the students' auditory learning styles peer demonstration attained a weighted mean of 3.26 and standard deviation of 0.66 and was very great extent as viewed by the respondents. This means the learners are more confident to demonstrate when their groupmates and peers support them.

Table 6 Level of Using Peer-Assisted Learning Strategies in Teaching Mensuration and Calculation in terms of Peer Demonstration

STATEMENTS	MEAN	SD	REMARKS
Auditory			
I can pay more attention to the voices of my classmates when they exhibit the topic or the lesson.	3.23	0.69	Agree
I create more opportunities to listen to my groupmates' demonstrations.	3.23	0.53	Agree
After listening to my groupmates' explanations, I can demonstrate how a certain problem was solved.	3.50	0.51	Strongly Agree
I can easily understand the lesson when my classmate demonstrates the lesson with clarity of voice.	3.09	0.61	Agree



I pay more attention to how my classmates explain the process than to knowing the answer.	3.27	0.88	Strongly Agree
	3.26	0.66	VGE
Interpersonal			
I can understand the lesson when I am part of the topic demonstration.	3.46	0.51	Strongly Agree
I have more opportunities to identify the errors committed to solving problems when I engage myself in exhibiting the lesson.	3.31	0.62	Strongly Agree
I can have a deeper understanding of the lesson when it is executed in collaborative work.	3.50	0.51	Strongly Agree
I can think critically about the problem when I involve myself in the peer demonstration.	3.42	0.50	Strongly Agree
When done in a group, I can have a wide range of possibilities to discuss certain difficulties in the lesson.	3.38	0.57	Strongly Agree
	3.42	0.54	VGE
Verbal			
I am more participative if I involve myself and speak my insights during the peer demonstration.	3.05	0.85	Agree
I can expand my knowledge about the topic if the conversation is involved.	2.84	0.90	Agree
I enhance my competence and skill about the topic when I speak about it with other people.	3.32	0.67	Strongly Agree
I learn the topic when I communicate more during the peer demonstration.	3.00	0.82	Agree
I emphasize how I explained the lesson in exhibiting the process during group work.	3.16	0.76	Agree
	3.07	0.80	GE
Visual			
I understand the lesson well if I can see how my groupmates demonstrate the topic.	3.14	0.35	Agree
I can exhibit the lesson well in collaborative works when provided by visual materials.	3.14	0.71	Agree
I am less confused if the process in solving a particular problem is presented with pictures and graphic organizers when it is demonstrate by peer.	3.00	0.76	Agree
I tend to concentrate more on the visuals when peer demonstration is ongoing.	3.27	0.55	Strongly Agree
I can confidently demonstrate what I learn about the topic through peer demonstration using different visual materials.	3.41	0.59	Strongly Agree
	3.19	0.61	GE
Weighted Mean		3.24	
SD		0.65	
Verbal Interpretation		Very Great Extent	

Interpersonal learners tend to deeply understand the lesson in more collaborative ways when the lesson is well demonstrated in more interactive execution (M=3.50, SD=0.51). Furthermore, they tend to identify the errors committed when they engaged their self and groupmates in the activities together (M=3.31, SD=0.62). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the interpersonal learning styles peer demonstration attained a weighted mean of 3.42 and standard deviation of 0.54, which was a very great extent, as viewed by the respondents. This means learners enjoy the demonstration activities more when involving each other.

Verbal learners tend to believe they are competent when communicating and interacting with other people during the demonstration (M=3.32, SD=0.67). Furthermore, learners tend to participate more in demonstrations that expand knowledge and create good conversation (M=2.84, SD=0.90). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the verbal learning styles peer demonstration attained a weighted mean of 3.07 and a standard deviation of 0.80, which was a great extent, as viewed by the respondents. This means that the learners enhance their knowledge and skills through demonstration through communication with their groupmates and peers; thus, they are

confident in sharing and expressing their thoughts without hesitation.

Visual learners tend to believe they confidently demonstrate the lesson with the help of their peers and are supported by the visual materials (M=3.41, SD=0.59). Furthermore, learners tend to lessen their problem-solving confusion when their peers are presented with visual materials that can help them solve it correctly (M=3.00, SD=0.76). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the students' visual learning styles peer demonstration attained a weighted mean of 3.19 and standard deviation of 0.61 and was a great extent as viewed by the respondents. This means learners confidently demonstrate and share their ideas with peers supported by visual materials or aids.

The level of using Peer Assisted Learning Strategies in teaching mensuration and calculation based on the students' learning styles Peer demonstration attained a weighted mean score of 3.24 and a standard deviation of 0.65 and was Very Great Extent among the respondents. This means that the learners can develop their demonstration skills with the help of their groupmates and peers. Additionally, peer demonstration empowers the students to take charge of their learning.



Table 7 Level of Using Peer-Assisted Learning Strategies in Teaching Mensuration and Calculation in terms of Peer Led-Discussion

STATEMENTS	MEAN	SD	REMARKS
Auditory			
I learn more when I listen to my peers.	3.55	0.74	Strongly Agree
I can do more about the activities when I listen to my peers inside the class.	3.23	0.61	Agree
I spent my time well listening to my peers who led the discussion rather than being part of the discourse.	3.50	0.60	Strongly Agree
I understand the lesson well when I listen to my peers in the discussion.	3.45	0.74	Strongly Agree
I feel confident listening to my peers when they lead the discussion.	3.41	0.67	Strongly Agree
	3.43	0.67	VGE
Interpersonal			
I can encourage myself and others to learn and engage in discussing the topic when I talk to others.	3.42	0.76	Strongly Agree
I am willing to discuss some clarification and questions with my peers.	3.23	0.65	Agree
I can easily interpret my understanding through the help of my peers when I participate to them.	3.42	0.64	Strongly Agree
I like to work in a positive environment when I engage myself in the communication during the peer led- discussion.	3.62	0.57	Strongly Agree
I learn to work in teams and gain self-confidence in peer-led discussions.	3.54	0.51	Strongly Agree
	3.45	0.64	VGE
Verbal			
I can assess my learning and understanding by discussing the topic and concepts.	3.21	0.71	Agree
I learn to work in a team and communicate effectively.	3.37	0.83	Strongly Agree
I am open and willing to ask questions about the topic with other students.	3.26	0.81	Strongly Agree
I learn through talking about concepts with peers.	3.05	0.85	Agree
I feel more comfortable communicating about the topic with peers even if I commit mistakes.	3.11	0.81	Agree
	3.20	0.79	GE
Visual			
I prefer to see information on the board and supplemented by visual aids discussed by other students.	3.41	0.67	Strongly Agree
I think the best way to remember the lesson is through discussion with my classmates, provided by pictures or photos.	3.14	0.56	Agree
I prefer to explain the lesson to my classmates by using posters, models, or graphs in peer discussions.	3.41	0.67	Strongly Agree
I can easily understand and follow the process of a calculation when my peer uses visual aids.	3.14	0.47	Agree
I prefer looking at the examples that are written than listening to the explanation.	3.14	0.64	Agree
	3.25	0.61	VGE
Weighted Mean		3.32	
SD		0.68	
Verbal Interpretation			<i>Very Great Extent</i>

Table 7 illustrates the level of using Peer-Assisted Learning Strategies in teaching mensuration and calculation in terms of Peer-led- discussion.

Auditory learners tend to believe they learn through listening to the lesson being led by their peers (M=3.55, SD=0.74). Furthermore, learner tends to do the activities easily when their peers lead them (M=3.23, SD=0.61).

The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the discussion of auditory learning styles attained a weighted mean of 3.43 and a standard deviation of 0.67 and was a great extent as viewed by the respondents. This means the learner listens and does the activities when their peers enhance learning and discussion.

Interpersonal learners tend to believe in working in a positive environment when communicating with the peer discussion (M=3.62, SD=0.57). Furthermore, they tend to confidently ask and clarify questions to their peers, leading them (M=3.23, SD=0.65). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the students' interpersonal learning styles peer led- discussion attained a weighted mean of 3.45 and standard deviation of 0.64 and was a very great extent as viewed by the respondents. This means the learners engaged themselves in the leading discussion with their peers without hesitation.

Verbal learners tend to believe they can communicate effectively as a team during the peer discussion (M=3.37, SD=0.83) Furthermore, learners learn the concepts through interaction with their peers (M=3.05, SD=0.85). The level of



using peer assisted learning strategies in teaching mensuration and calculation based on the verbal learning styles peer-discussion attained a weighted mean of 3.20 and standard deviation of 0.79 and was a great extent as viewed by the respondents. This means the learners are more communicative when their peers lead the discussion and activities tasks.

Visual learners tend to believe they prefer to see the information through visual aids like posters and models presented by their peers (M=3.41, SD=0.67). Furthermore, it tends to understand the discussion and recall the flow of the process using other supplementary aids (M=3.14, SD=0.47). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the student's visual learning styles peer-led- discussion attained a weighted mean of 3.25 and standard deviation of 0.61 and was a great extent as viewed by the respondents. This means the learners must prefer to learn quickly when visual aids and other supported materials provide it.

The level of using Peer-Assisted Learning Strategies in teaching mensuration and calculation based on the students' learning styles Peer-led- discussion attained a weighted mean score of 3.32 and a standard deviation of 0.68 and was Very Great Extent among the respondents. This means that learners build their communication skills and harmonious team relationships with their peers in various learning styles.

Level of Using Peer-Assisted Learning Strategies in Teaching Mensuration and Calculation in terms of Peer Tutoring

Table 8 illustrates below the level of using Peer-Assisted Learning Strategies in teaching mensuration and calculation in terms of Peer tutoring

Auditory learners tend to believe that they are comfortable listening to their peers during discussions (M=3.32, SD=0.65). Furthermore, learners listen to their class achievers during the session (M=3.09, SD=0.75). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the auditory learning styles of peer tutoring attained a weighted mean of 3.22 and standard deviation of 0.71 and was a great extent as viewed by the respondents. This means the learners actively listen to their peer teaching and guidance during class discussions.

Interpersonal learners tend to feel comfortable cooperating with their peer tutor during the discussion; thus, they believe they have more Ideas to share when they are with their peers (M=3.42, SD=0.70) Furthermore, learner tends to understand the lesson by interfering with their peers in the class tutorials (M= 3.23, SD= 0.51). The level of using peer assisted learning strategies in teaching mensuration and calculation based on the interpersonal learning styles of peer tutoring attained a weighted mean of 3.32 and a standard deviation of 0.64 and was a great extent as viewed by the respondents. This means the learners are more willing to listen to their peers during the tutorials, which creates a good relationship with each other.

Table 8 Level of Using Peer-Assisted Learning Strategies in Teaching Mensuration and Calculation Based on the Students' Learning Styles Peer tutoring

STATEMENTS	MEAN	SD	REMARKS
Auditory			
I can understand the lesson well when I listen to the explanation of my classmate who had a high score on our quiz about the topic.	3.27	0.77	Strongly Agree
I prefer listening to my classmates who are achievers in the class.	3.09	0.75	Agree
Listening to my peers who can do well in the classroom creates positive learning for the other students.	3.27	0.70	Strongly Agree
I am more comfortable listening to my peers in the lesson discussion.	3.32	0.65	Strongly Agree
I can easily distinguish the errors I committed in the lesson when I listen to my peers who are teaching the lessons.	3.14	0.71	Agree
	3.22	0.71	GE
Interpersonal			
I can ask for some clarification by means of interacting comfortably with my peers who teach the topic.	3.23	0.51	Agree
I feel positive when I ask for an additional explanation from my classmates who teach the lesson.	3.38	0.64	Strongly Agree
I can easily interact with my peers with high scores in the quiz about the lesson makes learning more meaningful.	3.31	0.62	Strongly Agree
I have understood the lesson well when I collaborate with my peer tutor.	3.23	0.71	Agree
I feel comfortable in cooperating with my peer tutor because I think they have more ideas about the topic.	3.42	0.70	Strongly Agree
	3.32	0.64	VGE
Verbal			
I can grasp the needed learning when I talk about the topic with my peer tutor.	3.32	0.58	Strongly Agree
I more comfortable when my peers teach and guide me in a particular activity.	3.42	0.84	Strongly Agree
I can easily get the main idea of the topic when communication is presented in the peer tutoring approach.	3.16	0.69	Agree
I can add more information to have a deeper understanding of the topic when my	3.21	0.79	Agree



peer assists it.			
I can learn in a positive environment when I exchange my ideas with my peer tutor.	2.95	0.78	Agree
	3.21	0.74	GE
Visual			
I can easily get the idea in the peer tutoring approach when visual aids supplement it.	3.27	0.55	Strongly Agree
I tend to focus more on how the peer tutor elaborated on the topic using pictures or written texts.	3.23	0.53	Agree
I pay more attention when listening to the peer tutor's discussion with pictures or visual aids.	3.23	0.61	Agree
I can focus on the lesson when it is explained verbally using visual aids with the help of my peer tutor.	3.27	0.46	Strongly Agree
I can learn more in the peer tutoring approach when I am guided with photos and videos.	3.14	0.56	Agree
	3.23	0.54	GE
Weighted Mean		3.25	
SD		0.66	
Verbal Interpretation			Very Great Extent

Verbal learners tend to believe that when their peers teach them well and explain the guided materials in particular activities, they become more confident in finishing the task (M=3.42, SD=0.84). Furthermore, learners tend to learn in a positive environment by exchanging ideas with their peer tutor (M=2.95, SD=0.78). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the verbal learning styles of peer tutoring attained a weighted mean of 3.21 and a standard deviation of 0.74, which was a great extent, as viewed by the respondents. This means that the learners participate more in peer teaching and interactive learning and can confidently express their ideas to others.

Visual learners tend to believe they easily understand the lesson when the peer tutor presents various supporting materials that can enhance their understanding (M=3.27, SD=0.55). Furthermore, learners tend to learn in peer tutoring when it is provided and guided by digital presentation aids (M=3.14, SD=0.56). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the visual learning styles of peer tutoring attained a weighted mean of 3.23 and a standard deviation of 0.54, and this was a great extent. This means learners learn through peer tutoring with the help of their companion in learning. Thus, learners learn and understand the topic much easier, supported by supplementary learning materials that can enhance their academic skills.

The level of using Peer Assisted Learning Strategies in teaching mensuration and calculation based on the students' learning styles Peer tutoring attained a weighted mean score of 3.25 and a standard deviation of 0.66 and was Very Great Extent among the respondents. This means that the learners view their peers' help and guidance as improving their academic and social skills with their tutor, producing positive experiences and good outcomes. Peer tutoring positively affects students' learning, as the learners are more comfortable participating in the learning process and in the activities given by the teacher. So that the students engage more in the activities and motivate to participate and collaborate in the group of students.

Level of Using Peer-Assisted Learning Strategies in Teaching Mensuration and Calculation in terms of Think Pair- share

Table 9 illustrates below the level of using Peer Assisted Learning Strategies in teaching mensuration and calculation in terms of Think pair- share

Auditory learners tend to listen attentively to their partners when they share their ideas in the activities (M=3.45, SD=0.74). Furthermore, learners tend to be quite comfortable understanding their partner's shared ideas about the topic (M=3.14, SD=0.64). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the students' auditory learning styles think pair-share attained a weighted mean of 3.31 and standard deviation of 0.67 and was a very great extent as viewed by the respondents. This means learners prefer to listen and think together as a group and with their partners and have connections during the activities that make them feel comfortable during the task.

Interpersonal learners tend to collaborate with their partners during the task (M=3.54, SD=0.51). Furthermore, learners tend to do tasks with the help of others (M=3.31, SD=0.74). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the students' interpersonal learning styles think pair-share attained a weighted mean of 3.42 and standard deviation of 0.62 and was a very great extent as viewed by the respondents. This means learners prefer to have partners during the activities that can help them share and get some ideas while they are together.

Verbal learners tend to learn better in the pair-share discussion; thus, they can easily state their concerns while doing the activity with their partner (M=3.42, SD=0.51). Furthermore, learners believe that interaction with their partners during the discussion is more effective than listening (M=3.26, SD=0.81).



Table 9 Level of using Peer Assisted Learning Strategies in teaching mensuration and calculation based on the students' learning styles Think Pair- Share

STATEMENTS	MEAN	SD	REMARKS
Auditory			
I learn when I hear my pair sharing his/her ideas about the topic.	3.45	0.74	Strongly Agree
I enjoy listening to my partner to get more ideas.	3.32	0.65	Strongly Agree
Listening to my partner during an activity makes me more comfortable about the topic.	3.14	0.64	Agree
I prefer to listen to others than speak verbally.	3.23	0.75	Agree
I listen carefully to what my partner tells me to do.	3.41	0.59	Strongly Agree
	3.31	0.67	VGE
Interpersonal			
I prefer to do the task with the help of others.	3.31	0.74	Strongly Agree
Interacting with my partner about the topic resolves confusion on the topic.	3.46	0.65	Strongly Agree
I feel enthusiastic when I work with my partner on the topic.	3.46	0.65	Strongly Agree
I can collaborate with my partner during the activity.	3.54	0.51	Strongly Agree
I feel have better outcomes when I work in pair.	3.35	0.56	Strongly Agree
	3.42	0.62	VGE
Verbal			
I learn the lesson better when I do discussion with my partner.	3.32	0.82	Strongly Agree
I can confidently share the ideas when I explained it with my partner during the activity.	3.32	0.75	Strongly Agree
I prefer to state my concern in doing the activity with my partner about the topic.	3.42	0.51	Strongly Agree
I learn more when I talk to my partner than when I listen to his ideas about the topic.	3.26	0.81	Strongly Agree
I can understand my partner's ideas when they are discussed verbally during the activity.	3.32	0.67	Strongly Agree
	3.33	0.71	VGE
Visual			
I learned better by reading what my partner wrote in the activity paper during the think-pair share.	3.18	0.50	Agree
I remember things when my partner explains his ideas using visual aids.	3.18	0.39	Agree
I learn better when reading the topic than listening the discussion of my partner.	3.05	0.58	Agree
I learn easily when the information is easy to read and understand with the help of my partner.	3.36	0.49	Strongly Agree
If presented with a visual aid, I take a short time to analyze the information in the think-pair share.	3.05	0.58	Agree
	3.16	0.52	GE
Weighted Mean		3.31	
SD		0.63	
Verbal Interpretation		Very Great Exten	

The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the verbal learning styles think pair-share attained a weighted mean of 3.33 and a standard deviation of 0.71, which was a great extent. This means learners enjoy interacting with their partners while performing the activities.

Visual learners tend to believe that they learn the information presented with their partner when the materials are readable and precise to the lesson's learning objectives (M=3.36, SD=0.49). Furthermore, learners tend to think this shortens the time needed to analyze the material when the visual aids are presented during the discussion (M=3.05, SD=0.58). The level of using peer-assisted learning strategies in teaching mensuration and calculation based on the visual learning styles think pair-share attained a weighted mean of 3.16 and standard deviation of 0.52, which was a great extent, as viewed by the

respondents. This means that learners learn the information presented like visual aids with the help of their partners.

The level of using Peer Assisted Learning Strategies in teaching mensuration and calculation based on the students' learning styles Think Pair- Share attained a weighted mean score of 3.31 and a standard deviation of 0.63 and was Very Great Extent among the respondents. This means the learners improve their ability to recall information and learn from their partner. It also arouses the learners' interest in interacting and working with one another.

Level of Student Technical Skills

This study described comprehension, critical thinking, problem solving, and spatial visualization, which was determined by the weighted mean and standard deviation.



Table 10 Level of Students' Technical Skills Before and After Using Peer Assisted Learning Strategies and Group According to their Learning Styles in terms of Comprehension

Student Learning Styles	Before			After			
	Mean	SD	Verbal Interpretation	Mean	SD	Verbal Interpretation	
Auditory	1.48	1.08	Did not meet Expectations	3.78	0.67	Very Satisfactory	
Interpersonal	1.46	1.17	Did not meet Expectations	4.04	0.53	Very Satisfactory	
Verbal	1.37	0.83	Did not meet the expectation	4.16	0.60	Very Satisfactory	
Visual	1.59	1.14	Did not meet Expectations	3.54	0.60	Very Satisfactory	
Weighted Mean		1.48			3.88		
SD		1.06			0.60		
Verbal Interpretation		<i>Did not meet Expectations</i>				<i>Very Satisfactory</i>	

Table 10 presents the level of students' technical skills before and after using peer-assisted learning strategies and groups according to their learning style in terms of Comprehension.

For students' auditory learning style, before it attained a weighted mean and standard deviation of (M= 1.48, SD= 1.08), it did not meet expectations. Furthermore, after using peer-assisted learning strategies in terms of comprehension, I attained a weighted mean and standard deviation of (M= 3.78, SD= 0.67) which was very satisfactory. This means the learners improved their technical comprehension skills before and after utilizing peer-assisted learning strategies according to their learning styles.

For students' interpersonal learning style, before it attained a weighted mean standard deviation of (M= 1.46, SD= 1.17), it did not meet expectations. Furthermore, after using the peer-assisted learning strategies in terms of comprehension, a weighted mean and standard deviation of (M= 4.04, SD= 0.53) was attained, which was very satisfactory. This means the learners improved their technical comprehension skills before and after utilizing peer-assisted learning strategies according to their learning styles.

For students' verbal learning styles, before it attained a weighted mean and standard deviation of (M= 1.37, SD= 0.83), it did not meet expectations. Furthermore, after using peer-assisted learning strategies in terms of comprehension, I attained a weighted mean and standard deviation of (M= 4.16, SD= 0.60), which was very satisfactory. This means that the learners improved their technical skills in comprehension before and after the utilization of peer-assisted learning strategies according to their learning styles.

For students' visual learning styles, before it attained a weighted mean and standard deviation of (M= 1.59, SD=1.14) it did not meet expectations. Furthermore, after using peer-assisted learning strategies in terms of comprehension, I attained a weighted mean and standard deviation of (M= 3.54, SD= 0.60), which was very satisfactory. This means the learners improved their technical comprehension skills before and after utilizing peer-assisted learning strategies according to their learning styles.

The students' technical skills in terms of comprehension before using the peer-assisted learning strategies visual learning style got the highest weighted mean and standard deviation of (M= 1.59, SD= 1.14) while the verbal learning style got the lowest weighted mean and standard deviation of (M= 1.37, SD= 0.83) and was did not meet the expectation. Furthermore, after using the peer-assisted learning strategies, the verbal learning style got the highest weighted mean of (M= 4.16, SD= 0.60), while the visual learning style got the lowest weighted mean and standard deviation of (M= 3.54, SD= 0.60) and was very satisfactory.

The level of student technical skills before and after using peer-assisted learning strategies and groups according to their learning styles in terms of comprehension before it attained a mean of 1.48 and standard deviation of 1.06 and did not meet Expectations. Furthermore, after the weighted mean of 3.88 and standard deviation of 0.60, it was Very Satisfactory. This means that the student's technical skills in terms of comprehension improved before and after using the peer-assisted learning strategies according to their learning styles. It effectively supports learner development and also shows a positive impact on the learner's skills.

Table 11 Level of Students' Technical Skills Before and After Using Peer Assisted Learning Strategies and Group According to their Learning Style in terms of Critical thinking

Student Learning Styles	Before			After		
	Mean	SD	Verbal Interpretation	Mean	SD	Verbal Interpretation
Auditory	1.56	1.08	Did not meet Expectations	3.61	0.72	Very Satisfactory
Interpersonal	1.50	1.17	Did not meet Expectations	4.11	0.82	Very Satisfactory
Verbal	1.47	1.07	Did not meet the	3.63	0.83	Very Satisfactory



Visual	1.54	0.96	expectation Did not meet Expectations	3.45	0.86	Very Satisfactory
Weighted Mean		1.52				3.70
SD		1.07				0.81
Verbal Interpretation		<i>Did not meet Expectations</i>				<i>Very Satisfactory</i>

Table 11 presents the level of students' technical skills before and after using peer assisted learning strategies and groups according to their learning style in terms of Critical thinking.

For students' auditory learning style, before it attained a weighted mean of and standard deviation of (M= 1.56, SD= 1.08), it did not meet expectations. Furthermore, after using peer assisted learning strategies in terms of critical thinking, attained a weighted mean and standard deviation of (M= 3.61, SD= 0.72) and was very satisfactory. This means that the learners improved their technical skills in critical thinking before and after utilizing peer assisted learning strategies according to their learning styles.

For students' interpersonal learning style, before it attained a weighted mean standard deviation of (M= 1.50, SD= 1.17), it did not meet expectations. Furthermore, after using the peer-assisted learning strategies in terms of critical thinking, a weighted mean and standard deviation of (M= 4.11, SD= 0.82) was attained, which was very satisfactory. This means that the learners improved their technical skills in critical thinking before and after utilizing peer-assisted learning strategies according to their learning styles.

For students' verbal learning styles, before it attained a weighted mean and standard deviation of (M= 1.47, SD= 1.07), it did not meet expectations. Furthermore, after using peer-assisted learning strategies in terms of critical thinking, attained a weighted mean and standard deviation of (M= 3.63, SD= 0.83) and was very satisfactory. This means that the learners improved their technical skills in critical thinking before and after the utilization of peer assisted learning strategies according to their learning styles.

For students' visual learning styles, before it attained a weighted mean of and standard deviation of (M= 1.54, SD= 0.46), it did not meet expectations. Furthermore, after using peer-assisted learning strategies in terms of critical thinking, attained a weighted mean and standard deviation of (M= 3.45, SD= 0.86) and was very satisfactory. This means that the learners improved their technical skills and critical thinking before and after the utilization of peer assisted learning strategies

according to their learning styles.

Regarding the students' technical skills in terms of critical thinking before using the peer-assisted learning strategies, the auditory learning style got the highest weighted mean and standard deviation of (M= 1.56, SD= 1.08) while the verbal learning style got the lowest weighted mean and standard deviation of (M= 1.47, SD= 1.07) and was did not meet expectation. Furthermore, after using the peer assisted learning strategies, the interpersonal learning style got the highest weighted mean of (M= 4.11, SD= 0.82), while the visual learning style got the lowest weighted mean and standard deviation of (M= 3.45, SD= 0.86) and was very satisfactory.

The level of student technical skills before and after using peer-assisted learning strategies and groups according to their learning styles in terms of critical thinking before it attained a weighted mean of 1.57 and standard deviation of 1.07 and Did not meet Expectations. Furthermore, after the weighted mean of 3.70 and standard deviation of 0.81, it was Very Satisfactory. This means that the students' technical skills in terms of critical thinking improved before and after using the peer-assisted learning strategies according to their learning styles. That results in the enhancement of the learners' thinking abilities and creative minds. Additionally, it helps learners in decision-making and solving complex math problems.

Level of Students' Technical Skills before and after Using Peer-Assisted Learning Strategies and Group According to their Learning Style in terms of Problem-Solving

Table 12 presents below the level of students' technical skills before and after using peer-assisted learning strategies and groups according to their learning style in terms of Problem solving. For students auditory learning style, before it attained a weighted mean and standard deviation of (M= 1.30, SD= 1.06) it did not meet expectations. Furthermore, after using peer assisted learning strategies in terms of problem solving, attained a weighted mean and standard deviation of (M= 3.35, SD= 0.77) and was very satisfactory. This means that the learners improved their technical problem-solving skills before and after using peer assisted learning strategies according to their learning styles.

Table 12 Level of Students' Technical Skills Before and After Using Peer-Assisted Learning Strategies and Group According to Their Learning Style in terms of Problem-Solving

Student Learning Styles	Before			After		
	Mean	SD	Verbal Interpretation	Mean	SD	Verbal Interpretation
Auditory	1.30	1.06	Did not meet Expectations	3.35	0.77	Very Satisfactory
Interpersonal	1.42	0.81	Did not meet Expectations	3.85	0.67	Very Satisfactory



Verbal	0.79	0.85	Did not meet the expectation	3.63	0.50	Very Satisfactory
Visual	1.23	0.87	Did not meet Expectations	3.27	0.63	Very Satisfactory
Weighted Mean		1.18			3.53	
SD		0.90			0.64	
Verbal Interpretation			Did not meet Expectations			Very Satisfactory

For students' interpersonal learning style, before it attained a weighted mean and standard deviation of (M= 1.42, SD= 0.81), it did not meet expectations. Furthermore, after using the peer-assisted learning strategies in terms of problem-solving attained a weighted mean and standard deviation of (M= 3.85, SD= 0.67) and was very satisfactory. This means the learners improved their technical problem-solving skills before and after using peer assisted learning strategies according to their learning styles.

For students' verbal learning styles, before it attained a weighted mean and standard deviation of (M= 0.75, SD= 0.85), it did not meet expectations. Furthermore, after using peer assisted learning strategies in terms of problem solving, I attained a weighted mean and standard deviation of (M= 3.63, SD= 0.50), which was very satisfactory. This means that the learners improved their technical problem-solving skills from before and after using peer assisted learning strategies according to their learning styles.

For students visual learning styles, before it attained a weighted mean and standard deviation of (M= 1.23, SD= 0.87), it did not meet expectations. Furthermore, after using peer assisted learning strategies in terms of problem-solving attained a weighted mean and standard deviation of (M= 3.27, SD= 0.63) and was very satisfactory. This means that the learners improved their technical problem-solving skills from before and after using peer assisted learning strategies according to their learning styles.

Regarding the students' technical skills in terms of problem

solving before using the peer assisted learning strategies, the interpersonal learning style got the highest weighted mean and standard deviation of (M= 1.42, SD= 0.81) while the verbal learning style got the lowest weighted mean and standard deviation of (M= 0.79, SD= 0.85) and was did not meet the expectation. Furthermore, after using the peer assisted learning strategies, the interpersonal learning style got the highest weighted mean of (M= 3.85, SD= 0.67), while the visual learning style got the lowest weighted mean and standard deviation of (M= 3.27, SD= 0.63) and was very satisfactory.

The level of students' technical skills before and after using peer assisted learning strategies and groups according to their learning styles in problem-solving before the attained weighted mean of 1.18 and standard deviation of 0.90 did not meet Expectations. Furthermore, after the attained weighted mean of 3.53 and standard deviation of 0.64, it was Very Satisfactory. This means that the students' technical skills in terms of problem solving improved before and after using the peer assisted learning strategies according to their learning styles. It showed that the students developed their problem solving abilities, which led to their enhancement in solving complex problems and analyzing and interpreting data.

Level of Students' Technical Skills Before and After Using Peer-Assisted Learning Strategies and Group According to their Learning Styles in terms of Spatial Visualization

Table 13 presents below the level of students' technical skills before and after using peer-assisted learning strategies and groups according to their learning style in terms of Spatial visualization.

Table 13 Level of Student Technical Skills before and after Using Peer Assisted Learning Strategies and Group According to their Learning Style in terms of Spatial visualization

Student Learning Styles	Before			After		
	Mean	SD	Verbal Interpretation	Mean	SD	Verbal Interpretation
Auditory	0.96	0.88	Did not meet Expectations	3.39	0.58	Very Satisfactory
Interpersonal	0.85	0.67	Did not meet Expectations	3.65	0.63	Very Satisfactory
Verbal	1.21	0.71	Did not meet the expectation	3.32	0.67	Very Satisfactory
Visual	1.04	0.95	Did not meet Expectations	3.73	0.88	Very Satisfactory
Weighted Mean		1.01			3.52	
SD		0.80			0.69	
Verbal Interpretation			Did not meet Expectations			Very Satisfactory

For students' auditory learning style, before it attained a weighted mean and standard deviation of (M= 0.96, SD= 0.88),

it did not meet expectations. Furthermore, after using peer assisted learning strategies in terms of spatial visualization,



attained a weighted mean and standard deviation of (M= 3.39, SD= 0.58) and was very satisfactory. This means that the learners improved their technical spatial visualization skills before and after utilizing peer assisted learning strategies according to their learning styles.

For students' interpersonal learning style, before it attained a weighted mean and standard deviation of (M= 0.85, SD= 0.67), it did not meet expectations. Furthermore, after using the peer assisted learning strategies in terms of spatial visualization, attained a weighted mean and standard deviation of (M= 3.65, SD= 0.63) and was very satisfactory. This means that the learners improved their technical skills in spatial visualization before and after the utilization of peer assisted learning strategies according to their learning styles.

For students' verbal learning styles, before it attained a weighted mean and standard deviation of (M= 1.21, SD= 0.71), it did not meet expectations. Furthermore, after using peer-assisted learning strategies in terms of spatial visualization, attained a weighted mean and standard deviation of (M= 3.32, SD= 0.67) and was very satisfactory. This means that the learners improved their technical skills in spatial visualization before and after using peer assisted learning strategies according to their learning styles.

For students' visual learning styles, they did not meet expectations before they attained a weighted mean standard deviation of (M= 1.04, SD= 0.95). Furthermore, after using peer assisted learning strategies in terms of spatial visualization, attained a weighted mean and standard deviation of (M= 3.73, SD= 0.88) and was very satisfactory. This means that the learners improved their technical skills in spatial

visualization from before and after using peer assisted learning strategies according to their learning styles.

Regarding the students' technical skills in terms of spatial visualization before using the peer assisted learning strategies the verbal learning style got the highest weighted mean and standard deviation of (M= 1.21, SD= 0.71) while the interpersonal learning style got the lowest weighted mean and standard deviation of (M= 0.85, SD= 0.67) and was did not meet the expectation. Furthermore, after using the peer assisted learning strategies, the visual learning style got the highest weighted mean of (M= 3.73, SD= 0.88), while the verbal learning style got the lowest weighted mean and standard deviation of (M= 3.32, SD= 0.67) and was very satisfactory. The level of students' technical skills before and after using peer assisted learning strategies and groups according to their learning styles in terms of spatial visualization before the attained weighted mean of 1.01 and standard deviation of 0.80 and Did not meet Expectations. Furthermore, after the attained weighted mean of 3.52 and standard deviation of 0.69, and was Very Satisfactory. This means that the students' technical skills in terms of spatial visualization improved before and after using the peer assisted learning strategies according to their learning styles. It enhances the learner's spatial abilities in interpreting and analyzing data using visual analysis of figures, diagrams, and plans.

Significant Difference between the Students' Technical Skills Using Peer-Assisted Learning Strategies as Group According to Their Learning Styles

The computed p- p-values were compared to the level of significance at 0.05 to determine the significant difference in student technical skills using peer assisted learning strategies.

Table 14 Test of Difference Between the Students' Technical Skills Using Peer-Assisted Learning Strategies as a Group According to Their Learning Styles

Student Technical Skills	Before		After		Mean Difference	T value	P value
	Mn	SD	Mn	SD			
Comprehension							
Auditory	1.48	1.08	3.78	0.67	2.30	-8.78	<0.001
Interpersonal	1.46	1.17	4.04	0.53	2.58	-10.34	<0.001
Verbal	1.37	0.83	4.16	0.60	2.78	-11.79	<0.006
Visual	1.59	1.14	3.54	0.60	1.95	-7.11	<0.005
	1.48	1.06	3.88	0.60	2.40		
Critical thinking							
Auditory	1.56	1.08	3.61	0.72	2.04	-8.01	<0.005
Interpersonal	1.50	1.17	4.11	0.82	2.61	-10.27	<0.001
Verbal	1.47	1.07	3.63	0.83	2.16	-7.22	<0.001
Visual	1.54	0.96	3.45	0.86	1.91	-7.27	<0.003
	1.52	1.07	3.70	0.81	2.18		
Problem-solving							
Auditory	1.30	1.06	3.35	0.77	2.04	-7.77	<0.009
Interpersonal	1.42	0.81	3.85	0.67	2.42	-13.7	<0.004
Verbal	0.79	0.85	3.63	0.50	2.84	-12.21	<0.003



Visual	1.23	0.87	3.27	0.63	2.04	-8.8	<0.001
	1.18	0.90	3.53	0.64	2.33		
Spatial visualization							
Auditory	0.96	0.88	3.39	0.58	2.43	-10.06	<0.001
Interpersonal	0.85	0.67	3.65	0.63	2.81	-20.63	<0.003
Verbal	1.21	0.71	3.32	0.67	2.10	-8.75	<0.006
Visual	1.04	0.95	3.73	0.88	2.68	-8.81	<0.001
	1.01	0.80	3.52	0.69	2.51		

Legend: *Significant at 0.05

Revealed in Table 14 is the test of difference between the students' technical skills in terms of comprehension, critical thinking, problem solving, and spatial visualization is significantly difference before and after using peer-assisted learning strategies as a group according to their learning styles in terms of auditory, interpersonal, verbal and visual, as evidenced that were the p value (0.05) are above significance. This implies that the learners performed better after using the peer assisted learning strategies as group according to their learning styles. Their level of student technical skills has significantly improved from low to very high. The result of this study indicate that the students enhance their technical skills

when there is various peer assisted learning strategies to be used in teaching mensuration and calculation. Additionally, it also potentially improves the academic performance of the students.

Significant Effect of Peer-Assisted Learning Strategies the Students' Technical Skills as a Group According to their Learning Styles

The computed p- p-values were compared to the significance level at 0.05 to determine the significant effect of peer assisted learning strategies on the students' technical skills according to their learning styles.

Table 15 Regression Analysis on the Level of Utilizing Peer-Assisted Learning Strategies to the Students' Technical Skills as a Group According to Their Learning Styles

Comprehension	B	SE	β	t	p
Constant	3.684	0.904		4.075*	0.000
Jigsaw Method		0.245	0.09	0.368	0.713
Peer demonstration		0.223	0.125	0.561	0.576
Peer-led- discussion		0.233	-0.032	-0.138	0.89
Peer tutoring		0.193	0.12	0.625	0.533
Think Pair- Share		0.215	-0.238	-1.11	0.27
R-squared				.027	
Adjusted R-squared				-.031	
Standard Error of the Estimate		.643			
F(5, 83)				.469	.799
Critical thinking	B	SE	β	t	p
Constant	4.236	1.155		3.667*	0.000
Jigsaw Method		0.313	0.692	2.214*	0.03
Peer demonstration		0.285	0.04	0.14	0.889
Peer led- discussion		0.297	-0.421	-1.417	0.16
Peer tutoring		0.246	-0.07	-0.285	0.776
Think Pair- Share		0.274	-0.379	-1.382	0.171
R-squared				.087	
Adjusted R-squared				.033	
Standard Error of the Estimate		.821			
F(5, 83)				1.605	.168
Problem Solving	B	SE	β	t	p
Constant	4.675	0.946		4.944*	0.000
Jigsaw Method		0.256	0.399	1.561	0.122
Peer demonstration		0.233	-0.4	-1.712	0.091
Peer-led- discussion		0.243	-0.034	-0.141	0.888
Peer tutoring		0.202	0.134	0.666	0.507
Think Pair- Share		0.225	-0.441	-1.963	0.053
R-squared				.105	



Adjusted R-squared				.051	
Standard Error of the Estimate				.672	
F(5, 83)				1.961	.093
Spatial visualization	B	SE	β	t	p
Constant	2.925	1		2.925*	0.004
<i>Jigsaw Method</i>		0.271	-0.067	-0.246	0.806
<i>Peer demonstration</i>		0.247	0.077	0.314	0.755
<i>Peer led- discussion</i>		0.257	-0.333	-1.296	0.199
<i>Peer tutoring</i>		0.213	0.314	1.472	0.145
<i>Think Pair- Share</i>		0.238	0.2	0.844	0.401
R-squared				.044	
Adjusted R-squared				-.013	
Standard Error of the Estimate				.711	
F(5, 83)				1.011	.404

*p < 0.05

Table 15 below presents the results of a multiple regression analysis examining the effect of peer assisted learning strategies in terms of the jigsaw method, peer demonstration, peer led-discussion, peer tutoring, and think pair-share to the student technical skills in terms of comprehension, critical thinking, problem-solving, and spatial visualization as group according to their learning styles.

This implies that using peer assisted learning strategies in terms of the jigsaw method to the students' technical skills in critical thinking only showed a significant effect, as evidenced by the obtained p- value (0.030) which was lower than (0.05) the significance level. On the other hand, students' technical skills in terms of comprehension, problem solving, and spatial visualization have no significant effect. This was supported by the attained p- value (0.713, 0.122, 0.806) above (0.05) the significance level. This further implies that the jigsaw method may mainly not affect their technical skills as group according to their learning styles.

Similarly, peer assisted learning strategies in terms of peer demonstration exhibited no significant effect on comprehension; the gained p-value (0.576) in terms of critical thinking (0.889), in terms of problem-solving (0.091), and (0.755) in spatial visualization were all beyond (0.05) level of significance. This explains further that the peer assisted learning strategies will not define the student technical skills.

On the same note, peer-assisted learning strategies in terms of peer led- discussion exhibited no significant effect on comprehension, the gained p- value (0.890) in critical thinking (0.160), in problem solving (0.091), and (0.199) in spatial visualization were all beyond (0.05) level of significance. This explains further that the PALS will not affect the student' technical skills.

Furthermore, peer assisted learning strategies in terms of peer tutoring exhibited no significant effect on comprehension the gained p- value (0.533) in terms of critical thinking (0.776), in problem-solving (0.507), and (0.145) in terms of spatial visualization were all beyond (0.05) level of significance. This further explains that the peer assisted learning strategies are

insufficient to show the students' technical skills in learning mensuration and calculation.

Lastly, peer assisted learning strategies in terms of think pair-share exhibited no significant effect on comprehension; the gained p- value (0.270) in terms of critical thinking (0.171), in terms of problem-solving (0.053), and (0.401) in terms of spatial visualization were all beyond (0.05) level of significance. This explains further that the peer assisted learning strategies will not affect the student technical skills.

Based on the findings above, it can be deduced that using peer assisted learning strategies will not affect the student technical skills. However, the functionalities of this can be perceived in the students' learning.

4. CONCLUSION AND RECOMMENDATIONS

Given the findings of the study, the researcher concluded the following:

Based on the findings of the researcher, it was concluded in the result of the students' technical skills in terms of comprehension, critical thinking, problem-solving, and spatial visualization showed significant differences before and after using peer assisted learning strategies as a group according to their learning style. Students enhance their technical skills when various peer-assisted learning strategies are used to teach mensuration and calculation. Therefore, the null hypothesis was rejected.

On the other hand, it was concluded in the result that the peer-assisted learning strategies in terms of the jigsaw method only showed a significant effect on the technical skills in terms of critical thinking as a group according to their learning styles, while other indicators do not show the significant effect to the student technical skills. This implies that peer-assisted learning strategies do not affect the students' technical skills according to their learning styles. Therefore, the null hypothesis is accepted.

Based on the conclusion driven, the researcher formulated the following recommendations.



1. The researcher recommended the utilization of Peer-Assisted Learning Strategies as an alternative strategy to teach mensuration and calculation; it is imperative to teachers teaching the subject as it motivates and increases the students' technical skills.
2. The researcher recommended that Peer-Assisted Learning Strategy be used to teach another subject to observe if the technique brings similar outcomes.
3. The researcher recommended that teachers incorporate the aligned students' learning styles in teaching to develop the essential skills and accommodate the students' diverse learning preferences.

REFERENCE

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