Spry Contemporary Educational Practices

ISSN: 2958-6690
Vol. 2, Issue. 2
(Jul-Dec 2023)
Page no: 1- 18

Implementing ELPS: A Innovative Approach to Develop Concepts of Fraction at Primary Level

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Received: 05-Jul-2023
Revised: 18-Jul-2023
Accepted: 25-Jul-2023

Abstract

Introduction: *STEM education is gaining momentum in Pakistan, providing opportunities for advancement and innovation. Primary mathematics education fosters critical thinking and problem-solving in unique situations. An organized abstraction method is needed to grasp math, especially fractions.*

Methodology: *The present research used the ELPS technique to improve primary-level math teachers' and students' grasp of fractions. Using a "Randomized Pretest-Posttest Control Group Design," ELPS was used for six weeks. The study included 285 Rahim Yar Khan pupils from diverse schools in Experimental and Comparison groups.*

Results/Findings: *The ELPS technique had a considerable favorable influence on pupils' fraction learning. Experimental students using ELPS had better arithmetic comprehension than Comparison students using normal math education. This shows that ELPS helps primary school kids understand fractions.*

Future Direction: *This study suggests developing tools and resources to enhance fraction teaching and learning. The unique ELPS method for teaching fractions in primary arithmetic classrooms offers opportunities for mathematics education research and improvement.*

Keywords: *ELPSA framework, fractions, primary level, Fraction Learning*

Introduction

Education is the ever-flowing river that nourishes the landscape of human potential, enabling individuals to cultivate the lush gardens of knowledge and understanding (Smith, 2018). It serves as the compass guiding us through the uncharted territories of life, helping us decipher the intricate map of existence (Jones, 2019). Much like a sculptor crafting a masterpiece from a raw block of stone, education molds our minds, chiseling away the rough edges of ignorance and revealing the exquisite beauty of enlightenment (Davis, 2020). It empowers us with the tools to shape our destinies and dream beyond the horizons of possibility (Brown, 2016). In essence, education is the cornerstone of progress, the beacon of hope, and the catalyst for a brighter future (Clark, 2017).

STEM education is akin to the cosmic force that fuels the engines of innovation, propelling us into a future limited only by the boundaries of our imagination (Johnson, 2017). It is the dynamic fusion of science, technology, engineering, and mathematics that ignites the sparks of curiosity and transforms them into the flames of discovery (Brown, 2018). Just as the roots of a mighty oak tree delve deep into the earth, STEM education anchors us in a foundation of critical thinking and problem-solving skills (Smith, 2019). It's the bridge between the known and the unknown, the catalyst for young minds to explore uncharted realms and craft solutions to the world's most pressing challenges (Jones, 2020). In essence, STEM education is the beacon that guides us towards a future where innovation and creativity know no bounds, and possibilities are as limitless as the stars in the night sky (Clark, 2016).

In Pakistan, STEM education is akin to a rising tide, poised to lift the nation to new heights of progress and innovation. As the country grapples with the challenges of the 21st century, STEM (Science, Technology, Engineering, and Mathematics) education emerges as a beacon of hope and transformation (Khan, 2019). It is the catalyst for nurturing a generation of young minds equipped with the critical thinking and problem-solving skills essential for addressing pressing societal issues and driving economic growth (Ali, 2020). STEM education in Pakistan is not just a classroom endeavor; it is a nationwide movement that

fosters curiosity, ignites creativity, and empowers students to explore the frontiers of knowledge (Hussain, 2018). It's a testament to Pakistan's commitment to harnessing the power of science and technology to unlock a future where innovation knows no bounds and where the youth are the architects of positive change (Ahmed, 2017).

Mathematics is like a grand puzzle, where young minds at the primary level begin to piece together the mysteries of numbers and shapes (Smith, 2019). While it opens doors to a world of logic and problem-solving, it also presents its fair share of challenges. At this early stage, students often encounter difficulties in grasping abstract concepts like fractions or solving intricate word problems (Jones, 2018). These hurdles can seem like towering mountains to climb, but they are also valuable opportunities for growth. Nurturing resilience and a growth mindset in young learners can help them navigate these mathematical mazes (Davis, 2020). It's essential to view these struggles not as barriers but as stepping stones towards developing critical thinking skills that will serve as the foundation for their mathematical journey (Clark, 2016).

Mathematics education in Pakistan at the primary level is like to nurturing the seeds of critical thinking and problem-solving amidst the backdrop of unique challenges (Smith, 2018). While mathematics holds the potential to empower young learners, it often encounters difficulties due to resource constraints and educational disparities. The shortage of qualified teachers, particularly in rural areas, can hinder effective instruction (Jones, 2016). Moreover, the lack of access to quality educational materials and the prevalence of rote learning methods can stifle the development of mathematical thinking skills (Khan, 2015). However, these challenges also serve as catalysts for innovation and the exploration of alternative teaching approaches (Zaidi, Khan & Oad, 2020). Initiatives are emerging to make mathematics education more engaging and accessible, offering hope for a brighter future where all young learners can unlock the beauty and power of mathematics (Ahmed, 2017).

The development of students' deep understanding of mathematical concepts, particularly fractions, often requires a carefully structured sequence of abstraction for effective comprehension (Smith, 2017). In comparison to other subjects, mathematics is often viewed as an abstraction from reality, involving a specific sequence of idea development leading to comprehension (Brown, 2018). This abstraction becomes particularly evident when dealing with fractions. Pamela Liebeck's E.L.P.S theory, proposed in 1984, has been influential in the field of education, particularly in mathematics instruction. The theory

outlines a structured sequence of steps aimed at facilitating deep understanding and conceptual development in learners, with a particular focus on mathematical concepts, including fractions (Ali, Ahmad, & Sewani, 2022).

E.L.P.S stands for:

E: Experience with physical objects: This stage emphasizes the importance of hands-on, concrete experiences. Learners engage with physical objects to develop an initial grasp of the concept. In the context of fractions, this might involve using tangible materials like fraction bars or pie charts to explore the concept of parts and wholes.

L: Spoken Language that describes the experience: The second stage involves verbal communication. Learners articulate their experiences and engage in discussions with peers and teachers. This verbalization helps solidify their understanding of the concept. In fractions, students might use oral language to describe their observations and interactions with fraction representations.

P: Pictures that represent the experience: Visual representations play a vital role in this stage. Learners transition from concrete experiences to using pictures or visual aids to represent the concept. For fractions, this could involve drawing diagrams or using visual models to illustrate fractional relationships.

S: Written symbols that generalize the experience: The final stage focuses on abstraction through written symbols. Learners move from concrete experiences and visual representations to using mathematical symbols and notation to express and generalize their understanding. In the context of fractions, this would involve using fraction notation and mathematical symbols to work with fractions in a symbolic manner.

Liebeck's E.L.P.S theory emphasizes a gradual progression from concrete to abstract, allowing learners to build a strong foundation and a deep conceptual understanding of the subject matter. It has had a significant impact on pedagogical approaches, especially in the teaching of complex topics like fractions in mathematics, by promoting a more holistic and learner-centered method of instruction.

The education system in Pakistan has historically prioritized knowledge transmission over the construction of concepts (Ahmed, 2017). The predominant teaching approach involves direct instruction, a traditional method where teachers introduce new topics through

examples and provide learners with handouts to complete tasks in textbooks and notebooks (Khan, 2019).

Research objectives

Following research objectives were designed

1. Calculate the outcomes of ELPS technique on fractions learning of students at primary level
2. Compare the outcomes of ELPS technique for fractions learning across the gender groups at primary level
3. Assess effect of ELPS technique on fractions learning of students in Government and private institutes at primary level

Research Questions

To achieve the objectives of the study, the researcher developed the following research questions.

1. Do the students' learning outcomes differ if they are taught fractions with ELPS technique as compared to traditional teaching method?
2. Do the students' learning outcomes differ if they are taught addition in fractions with ELPS technique as compared to traditional teaching method?
3. Do the students of Private and Government sector schools differ in their learning of fractions if they are taught with ELPS as compared to traditional teaching method at the primary level in RYK?

Research Methodology

This research was intended to observe the effect of ELPS technique on fraction learning by comparing the post-test score after the treatment was applied. As the research was meant to compare the two groups so researcher followed Randomized Pretest-Posttest Control group Design which is a true experimental design.

The design of research is as followed given below scheme:

The Randomized Pretest-Posttest Control Group Design

Treatment group **R_1 O_1 X O_3**

Control group **R_2 O_2 C O_4**

Where:

R_1: Random Assignment to Experimental Group

R_2: Random Assignment to Control Group

O_1: Pretest; a General Mathematics Assessment Treatment group

O_2: Pretest; a General Mathematics Assessment Control group

O_3: Posttest Student's Fraction Learning Outcome of Experimental Group (Dependent Variable)

O_4: Posttest Student's Fraction Learning Outcome of Control Group (Dependent Variable)

X: Exposure to ELPS technique (Independent Variable)

C: Non-Treated Controlled Group with Traditional Teaching

Pretest was designed from Punjab Textbook (PTB), the textbook of mathematics of grade IV. Initial two units were selected from the taught content of text book. Posttest was developed from third chapter of PTB with the given guideline in accordance with literature. In this study, researcher designed two tests, one was pre-test, and one was posttest. Pre-test was meant to perform random assignment to equalize the control and experimental group.

Population included all the Grade-IV students from Government& private schools of city Rahim Yar Khan during the academic year of 2021-2022.Random sampling was used to select four different schools from city Rahim Yar khan including three Government schools and one private school.

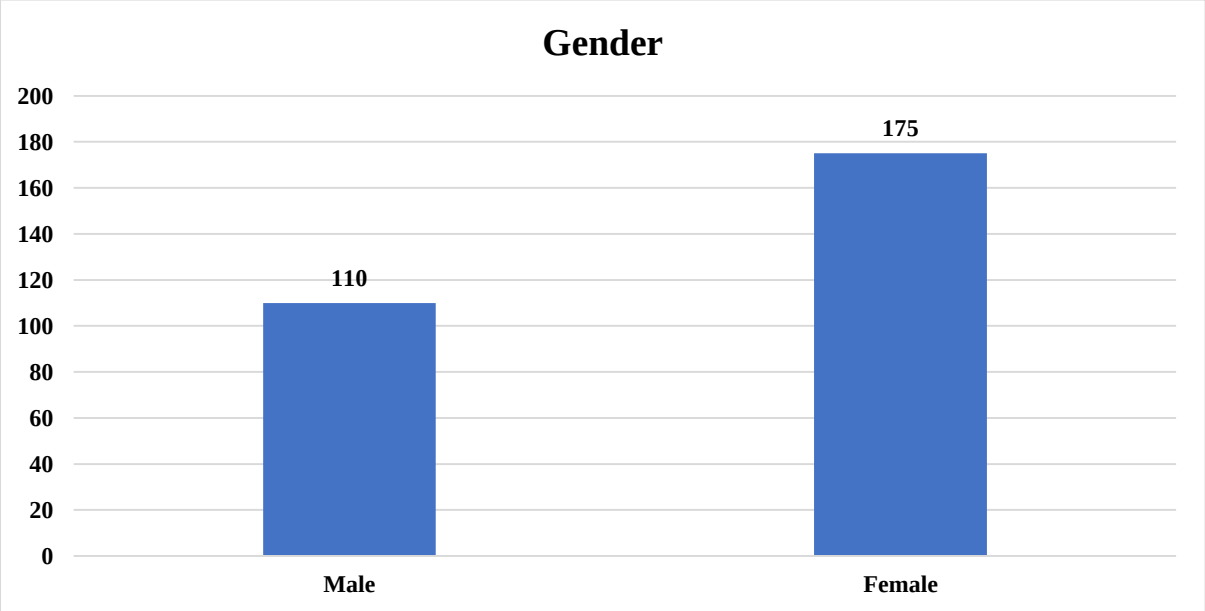
For the instrumentation, researcher identified the content, SLO and cognitive domains, content validity was calculated. CVR= (Ne- N/2) (N/2) where Ne is the number of panelists indicating "essential" and N is the total number of panelists. Lawshe Table was used to determine the numeric value of CVR. In this study the experts' panel included 10 members, according to Lawshe Table, if the CVR was equal to or bigger than .62, then the item in the instrument was accepted. For the construct Validity, Researcher requested to three validators among which two validators asked the researcher to make few corrections like to

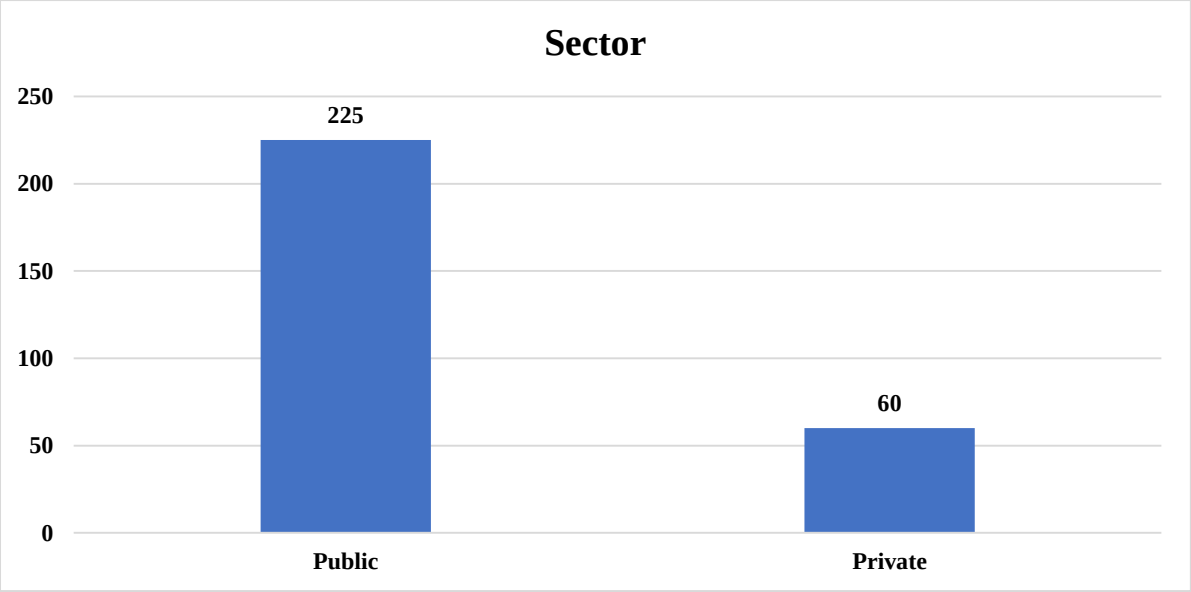
convert a word problem into multiple choice question and one validator asked researcher to add Urdu translation underneath the question statements.

Pilot study was conducted on the 29 students of grade-IV in a private school among which 13 were males and 16 were females. The result of pilot study revealed that time duration was less for attempting the question paper. So, 30 minutes were added for all the students to complete the test. It was also observed that students needed one extra page for doing rough work, which was also added with the test. Short comings of the research instrument were modified after consultation with advisors, which helped researcher to conduct the research properly and to interpret results correctly. The internal consistency of items was determined using Split-Half Reliability method. The split-half reliability was measured by calculating the Cronbach's Alpha in SPSS. The value of Cronbach's Alpha was 0.865 depicting that item was internally consistent.

Research was implemented on the Experimental group for six weeks, data was collected by conducting the test on both Experimental and control groups in order to compare the outcomes. Data was collected in the form of achievement scores of scores, data was organized and fed into SPSS. The researcher analyzed data through relevant statistical tests and formula as; ttest, frequency, mean score, percentage, standard deviation, and value of significance etc

Data Analysis and discussion





Descriptive statistics

Descriptive data was calculated by using SPSS to view the measure of central tendency, dispersion, and distribution of score among the students who were taught with ELPS technique (Experimental group) and students who were taught with traditional teaching method (Control group)

Table 4.1 Descriptive statistics of Achievement score in Control& Experimental Group for Fraction Learning

Group	Central Tendency			Dispersion		Distribution	
	Mean	Median	Mode	SD	Range	Skewness	Kurtosis
Control	30.7	31.5	32	4.5	21.7	-0.41	-0.22
Experimental	36.5	37	40	2.8	21.8	-0.25	13.3

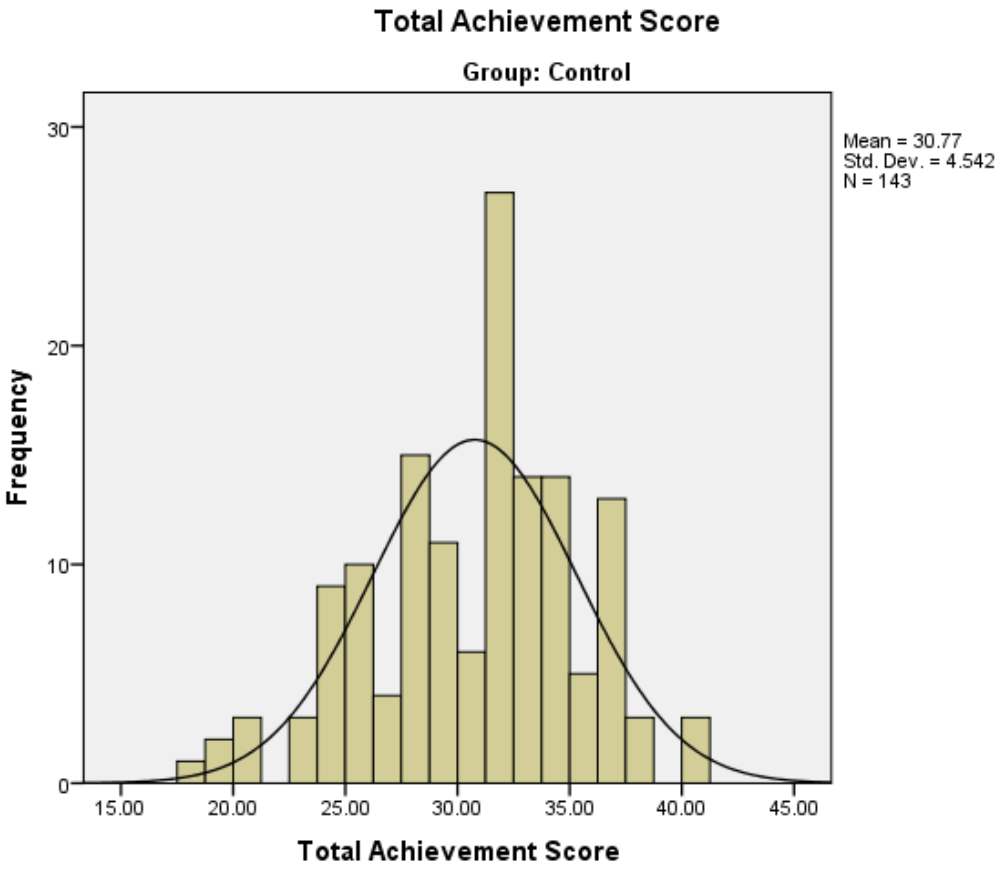


Figure 4.1 Total Achievement score of Control Group for Fraction Learning

The descriptive analysis of Student's Achievement Score in control group and experimental group is presented in Table 4.2 which represents 30.77 mean of Achievement Score in control group and mean Achievement Score of experimental group is 36.59. This explains that students of experimental group achieved higher score than control group students. Standard deviation of control group is 4.54 which is greater than standard deviation of experimental group i.e., 2.82 which shows that most of students of experimental group scored nearer to mean as compared to control group. Figure 4.1 & 4.2 represents data of experimental group is negatively skewed with -2.5indicating great numbers of larger values which means that many students achieved higher scores as compared to students of control group with skewness -0.41. Kurtosis of experimental group is highly positive 13.3 showing that distribution curve is pointy and great numbers of students achieved highest score taught with ELPS techniques as compared to students of control group with kurtosis -0.22.

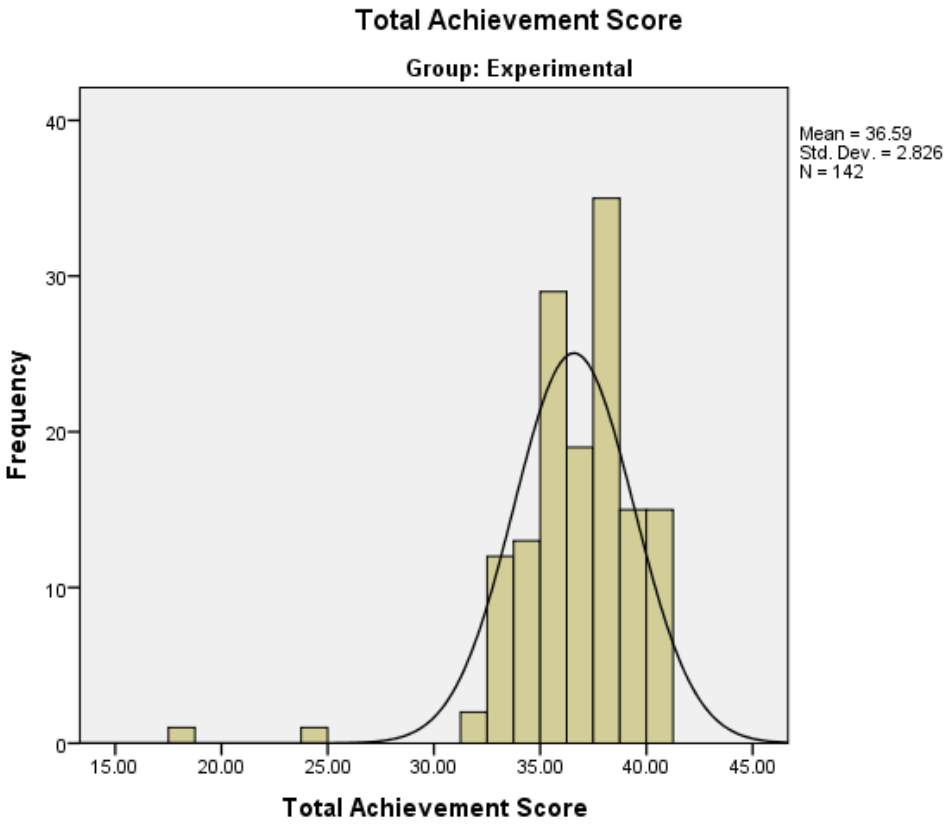


Figure 4.2 Total Achievement score of Experimental Group for Fraction Learning

Table 4.2 Results of Independent Sample t-Test for Achievement Score in Experimental and Control Group

Levene's Test				t-test for Equality of Means			
	Sig.	t	df	Sig. (2-tailed)	Mean Diff	Std. Error Diff	Cohen's d
Total Achievement score	.000	12.9	237	.000	5.81	.447	1.5

The table 4.2 shows that Levene's test shows that [t (237) = 12.9, p=.000] which is smaller than significance value 0.05, presenting that equality of variance between two groups was not assumed. Accordingly, the sig value of t-test is p=.000 (p<0.05) shows that score of experimental group and control group are significantly different from each other. Therefore, the hypothesis **H1^{0}** "There is no significant difference of students' Fraction score at grade-IV level whether they are taught with ELPS technique or with traditional method" is rejected. Hence proving that alternative hypothesis **H1^{a}** "The students' Fraction score differs if they are taught with ELPS technique or traditional teaching method at grade-IV level" is accepted. Table 4.2 shows t-value is 12.9 which is relatively larger than 0 and represents that difference

of variance between two groups is large. Standard error difference is .448 which shows that there is no uncertainty of the difference between means of two groups. Mean Difference is 5.8, showing that significant difference of scores between two groups exists is large. Cohen's d value is 1.5 which shows that difference between two means is larger than 1 standard deviation. The eta square was calculated to determine the magnitude of difference between two groups. The eta squared value was 0.34 which low as it is less than 1.

Table 4.3 Results of Independent Sample t-Test for Addition of Fraction Achievement Score in Experimental and Control Group

Levene's Test		t-test for Equality of Means					
Addition in Fraction score	Sig.	t	df	Sig. (2-tailed)	Mean Diff	Std. Error Diff	Cohen's d
	.000	9.62	233	.000	2.27	.236	1.14

In table 4.3, Levene's test shows that [t (233) = 9.6, p=.000] is less than 0.05, indicating that two groups did not share variance. The sig value of t-test (p=.000, p<0.05) indicates substantial differences in scores between experimental and control groups. Thus, hypothesis H20 "There is no significant difference of students' Fraction addition score at grade-IV level whether they are taught with ELPS technique or with traditional method." is rejected. Thus, alternative hypothesis H2a "The students' fraction addition score differs if they are taught with ELPS technique or traditional teaching method at grade-IV level." is accepted. Table 4.3 indicates a 9.62 t-value, which is above 0.

Table 4.4 Results of Independent Sample t-Test for Fraction Subtraction Achievement Score in Experimental and Control Group

Levene's Test				t-test for Equality of Means			
Subtraction in Fraction score	Sig.	t	df	Sig. (2-tailed)	Mean Diff	Std. Error Diff	Cohen's d
	.000	7.01	234	.000	1.39	.198	0.83

The table 4.4 shows that Levene's test shows that [t (234) = 7, p=.000] which is smaller than significance value 0.05, presenting that equality of variance between two groups was not assumed. Accordingly, the sig value of t-test is p=.000 (p<0.05) shows that score of experimental group and control group are significantly different from each other. Therefore, the hypothesis **$H3^0$** "There is no significant difference of students' Fraction subtraction score at grade-IV level whether they are taught with ELPS technique or with traditional method" is rejected. Hence proving that alternative hypothesis **$H3^a$** "The students' Fraction addition

score differs if they are taught with ELPS technique or traditional teaching method at grade-IV level." is accepted. Table 4.4 shows t-value is 7.01 which is relatively larger than 0 and represents that difference of variance between two groups is large. Standard error difference is .198 which shows that there is no uncertainty of the difference between means of two groups. Mean Difference is 1.39, showing that significant difference of scores between two groups exists. Cohen's d value is 0.83 which shows that difference between two means is large. The eta square was calculated to determine the magnitude of difference between two groups. The eta squared value was 0.14 which low as it is less than 1.

Table 4.10 Results of Independent Sample t-Test for Fraction Achievement Score in Gender Groups

Levene's Test				t-test for Equality of Means			
	Sig.	t	df	Sig. (2-tailed)	Mean Diff	Std. Error Diff	Cohen's d
Scores in Gender groups	.513	.132	283	.895	0.76	.581	0.0

The table 4.10 shows that Levene's test shows that [t (283) = .132, p=.513] which is larger than α=0.05, presenting that equality of variance between two groups was assumed. Accordingly, the sig value of t-test is p=.895 (p>0.05) shows that score of male and female groups are not significantly different from each other. Therefore, the hypothesis **H4^{a}** "The students' Fraction score differs across the gender groups if they are taught with ELPS technique or traditional teaching method at grade-IV level." is rejected. Hence proving that null hypothesis **H4^{0}** "There is no significant difference of students' Fraction score across the gender groups at grade-IV level whether they are taught with ELPS technique or with traditional method." is accepted. Table 4.10 shows t-value is 0.321 which is relatively less than 0 and represents that there is no significant difference of variance between male and female groups. Standard error difference is .581 which shows that there is no uncertainty of the difference between means of two groups. Mean Difference is 0.76 showing that no significant difference of scores between two groups exists as Cohen's d value is also 0. The eta square was calculated to determine the magnitude of difference between two groups. The eta squared value was0.0009 which low as it is less than 1.

Table 4.5 Results of Independent Sample t-Test for Fraction Addition Achievement Score in Gender Groups

Levene's Test	t-test for Equality of Means						
	Sig.	t	df	Sig. (2-tailed)	Mean Diff	Std. Error Diff	Cohen's d
Fraction Addition Scores in Gender groups	.872	-1.28	283	.199	-.359	.279	0.17

Table 4.5 demonstrates that Levene's test (t (283) = -1.28, p=.872) exceeds α=0.05, indicating that two groups share equal variance. The sig value of t-test (p=.199, p^0.05) indicates no significant difference in scores between male and female groups. Thus, hypothesis H5a "The students' fraction addition score differs across gender groups if they are taught with ELPS technique or traditional teaching method at grade-IV level." is rejected. Thus, null hypothesis H50 "There is no significant difference of students' Fraction addition score across gender groups at grade-IV level whether they are taught with ELPS technique or with traditional method." is accepted. Table 4.5 indicates a t-value of -1.28, indicating no significant variance between male and female groups. The standard error difference between two groups' means is.279, indicating no ambiguity. Mean Difference is -3.59 and Cohen's d value is 0.17, indicating the two groups' scores are not substantially different. To measure group differences, the eta square was calculated. Eta squared was 0.008, which is below 1.

Table 4.6. Results of Independent Sample t-Test for Fraction Subtraction Achievement Score in Gender Groups

Levene's Test	t-test for Equality of Means						
	Sig.	t	df	Sig. (2-tailed)	Mean Diff	Std. Error Diff	Cohen's d
Fraction subtraction Scores in Gender groups	.540	1.92	283	.055	.423	.219	0.22

Table 4.6 demonstrates that Levene's test (t (283) = 1.92, p=.540) exceeds α=0.05, indicating that two groups share equal variance. The sig value of t-test (p=0.55 (p�0.05) indicates no significant difference in scores between male and female groups. Thus, hypothesis H6a "The students' fraction subtraction score differs across gender groups if they are taught with ELPS technique or traditional teaching method at grade-IV level." is rejected. Thus, null hypothesis H60 "There is no significant difference of students' Fraction subtraction score across the gender groups at grade-IV level whether they are taught with ELPS

technique or with traditional method." is accepted. Table 4.6 reveals a t-value of 1.92, which is close to 0 and indicates no significant variance between male and female groups. A standard error difference of.219 indicates no uncertainty in the difference between two group means. The mean difference is 0.423 and Cohen's d value is 0.22, indicating that scores are not significantly different between groups. To measure group differences, the eta square was calculated. The eta squared value was 0.01 low.

Table 4.7 Results of Independent Sample t-Test for Fraction Achievement Score between Government and Private Schools

Levene's Test		t-test for Equality of Means					
Total Achievement school sector	Sig. .006	t 1.19	df 78	Sig. (2-tailed) .236	Mean Diff .960	Std. Error Diff .804	Cohen's d 0.17

Table 4.7 shows that Levene's test (t (78) = 1.19, p=.006) does not presume group variance equality (< α=0.05). T-test sig value (p=0.236, p<0.05) shows no significant difference in scores between government and commercial groups. Therefore, hypothesis H7a "The students' Fraction score differs among school sector if they are taught with ELPS technique or traditional teaching method at grade-IV level." is rejected. The null hypothesis is H70. We acknowledge "There is no significant difference of students' Fraction score among the school sector at grade-IV level whether they are taught with ELPS technique or with traditional method." Table 4.7 shows a t-value of 1.91, close to 0, indicating no variance difference between government and private schools. No uncertainty exists in the difference between two group means with a standard error difference of.804. A mean difference of 0.960 indicates no significant score difference between groups. Cohen's d is 0.17, showing little group difference. Group differences were measured using eta square. Eta squared was 0.004, below 1.

Conclusions

The conclusions were drawn in the context of research questions. There were seven research questions which were analyzed statistically, and following conclusions were made against research questions.

1. ELPS (Experience, Language, Picture & Symbol) technique has shown significant effect on students learning of fraction in the experimental group at primary level in

schools of RYK. Students taught with ELPS technique secured more achievement score as compared to students taught with traditional teaching method.

2. ELPS (Experience, Language, Picture & Symbol) technique has shown significant effect on students learning of addition in fraction at primary level in RYK. The students taught with ELPS (Experience, Language, Picture & Symbol) technique have shown more Achievement scores.
3. ELPS (Experience, Language, Picture & Symbol) technique has shown significance effect on students learning of subtraction in fraction at primary level in RYK.
4. Learning of Fraction with ELPS (Experience, Language, Picture &Symbol) technique has shown NO significant difference between male and female students at primary level.
5. Learning of Addition in Fraction with ELPS (Experience, Language, Picture &Symbol) technique has shown NO significant difference between male and female students at primary level.
6. Learning of Subtraction in Fraction with ELPS (Experience, Language, Picture &Symbol) technique has shown NO significant difference between male and female students at primary level.
7. Learning of Fraction with ELPS (Experience, Language, Picture &Symbol) technique has shown NO significant difference between Government and Private school students at primary level.

Discussion

Results of current study revealed that ELPS technique has shown positive effect on student's learning of addition in fraction at primary level in RYK. According to data analysis, there was significant difference of scores between the group taught with ELPS technique and group taught with traditional teaching method for learning of addition in fraction which was in line with benchmark for learning success according to (Sukasno, Friansah and Purwasi 2018). Results of the current research also was in accordance with the results of research conducted by Arifin (2015) which showed significant results of students making relationships between concepts and presenting concepts in various mathematical representations. It confirms that treatment by using ELPSA framework can increase understanding of mathematical concept significantly among students for learning as it was revealed by the results of (Johar& Hajar, 2016) that students were able to connect previous personal

experience with the new learning with the help of ELPSA framework which gave chance to students for expressing their own outcomes and developing visual thinking for presenting the ideas symbolically. Such results were consequence of teaching practice with ELPS which allows students to get engaged in mathematical associated discussions for significance learning (Oad, Khan & Khoso, 2020).

Based on the results of this study it was found that ELPS technique has effect on student's learning of subtraction in fraction at primary level in RYK. The results of current study are in accordance with (Lowrie & Patahuddin, 2015); (Febrilia &Winarti, 2018). They found that ELPSA helped students to reinforce concepts by providing opportunities to scaffold understanding of mathematical concepts and students became able to identify and apply their mathematics knowledge to the new situations. The results of study are also in line with findings of (Sukasno, Friansah & Purwasi, 2018) they described that ELPS technique is helpful to attain mastery in learning fractions. Results of the study by Kor, et al., (2019) also suggested that representations of unfamiliar fractions by the high achievers demonstrated development of mental referents for fractions as students become able to visualize and perform operations mentally with larger value numerators and denominators after the exposure with ELPSA technique ((Imran & Akhtar, 2023).

Recommendations

1. This is suggested that ELPSA model may be used to teach any subject specifically mathematics due to its long-time learning effect among students at primary level.
2. Duration of learning may be increased for fraction teaching through ELPS technique as it is activity based and needs more time to teach than a traditional teaching method.
3. These findings are useful for teachers who prepare teaching activities to enhance fraction sense among the students so teachers must consider ELPSA model while preparing the lesson planner.
4. It is recommended to school heads, coordinators, professional educationists, and trainers to incorporate ELPS technique for developing mathematical concept in student at primary level and for that purpose, ELPS training may be conducted to accomplish this task.
5. Number of questions can be increased by the future researchers to enhance the scope of study so that more insights might be gained for students' sense of fraction.

6. It is recommended to researchers and policy makers of institutes to create and develop tool kit for mathematics in the light of content of textbook for enhancement of fractional concepts among students at primary level.
7. It is suggested that teacher may focus easy and understandable language during conduction of fractional concepts especially in word problems because student feel difficulty in identifying the fraction operation.
8. Adequate use of ELPS might help teachers to share tricks for identifying the fraction operations.

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