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Effectiveness of Literacy and Numeracy Drive Application: An Analytical Study Based on Teachers' Perceptions and Students' Learning Achievements in Punjab

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Imtiaz Akhter[1*]
Faculty of Education, Department of Distance
Non-Formal & Continuing Education
Allama Iqbal Open University (AIOU), Islamabad – Pakistan
imtiazakhter6@gmail.com

Dr. Muhammad Ajmal[2]
Faculty of Education, Department of Distance
Non-Formal & Continuing Education
Allama Iqbal Open University (AIOU), Islamabad – Pakistan
drajmal@aiou.edu

*Corresponding Author

Authors' Biography

[1] **Imtiaz Akhter** is currently a Research Scholar of Education at the Distance, Non Formal & Continuing Education, Allama Iqbal Open University in Islamabad – Pakistan. He received his master's degree in Education from the International Islamic University (IIUI) in Islamabad – Pakistan.

[2] **Dr. Muhammad Ajmal** is currently an Associate Professor and Chairman at the Distance, Non-Formal & Continuing Education, Allama Iqbal Open University in Islamabad – Pakistan. He obtained his Doctorate in Education from the National University of Modern Languages in Islamabad – Pakistan.

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Abstract

The study's objective was to discover head teachers' and teachers' perceptions about the role and students' achievement trends in Literacy and Numeracy Drive (LND) data in mathematics and English except Urdu. LND as an application was a step taken by the Government of Punjab, Pakistan, which started in 2015 and continues in the government primary section schools for grade three students of the province. The population comprised all primary section heads and teachers in 53 boy's public schools, consisting of 390 head teachers and teachers using a stratified sampling technique. The study's nature was quantitative and involved a survey method for data collection. The achievements of students' trends were analysed. The data collected were analysed using Mean as statistics with the help of the Statistical Package for Social Sciences (SPSS). The data revealed that head teachers and teachers have positive perceptions of English and mathematics, with high perceptions of mathematics. The students' trends were also more positive in mathematics. It was recommended that mathematics in LND is more favourable than English. A study may be conducted for boys and girls separately by considering all three subjects of LND in Punjab province.

Keywords: Literacy & numeracy drive application, Students' learning outcomes, Students' learning achievements, Teachers' perceptions

INTRODUCTION

In 2015, the government of Punjab, with the help of the Punjab Information Technology Board (PITB), collaborated with the Program Monitoring and Implementation Unit (PMIU) to launch a literacy and numeracy program for grade three. This task was for all government-funded schools in the Punjab. The objective was to examine grade three students' school performance in English, Urdu, and math (Ajmal, et al., 2023). In recent years, regarding the education reforms in the province of Punjab, the focus has been on infrastructure enhancement, retaining and increasing enrollment, improving students' learning outcomes and improving the quality of education. Essential training is the foundation of a future vocation for students in their down-to-earth lives. Literacy and numeracy abilities are imperative for a student's essential education. Fundamental literacy and numeracy abilities foster our comprehension for better correspondence and tackle the tough spots with our better standpoint. LND's student learning outcomes (SLOs) comprise grade two and grade three level learning results to assess the student's way of learning at grade three (Khalid, et al., 2019).

English as a Foreign Language in LND grants sound and cooperative progress toward students' learning. By utilizing LND, students can participate in a growing experience compared to conventional learning. LND affects the students' positive and responsive behaviour. Present-day education and learning instruments have become more viable and supportive, and they likewise work in the interest of educators (Habib, et al., 2021). The numerical skills depend on investigating the content region that prompts the particular idea of literacy and numeracy. The concept of the review upgrades the mastering abilities, and it advises getting more significant ideas with the assistance of this concept and furthering ideas about the literacy and numeracy abilities of the students. In literacy conversations and learning of ideas about subjects such as math, specific implications must be given and assigned to words, expressions and images (Shanahan & Shanahan, 2012). Psychology plays a crucial part in the learner's education; the educator needs to get the ideas free from numerical abilities by relating them with the student's way of life so the ideas can be evident in the student's brains.

Though some studies are there on literacy and numeracy for early-age students to develop their ideas about future functional life, there is still a need to explore more about it in our country. The significant concerns for this study are the finding concepts of head teachers, teachers, and students' accomplishment patterns towards the suitability of LND after its execution. How head teachers and their educators think the appropriateness, concerns and utility of LND about them at their level can be checked only through a scientific way of finding and investigating ground realities.

Problem Statement

Education and Numeracy Drive (LND) is not an older idea, given its significance in Punjab, Pakistan. It was initiated in 2015 by the administration of the Punjab School Education Department (SED), with the assistance of the Punjab Information and Technology Board (PITB) (Ajmal, et al., 2023). Research studies in the field could be more extensive; therefore, research is needed to find various viewpoints about fundamental concepts of literacy and Numeracy at the primary level in the province of Punjab. The fundamental reason for primary education is to make a base for students to effectively take part in the lower level of educational experience. The focal point of this research study was finding the perceptions of head teachers and teachers about the role of LND and students' learning achievements for session 2019-2020 of learners in district Chakwal of province Punjab, Pakistan.

Objectives

- To find out the perceptions of head teachers and teachers regarding the role of Literacy and Numeracy Drive (LND) in grade three at the primary level in government boys' schools.
- To analyse the trends of students' achievements based on LND data in English in grade three at the primary level in government boys' schools.
- To analyse the trends of students' achievements based on Literacy and Numeracy Drive (LND) data in mathematics in grade three at the primary level in government boys' schools.

Research Questions

- What are the perceptions of head teachers regarding their role in achieving Literacy and Numeracy Drive (LND) objectives in grade three at the primary level in government boys' schools?
- What are the perceptions of teachers regarding their role in achieving Literacy and Numeracy Drive (LND) objectives in grade three at the primary level in government boys' schools?
- What are students' achievement trends based on LND data in English subjects at the primary level?
- What are students' achievement trends based on LND data in mathematics subjects at the primary level?

Framework of the Study

The framework of the study can be viewed through the following diagram:

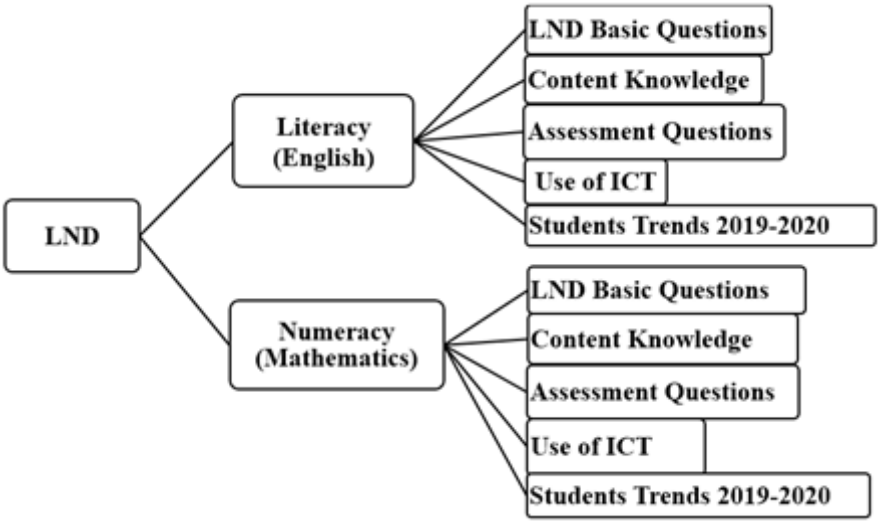

Fig. 1. Students' Achievement Trends through LND Application

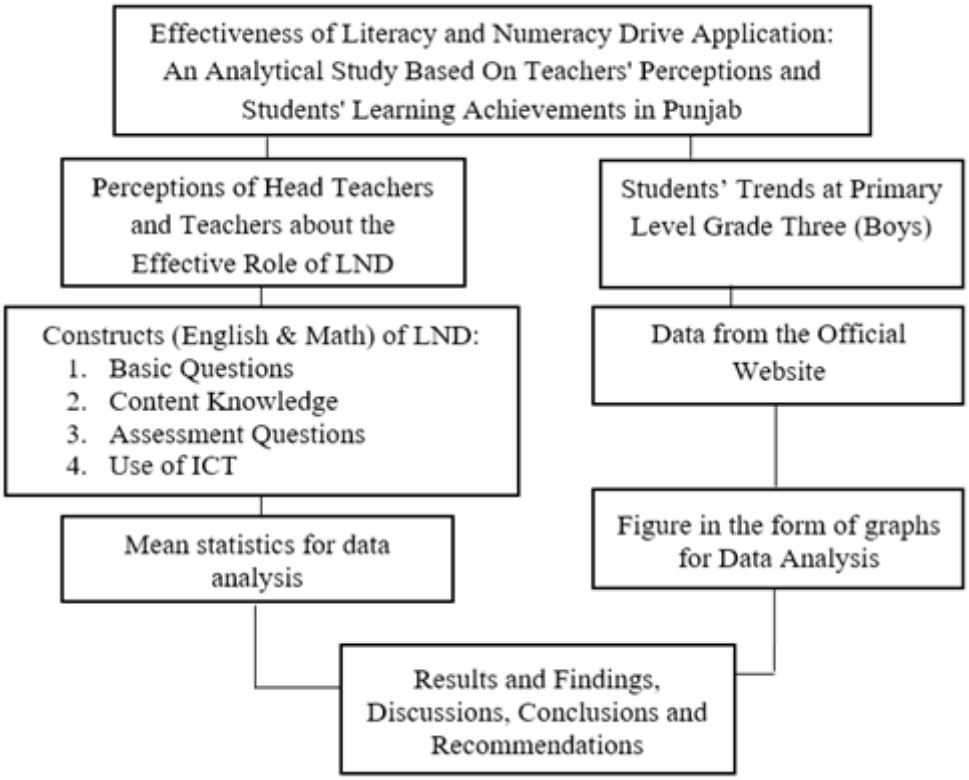

Fig. 2. The Framework Regarding Head Teachers and Teachers' Perceptions

LITERATURE REVIEW

Enhancement in literacy and numeracy abilities at an early age are essential and assume a fundamental part in fostering individuals' work and impact on the general public and their lives later in life (Shomos, 2010). Literacy and numeracy skills and abilities are human resources that help people meet different life challenges. The general accomplishments can be expanded by upgrading the essential literacy and numeracy abilities to ensure youngsters can satisfy the forthcoming guidelines in various fields of life.

Importance of Literacy

The field of education is continuously evolving with the latest research, practices, and policies led by educational professionals to provide a superb quality education to America's youth. The literature shows that those in classrooms have had disciplinary literacy skills since 2000 (Shanahan & Shanahan, 2008). Professionals and educators who comprehend the critical role of disciplined literacy in classrooms also consider it necessary to implement certain practices that meet time needs (Poyner, 2018).

Importance of Numeracy

UNESCO's (2004) approach suggests that math literacy includes excessive ideas rather than simple numeracy. Low mathematics skills and abilities cause people to experience social exclusion and limited travelling opportunities. The foundation of numerical proficiency is the investigation of content field perusing, which prompts the misgiving of disciplined education abilities (Shanahan & Shanahan, 2012). To promote attempts to develop the learners' numeracy-acquiring abilities and their results in meeting the objectives, the singular schools can substantiate themselves as the best places for deciding about the resources and supporting subtleties expected to adapt to the prerequisites (Masters, 2009). While gaining Numerical information, the substance area of numerical proficiency is a recommendable idea. The instructors can give the math literacy about culture, persuasive and instructional methods significant variables for numerical proficiency (Buehl, 2023).

Importance of English

There are four core standards in English: reading, writing, oral communication, and formal and lexical

(pronunciation development, nouns, and pronouns) in the LND materials. The learning outcomes also include listening, speaking along with language comprehension with the help of grammatical concepts (Khalid, et al., 2019). Accordingly, following an evaluation aids doubt should be wiped out for further developed LND results of tests on practices based. The learning conduct of city and rural living is different. Teachers of English experience difficulty showing the upsides of understanding at the stage of class three; there needs to be more time for teachers to plan the test with different subjects taught in LND (Haider, 2021).

Importance of Mathematics

The learners with great math ideas have sufficient proficiencies in mathematical reading skills, better understanding, and participation in complex ideas by utilizing jargon reasonable to these ideas (Buehl, 2023). In mathematics, the learning outcomes are set, such as number concepts, number operations, fractions, measurements, geometry, and information handling (Khalid, et al., 2019).

Importance of Information and Communication Technology

The need for health-related abilities makes individuals use less Information and Communication Technology (ICT). Numeracy and computer-related abilities have a solid connection; the low numeracy gifted individuals have less propensities towards computer use than those with higher capabilities in numeracy abilities. Low-pay individuals' education and numeracy also influence their admittance to Internet technology (Jensen, et al., 2010). The individuals with lower math proficiency levels who utilize the internet are not precisely those with higher math-related abilities; the latter are considerably more developed in utilizing the internet to look for data rather than stimulations. The educational sense encounters are firmly connected with proficiency in various math-related capacities and upgrading internet utilization designs at more significant level utilities (Peter & Valkenburg, 2006). The conventional classroom permits correspondence among educators and learners in the classroom's educational environment just; however, the learning approaches have gone a long way past this office where there are Android applications and thus numerous other computer-related skills, for example, multimedia with sound and video capabilities, accessible as a decision for better learning. The positive utilization of advanced innovation is helpful to learners to work on their inspiration for better scholarly growth experiences of their subjects (Wang et al., 2016).

Importance of Literacy and Numeracy Drive

The literacy and Numeracy Drive (LND) application's significance was paid for by the Punjab government in 2015 to enhance students' learning abilities with the help of information technology. The learning outcomes of grades two and three are included in this drive to promote the students learning in the subjects of Urdu, English and Mathematics of grade three level students in all government schools throughout the province. LND sets the benchmarks for all three subjects. The score set target is 80% for each subject. There are four core standards in English: reading, writing, oral communication, and formal and lexical (pronunciation development, nouns, and pronouns). In Mathematics, the learning outcomes are set, such as number concepts, number operations, fractions, measurements, geometry and information handling. In Urdu, the learning outcomes are reading, writing, listening, and speaking, along with language comprehension with the support of grammatical concepts (Khalid, et al., 2019).

Teaching and learning practices are of core importance in developing a more democratic learning process and the learner's skills for participating in it. Learning success is identified by developing work that evaluates progress and achievements, learning aims, and ways of evaluating and recording these aims (Ward & Edwards, 2002). The emphasis on the nature of instruction is that giving quality education to learners will help them develop and have superior possibilities throughout everyday life. The developing field is education, constant with the most recent examinations, practices, and approaches driven by instructive experts to give sublime quality training to America's young ones (Shanahan & Shanahan, 2008). The experts and teachers who fathom the significant job of trained education in classrooms additionally think of it as necessary to execute certain acts of time needs (Poyner, 2018). All global organizations and

associations are resolved to work with education quality by upgrading essential literacy and numeracy abilities. Many studies explain that the condition of Pakistan could be much better at the primary level of education. The learners are confronting issues in basic literacy and numeracy abilities and proficiencies (Bilal, et al., 2021).

The government pondered the same issues in basic literacy and numeracy skills and took this step to enhance students' learning skills with the help of LND applications using ICT. A tablet is used to help the students in learning as well. Their assessment is also made through this tablet, but a third party, i.e., the Program Monitoring and Implementation Unit (PMIU), which constantly coordinates with the school education department (SED) to update about the students' achievement through the results generated on tests conducted in the whole province. These results indicate the students' trends every month. So, the LND application becomes a vital part of the evaluation process through continuous assessments for the academia of the learners at grade three levels.

METHODOLOGY

This study followed quantitative research - the study's design was to collect and acquire the required data. One or more than one trait of a particular population that is described with the help of a tool through data collection is called a survey (Mills & Gay, 2016).

Population & Sampling

The study included 390 primary section head teachers and teachers working in government boys' primary sections schools in Tehsil Lawa, District Chakwal, the province of Punjab (Pakistan). Fifty-three schools were identified, and 53 head teachers and 337 teachers in class three participated in the study. Stratified random sampling technique was used to collect data from the sample, including heads and teachers in the study. In stratified sampling, the subgroups are made in the population named strata. Suppose a researcher's study aims to compare the population's observations, attitudes, and perceptions, which can be divided into subgroups in its sample. In that case, the best way is the stratified random sampling (Mills & Gay, 2016). Thus, in this study, the sample included two strata: head teachers and teachers of government primary section schools. There were 53 head teachers and 337 teachers as population in the study. The sample of this research study included 30% of 53 head instructors, which were 16, and 30% of the 337 educators, which were 101, with 117 sample units by the use of the technique of stratified sampling, which was most suitable for the study.

Research Instrument

The official "Literacy and Numeracy Drive Monthly Spot Assessments" websites were used to collect data regarding student achievement trends. The instrument was a questionnaire developed with the help of already used in the studies (Ishaq, et al., 2019; Khalid, et al., 2019) having a five-point Likert Scale for heads and teachers for their perceptions about LND role and students' monthly results data to analyze their trends of achievements English and mathematics.

Validity & Reliability

The validity of the content is vital to measuring the construct appropriately. The questionnaire was made with the assistance of already benefitted and utilized in the studies (Khalid, et al., 2019; Ishaq, et al., 2019). The expert's opinion of the field also checked the instrument's validity. Two specialists with skills in the field were nominated and given to check and recommend significant changes in the instrument to decide the validity. The revisions were made to the instrument as per the amendments suggested by the specialists. It is the consistency of an instrument for estimating the qualities of a construct used in a study (Polit & Beck, 2004). Cronbach's Alpha is an inward measurement determined by the mean of interconnection for questions with theoretical connectedness. The instrument's reliability was checked for 117 sample units, including 16 heads and 101 teachers. Cronbach's Alpha was applied for the instrument's reliability estimation of 0.984. The pilot study was conducted with ten sample units, two head teachers

and eight teachers first. It was analysed for the validity and reliability of the tool, which was developed with the help of previous studies and experts' opinions. These were similar types of respondents to those included in the main study. The instrument's reliability was measured through Chronbach's Alpha, which resulted in 0.990. This pilot study was taken to check the instrument's reliability separately for English and Mathematics because the study included mathematics-related questions as new ones.

Data Analysis

The analysis was conducted in two stages. First, the data collected through questionnaires from LND teachers and their heads was analysed using the Statistical Package for Social Sciences (SPSS) to compare heads and teachers with inter- and intra-approaches. Second, the trends students achieved were analysed in graphs or figures via English and Math subject scores as part of LND in Session 2019-20 for every working month.

RESULTS & FINDINGS

The five-point Likert scale was used and divided into five categories: Strongly Disagree (SDA=1), Disagree (DA=2), Neutral (N=3), Agree (A=4) and Strongly Agree (SA=5). The data were analysed with the help of the quantitative approach method for this study. There were two stages for data analysis. The first division included analysis through SPSS to find the mean of data for perceptions of head teachers and teachers about LND's role, while in the second stage, students' achieved trends with the help of graphs/figures were analysed.

Indicator-wise Analysis of Perceptions about the Role of LND in English

The responses analysis of the answers to statements from head teachers and teachers asking for LND's indicators in the subject of English is here, as explained in the following statistical tables.

Table 1
Primarily questions /Statements for English

Statements (1-4)	Head Teacher and Teacher	N	Mean
LND is appropriate for learning English reading.	Head Teacher	16	4.13
	Teacher	101	3.78
It develops students' English learning skills.	Head Teacher	16	4.13
	Teacher	101	3.63
Its teaching material develops interest in English teaching and learning.	Head Teacher	16	4.13
	Teacher	101	3.68

The above table shows that the Mean for basic questions for the subject of English asked from head teachers and teachers showed that head teachers' (Mean= 4.13) was the greatest and smallest, while the teachers' (Mean=3.78) was the greatest and (Mean= 3.63) recorded the lowest. It indicates that both head teachers and teachers have agreed or strongly agreed about the suitability, interests of students and teaching material used. Head teachers' responses are more favourable than teachers'.

Table 2
English Knowledge of Content

Statements	Head Teacher and Teacher	N	Mean
LND helps develop English subject students' interest in learning comprehension.	Head Teacher	16	4.19
	Teacher	101	3.67
The content to learn English is suitable in it.	Head Teacher	16	3.69
	Teacher	101	3.57
English comprehension is learnt quickly through it.	Head Teacher	16	3.56
	Teacher	101	3.46
Enough content is provided for learning comprehension in English.	Head Teacher	16	3.50
	Teacher	101	3.47
The content helps learn Simple Tenses (Past, Present and Future).	Head Teacher	16	3.69
	Teacher	101	3.49

Table 2 shows that the Mean for knowledge of content questions for the subject of English asked from head teachers and teachers showed that the head teachers' responses (Mean= 4.19) were the greatest and the lowest (Mean= 3.50), while the teachers' responses (Mean=3.67) were the greatest and (Mean= 3.46) recorded the lowest. This indicates that both head teachers and teachers have agreed or strongly agreed in their responses about the content, comprehension, and simple tense of students in content knowledge. Head teachers' responses are more favourable than teachers'.

Table 3
Questions of Assessment

Statements	Head Teacher and Teacher	N	Mean
The assessment method applied in LND about English subjects is appropriate for the students.	Head Teacher	16	4.06
	Teacher	101	3.50
Its assessment can improve methods of English teaching and learning.	Head Teacher	16	3.81
	Teacher	101	3.58
The assessment helps minimize shortcomings in the comprehension learning of students.	Head Teacher	16	3.75
	Teacher	101	3.47
Assessment through the MEA Software Application is better than usual assessment in English.	Head Teacher	16	3.56
	Teacher	101	3.24

Table 3 shows the mean for the assessment questions for English subject asked from head teachers and teachers. The head teachers' (Mean= 4.06) were the greatest and the smallest (Mean= 3.56), while the teachers' (Mean=3.58) were the greatest and (Mean= 3.24) recorded the lowest. It indicates that both head teachers have agreed or strongly agreed, while teachers have agreed mostly about assessment methods used to learn English through LND. Head teachers' responses are more favourable than teachers'.

Table 4
Using Information and Communication Technology (ICT)

Statements	Head Teacher and Teacher	N	Mean
Using the latest technology equipment (tablets, cell phones, etc.) in LND can help you learn English	Head Teacher	16	4.25
	Teacher	101	3.73
Learning English by using the internet facilitates its better utilization	Head Teacher	16	4.13
	Teacher	101	3.68
English pronunciation to give students better skills can be developed through ICT use	Head Teacher	16	3.88
	Teacher	101	3.63
Interest of Students in ICT use in English is more significant than in manual learning activities	Head Teacher	16	4.19
	Teacher	101	3.58

Table 4 illustrates the Mean for ICT use in English asked by head teachers and teachers. The responses of head teachers (Mean= 4.25) were the highest and the lowest (Mean= 3.88), while the teachers' responses (Mean=3.73) were the greatest and (Mean= 3.58) recorded the smallest. It indicates that both head teachers agreed or strongly agreed, while teachers agreed mostly about using ICT. The responses of head teachers were more favorable than those of teachers.

Indicator-wise Analysis of Perceptions about the role of LND in Mathematics

The responses analysis of the answers to statements from head teachers and teachers asking for LND's indicators in the subject of English are as following:

Table 5
Primary Questions/Statements for English

Statements	Head Teacher and Teacher	N	Mean
LND is appropriate for learning Mathematics	Head Teacher	16	4.00
	Teacher	101	3.76
It develops students' mathematics learning skills	Head Teacher	16	4.06
	Teacher	101	3.67
Its teaching material develops an interest in mathematics teaching and learning	Head Teacher	16	3.94
	Teacher	101	3.79

Table 5 indicates that the Mean for basic questions for mathematics asked from head teachers (Mean= 4.06) were the highest and lowest (Mean= 3.94), while the teachers' responses (Mean=3.79) were the highest and (Mean= 3.67) recorded the lowest. This indicates that both head teachers and teachers have agreed or strongly agreed about the suitability and interests. Head teachers' responses have been more positive than teachers'.

Table 6
Content Knowledge

Statements	Head Teacher and Teacher	N	Mean
LND helps develop Mathematics subject Students' interests in learning basic operations (e.g. addition, subtraction, multiplication and division) on numbers	Head Teacher	16	4.19
	Teacher	101	3.83
The content to learn mathematics is suitable in it	Head Teacher	16	4.00
	Teacher	101	3.66
The content about measurement learning, for example, length, mass, volume, and their application, is suitable for learning through it	Head Teacher	16	3.88
	Teacher	101	3.55
The content is suitable for learning geometry (Recognizing shapes such as circles, squares, triangles, and others)	Head Teacher	16	3.56
	Teacher	101	3.57
The content helps in learning data handling (graphs)	Head Teacher	16	4.00
	Teacher	101	3.56

Table 6 shows the Mean content knowledge of mathematics about every statement or question asked by head teachers and teachers. The table shows that head teachers' (Mean= 4.19) were the highest and (Mean= 3.56) was the least, while the teachers' (Mean=3.83) was the highest and (Mean=3.55) was minimal. This indicates that both head teachers and teachers have agreed or strongly agreed about students' content knowledge of content, geometry, and data handling. Head teachers are more favourable than teachers.

Table 7
Assessment questions

Statements	Head Teacher and Teacher	N	Mean
The mathematics assessment method adopted in LND is suitable for the students.	Head Teacher	16	4.06
	Teacher	101	3.61
Its assessment can improve methods of Mathematics teaching and learning.	Head Teacher	16	3.94
	Teacher	101	3.66
The assessment helps minimize shortcomings in learning basic operations (addition, subtraction) in mathematics.	Head Teacher	16	3.94
	Teacher	101	3.62
Assessment through the MEA Software Application is better than usual in Mathematics.	Head Teacher	16	3.75
	Teacher	101	3.40

Table 7 shows the Mean for Assessment Questions of Mathematics for every statement or question head teachers and teachers asked. The table indicates that head teachers' (Mean= 4.06) were the greatest and (Mean= 3.75) was the least, while the teachers' (Mean=3.66) was the greatest and (Mean=3.40) stayed as the most minimal. It indicates that both head teachers and teachers agreed or strongly agreed about assessment methods. Head teachers' responses are more favourable than teachers'.

Table 8
Use of Information and Communication Technology (ICT)

Statements	Head Teacher and Teacher	N	Mean
Using tablets, mobile phones, laptops, and other devices in LND to learn Mathematics is applicable	Head Teacher	16	3.81
	Teacher	101	3.68
Learning mathematics by using the internet facilitates its better utilization	Head Teacher	16	4.00
	Teacher	101	3.53
Different mathematical skills to direct students towards better skills can be developed through ICT use	Head Teacher	16	4.31
	Teacher	101	3.63
Students' interest in ICT use in Mathematics is greater than manual learning activities. Learning	Head Teacher	16	4.19
	Teacher	101	3.63

Table 8 shows that the Mean for ICT use in learning mathematics for every statement or question asked by head teachers and teachers depicted that head teachers' (Mean= 4.31) were the greatest and (Mean= 3.81) was the least. In contrast, the teachers' (Mean=3.68) was the greatest and (Mean=3.53) stayed the most minimal. This indicates that both head teachers and teachers agreed or strongly agreed with using ICT. Head teachers' responses are more favourable than teachers.

Trends of Students' Achievements

This was the second stage of data analysis in the study. The students' achieved trends were analysed in graphs or figures via scores of English and Math subjects as part of LND in Session 2019-20 for every working month of the year.

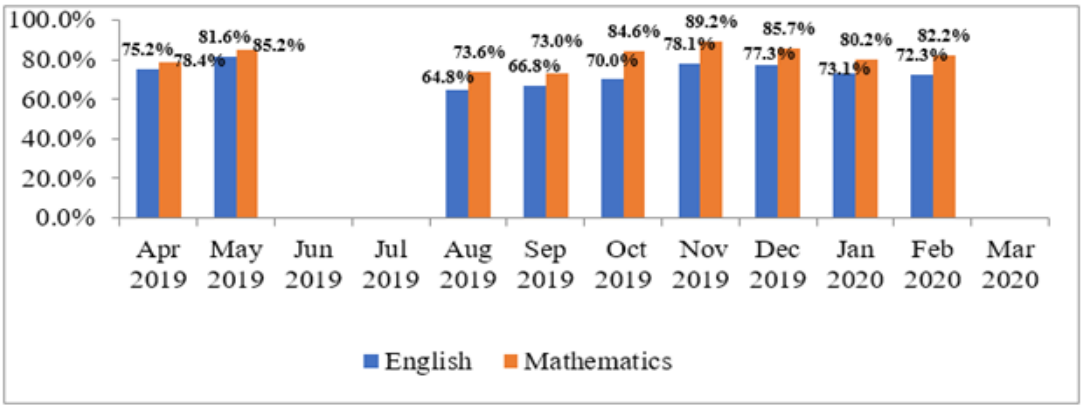

Fig. 3. Achievement Trends of English & Math in Chakwal

The above figure shows the learners' achievement test trend in English and Mathematics of Chakwal. The objective test score in each subject was 80%. The figure depicts the scores being 75.2% to 72.3% in English and 78.4% to 82.2% in Math from April to May 2019 and 2019 to Feb-20, except summer vacations from June and July 2019 and 2020 due to COVID-19. The figure shows almost on or above target results for mathematics while near or below target results in English.

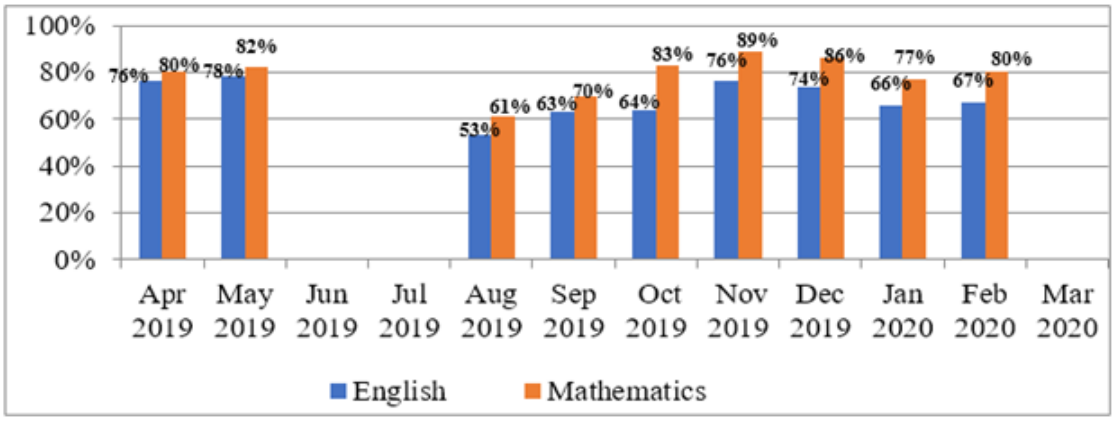

Fig. 4. Performance trends of English & Math in Lawa

The above figure shows the achievement test trend of learners in English and Math of Lawa, which covered the term from April 2019 to 2020. The objective tests' achievement score in each subject was 80%. The figure depicted that the scores were 76% to 67% in English and from 80% to 80% in Mathematics from April to May 2019 and 2019 to Feb-20, except for summer vacations in June and July 2019 and 2020 due to COVID-19. The figure shows mostly on or above target achievements in mathematics while near or below target achievement in English.

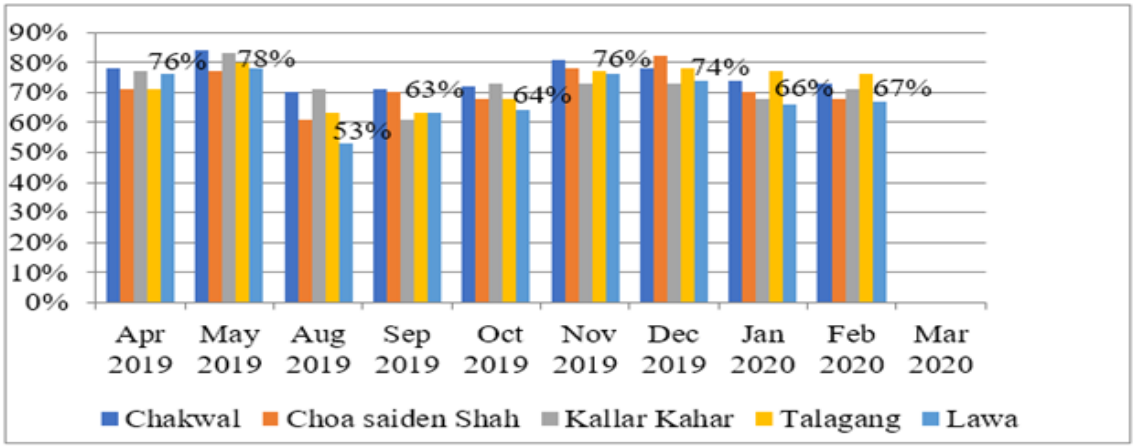

Fig. 5. Comparison Trend in English of Tehsil Lawa with all Tehsils

The above figure shows the achievement test trend of learners in the English subjects of the district's tehsils. The objective test score in each subject was 80%. The figure showed a reduction in scores from 76% to 67% in Lawa while in other four tehsils, Chakwal (78% to 73%), Choa Saiden Shah (71% to 68%), Kallar Kahar (77% to 71%) and Talagang (71% to 76%) from April to May-2019 and Aug-2019 to Feb-20 except summer vacations June and July-2019 and Mar-2020 due Covid-19. The figure depicted almost below-target achievements in English, and the same achievements were recorded concerning other disciplines.

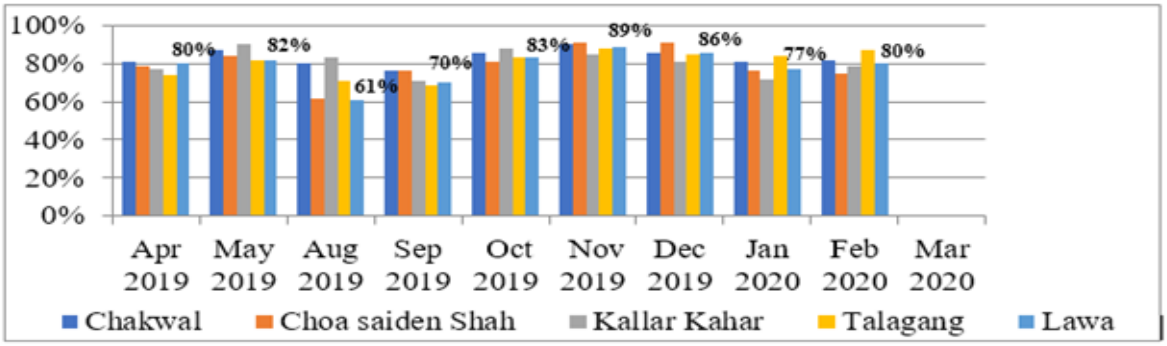

Fig. 6. Comparison Trend of LND in Mathematics Tehsil Lawa and All Tehsils

The above figure shows learners' achievement test trend in the Mathematics subjects of the district's tehsils. The objective test score in each subject was 80%. The figure showed consistency in scores from 80% to 80% in Lawa, while in the other four tehsils, Chakwal (81% to 82%), Choa Saiden Shah (79% to 75%), Kallar Kahar (77% to 79%) and Talagang (74% to 87%) from April to May-2019 and Aug-2019 to Feb-20 except summer vacations June and July-2019 and Mar-2020 due Covid-19. The figure depicted almost on-or-above-target results for mathematics, except for two months' achievements in Mathematics in three tehsils and two tehsils below for other tehsils, that is, Choa Saiden Shah (79% to 75%) and Kallar Kahar (77% to 79%).

Discussion

Students' assessments depend on the learning results of the particular class. Kennedy, et al., (2012) explained that accomplishing learning targets of learners with low literacy skills creates issues concerning academics. The set objectives are not attained because of different issues. Hence, literacy is a social practice connected with clear social justification and drawing in the local area general public at an immense level (Street, 2014). The principal objective of this study was to find the heads and teachers' discernments about the function of (LND) for two subjects (English and Math) at the primary level for government boys and schools in grade three. It is evident from the data analysis that the mean of head educators and teachers had positive discernments about jobs for English and Mathematics subjects. Osberg (2000) explains that an upgrade in proficiency and numeracy assists the necessary instructive results when estimating and taking direction from them. The data illustrated that heads and teachers had

positive discernments for their roles regarding appropriateness, substance of information, questions, and utilizing data and ICT separately in the two subjects, English and Mathematics. The heads showed more agreeableness than teachers in the discernment of their roles.

Besides, it was portrayed from analysing data that mostly the heads educators and teachers showed positivity that LND was reasonable for essential abilities in learning Basic English and Mathematics skills, creating learners' interests, and the teaching material used for them was fascinating. They also agreed on the utility of content knowledge and assessment techniques used for both subjects. They also agreed more on formative assessment in English and mathematics through MEA's software application, which was more beneficial than the usual assessment. In addition, they elaborated that ICT use in learning has positive effects, too. Mariam, et al., (2021) state that the textbook of class three only has content about vocabulary and reading comprehension and has yet to include practical and grammatical concepts and activities from easy to complex order patterns. However, in this study, positive perceptions were shown by the head teachers and teachers about content knowledge with practical and grammatical concepts. At the same time, students' overall achievements were revealed and aligned with the explanations in the study mentioned above.

The next objective was to analyse the trends of students' achievements in LND data in English. The results showed that its scores decreased in the scores to underneath the target (80%), which demonstrated that backward trends were shown in English. The third goal was to analyse the trends in students' achievements in mathematics. The data indicated that stable achievements in scores were recorded. Hence, positive growth was shown in mathematics. This present study showed the positivity of it but also points towards improvements that may be made to improve it. Khalid, et al., (2019) explained that the results of LND are positive and that much betterment is shown by students when they perform the assigned tasks. The present study showed students' positive results, especially in mathematics, which remained on or above-set targets. Although the results were declining in English in academic sessions, positive trends were recorded in maths.

People with good literacy levels use the Internet more frequently than those with low-level skills (Hong, et al., 2020). The learners can be more specific by participating in a growing experience when utilizing LND rather than using customary learning techniques. It meaningfully affects learners ' future possibilities in their lives. It affects a better responsive way of behaving of the students and their thoughts. At present, education and learning facilities have become more viable and supportive, which likewise work in the interest of the teachers too (Habib, et al., 2021). The present study hints that a positive approach is only possible with better reading and numeral skills performance. The heads and teachers positively perceive its role in the effectiveness of grade three students studying at the primary level.

CONCLUSION

The heads, along with teachers, have affirmative perceptions on the role of LND in its appropriateness for learning to read and comprehend, understand the contents, enhance the interest of students and teachers, assess and evaluate techniques used, and use ICT. The head teachers have shown more positivity than teachers about English. The heads and teachers have affirmative perceptions of LND's role in its appropriateness for learning mathematics, primarily in terms of questions, knowledge of the content, assessing and evaluating techniques, and using ICT. The head teachers have shown more positivity than teachers about mathematics. The students' achievements and scores in grade three were low from the set target, pointing to low achievement trends in English, which revealed the declining aspect of this subject. Achievements and scores in maths depicted more positivity, even above targets in some assessments, and positive growth in trends' enhancements in this subject.

The learners of grade three had positive growth in trends' enhancements in mathematics while inverse trends' enhancements in English as far as the set target was concerned. Mathematics scores and assessment results remained above average in the academic session. The Education and Numeracy Drive (LND) was effective after its execution in Chakwal, Punjab. There were fewer positive discernments and

trends in English and more positive discernments and trends in Mathematics. As a third-party evaluation, PMIU plays a critical role in carrying out and coordinating this drive. It can assist school practices in accomplishing targets set by SED and PITB in Punjab.

Recommendations

Heads and teachers might be prepared as per requirements incessantly by effectively saving time, which may not influence them unfavourably to improve the learning of class three students. At the local and global levels, in a chain form, sustainable development goals (SDGs "Goal 4: Quality Education") can be accomplished through cooperative endeavours.

- Teachers' teaching methods might be changed, particularly in English, according to the necessary abilities and targets previously set by the SED Punjab
- The ICT facilities may be upgraded as gadgets and internet with exceptional and thoroughly prepared teachers will be productive
- The outcomes of this research show that it can be implemented in other provinces of the country (Pakistan) as well

Limitations

Due to a lack of time, the study consisted of two subjects (English and Mathematics) out of three (excluding Urdu) for grade three.

Future Directions

A study may compare students in grade three regarding student trends in boys' and girls' schools.

The learners' achievement trends may be considered by comparing the last five years of each of the three subjects (English, maths, and Urdu) of LND in the Punjab.

Competing Interest

The authors had no competing interests.

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