

# Efficacy of McGovern–Dole Teacher Training Program: evidence from teachers’ perceptions on improved Literacy among school-age children

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## ABSTRACT

A summative evaluation study examined the efficacy of the McGovern–Dole Teacher Training Program in improving literacy among school-age children in Bunda District, Tanzania. A convergent design under a mixed-methods approach led to the CIRO evaluation model. The sample was obtained through systematic and stratified random and purposive sampling techniques to select 131 respondents. Research experts carried out validation. Pilot testing was conducted in two schools, followed by an estimation of the reliability of Likert-type items through Cronbach’s Alpha with a coefficient of 0.839. The trustworthiness of qualitative instruments was established through peer debriefing and triangulation. Descriptive statistics and thematic analysis were used to analyze the data. Teachers were found to have positive perceptions of the program and believed that it has equipped them with skills and competencies

that improve the literacy of school-age children. Teachers’ positive perceptions meant that the goal of improving literacy was achieved to a high extent. This study recommended rewards for teachers to foster literacy in school-aged children.

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## 1. Introduction

Literacy plays a crucial role as a catalyst for national development across the globe. Many countries, particularly those in Sub-Saharan Africa, have made significant efforts to align with international literacy agendas to combat illiteracy, which poses obstacles to economic, political, and social progress (Zuo, 2021). Although literacy is important for any nation’s development, achieving literacy among school-age children remains a formidable challenge globally. Statistics indicate that there are 102 million illiterate school-age children worldwide; the majority, comprising 24%, are from Sub-Saharan Africa, 17% belong to Arab states, 11% to South Asia, and 2% to Latin America and Caribbean countries (UNESCO, 2021).

Despite the Tanzanian government’s efforts to improve literacy rates, the levels of literacy and numeracy among school-age children in Tanzania remain relatively low. Recent data from UNESCO (2021) reveal that the cur-

rent literacy rate in Tanzania is 77.89%, which represents progress but is significantly lower than the impressive literacy rate of around 90% achieved in 1970. During that period, Tanzania was globally acknowledged as one of the leading countries in terms of literacy (Har, 2021). However, this decline in literacy rate was attributed to the implementation of the cost-sharing policy in education, which resulted in reduced funding for literacy programs and in-service training for teachers in schools.

In-service teacher training programs on students’ literacy have not only helped teachers to improve pedagogical know-how, content knowledge, and professional skills but have also helped to improve the performance of school-age children in terms of literacy. Hamisi and William (2020) affirm that for students to acquire quality literacy instruction, there should be competent and proficient teachers who can transfer knowledge, skills, and attitudes to students. On the other hand, literacy teachers frequently rely on reading

aloud as a common instructional technique (Mmasi & Anney, 2016). However, due to the high teacher-to-pupil ratio, they often fail to follow up on the material being read aloud to the students. In addition, Kadir (2020) argues that the insufficiency of teaching resource models hinders the effective teaching and learning of literacy among school-age children.

The current circumstances highlight the need for continuous professional development programs for teachers in the areas of numeracy and literacy. The responsibility to address illiteracy should not solely rest on the government, as it becomes increasingly burdensome. Therefore, there is a growing necessity for Non-Government Organizations (NGOs) and other stakeholders, such as McGovern–Dole, to collaborate and supplement the government's efforts and strategies in tackling this issue. The program aimed to improve the literacy of school-age children, with three specific objectives: training in-service teachers on literacy pedagogical content knowledge, preparing and using literacy instructional materials, and creating a conducive learning environment. The current study evaluated on teachers' perceptions of the McGovern–Dole Teacher Training Program in terms of improving the literacy of school-age children in Bunda District, Tanzania.

## 2. Purpose of this study

Low literacy rates among school-age children are alarming in Sub-Saharan Africa, including Tanzania, and have been a pressing concern. A significant number of primary school pupils complete their education without attaining proficiency in basic reading, writing, and arithmetic (referred to as the 3Rs). Research conducted by Mmasi and Anney (2016) reveals that 64% of Standard Two (II) pupils and 54% of Standard Three (III) pupils have not acquired mastery in numeracy, reading, and writing skills. Moreover, Kazenga (2018) and Hamisi and William (2020) highlight that most pupils who graduate from primary school national examinations (PSLE) cannot write even their names. These studies shed light on critical issues within the education system, particularly concerning instructional materials, learning environments, and limited pedagogical content knowledge for teaching literacy to school-age children in primary schools. If the problem remains unresolved, it can lead to extreme poverty and ignorance and jeopardize the prospects of these children.

According to the study conducted by Vyamana et al. (2017), which evaluated the McGovern–Dole program phase II spanning from September 2013 to December 2016, no statistically significant differences were observed between intervention schools (treatment group) and comparison schools (control group) in terms of the mastery of literacy skills. These findings prompted the implementation of phase III of the McGovern–Dole program from October 2016 to December 2022. Consequently, there exists a research gap that calls for an investigation into the perceptions of teachers regarding the effectiveness of the McGovern–Dole Teacher Training Program during

phase III in improving literacy among school-age children. Therefore, this study evaluated teachers' perceptions of the McGovern–Dole Teacher Training Program to improve the literacy of school-age children in Bunda District, Tanzania.

## 3. Evaluation question

What is the teacher's perception about the implementation of the McGovern–Dole Teacher Training Program on improving the literacy of school-age children in Bunda District, Tanzania?

## 4. Significance of the evaluation

This evaluation study holds significant importance for policy-making entities such as the Ministry of Education, Science, and Technology (MoEST) and the President's Office Regional Authority and Local Government (PO-RALG). It also provides valuable insights for decision-making within PCI-Tanzania, the organization responsible for implementing the program. Furthermore, this study offers essential information to donors, allowing them to assess whether the problem has been effectively addressed or if program extension is required. Additionally, this evaluation study provides valuable data for scholars undertaking future research on teacher training programs and capacity-building projects related to literacy. Moreover, this study highlights the applicability and usefulness of evaluation models such as CIRO, CIPP, and Kirkpatrick for assessing literacy training programs. It also equips teachers, trainers, and students with pertinent strategies for eradicating illiteracy and ensuring long-term sustainability.

## 5. Evaluation model

This summative evaluation study was guided by the CIRO evaluation model developed by Peter Warr, Michael Bird, and Neil Rackham (Warr et al., 1970). The CIRO model is specifically designed to assess the effectiveness of training programs, where this study is anchored. The acronym "CIRO" represents the four levels of the training model, which include context evaluation, input evaluation, reaction evaluation, and outcome evaluation.

**Context Evaluation:** Aimed to assess the program's overall environmental readiness, including the alignment of the program with identified needs and the adequacy of the proposed objectives in addressing those needs. In this study, the evaluator examined whether there was a necessity for in-service training for teachers in quality literacy instruction. This need arose due to factors such as insufficient literacy and pedagogical content, inadequate instructional materials, and subpar learning environments. Additionally, the collected data assisted the evaluator in determining the extent to which the training contributed to the improvement in literacy among school-age children.

**Input Evaluation:** This involved assessing the resources necessary for the successful implementation of the program. The evaluator examined the adequacy, effectiveness, efficiency, and relevance of both human and physical resources. This step helped determine the extent to which the available resources were suitable and utilized effectively to achieve the program's objectives. The resources considered in this study included trainers, early-grade teachers, coordinators, headteachers, Ward Education Officers (WEOs), District Primary Education Officers (DPEOs), teaching and learning resources, physical infrastructure, and financial funds. By evaluating these inputs, the evaluator gained insights into the availability and appropriate utilization of resources to support the intended outcomes of the program.

**Reaction Evaluation:** This component aimed to assess the participants' attitudes and emotions towards the implemented program. This involved gathering information, suggestions, and feedback from the teachers regarding the training they received. In this study, the evaluator collected suggestions from the teachers regarding various aspects of the program, including its context, content, and approaches. The gathered information and feedback were valuable in helping the trainers improve the training program based on the teachers' input.

**Outcome Evaluation:** Outcome evaluation involved assessing the extent to which the learning took place and whether they have an impact on teaching and learning activities. In this step, the evaluator viewed what occurred as the result of the training at the institutional level or pupils' level. In this study, the evaluator assessed the extent to which teachers who acquired literacy pedagogical content can prepare and use literacy instructional materials and create a favorable learning environment.

### 5.1. Strengths of the CIRO evaluation model

The CIRO evaluation model possesses significant strengths, particularly in its consideration of the contextual understanding of the problem, which serves as a foundation for training design and objective setting based on identified needs (Saminathan & Mohd Suaib, 2021). Additionally, the model offers a straightforward and cost-effective approach to data collection. Furthermore, the model encompasses pre- and post-training measurements, allowing for the assessment of training achievements at different levels. In this study, the evaluation of training can be assessed at two levels: immediate outcomes, which refer to the changes in teachers' capacity following training, and intermediate outcomes, which involve changes in behaviors, practices, and performance, including the transferability of training into the classroom context. Lastly, the model acknowledges the highest level of outcomes, indicating the significant changes achieved by institutions following teacher training.

### 5.2. Weakness of the CIRO evaluation model

The CIRO evaluation model lacks a validation phase and fails to address teachers' behaviors in applying acquired knowledge (Sutton, 2016).

### 5.3. Application of the CIRO evaluation model

Despite its limitations, the CIRO evaluation model proved to be valuable in this summative evaluation study as it specifically addressed the aspects of context, input, reaction, and outcome evaluation, which applied to the training program in the present context. The relevance of the model to the current study stemmed from its primary purpose of evaluating the effectiveness of training programs, aligning with the focus of the study on assessing the impact of the McGovern–Dole Teacher Training Program on enhancing teachers' literacy pedagogical content knowledge in Bunda District, Tanzania.

## 6. Review of empirical studies

In this section, a comprehensive review of empirical studies is presented. The empirical studies have been categorized thematically based on the evaluation questions, providing a logical organization. This review encompasses studies conducted at the global level, as well as in Africa, East Africa, Tanzania, and the local context. These studies offer valuable insights into the problem, providing a deeper understanding of the issue, evaluation methodologies, and the instruments used for data collection, analysis, and interpretation. Furthermore, the reviewed studies assist the evaluator in identifying the existing knowledge gap that the current study aims to fill.

## 7. Teachers' perceptions of training programs to improve the literacy of school-age children

Teacher training programs are conducted to equip teachers with techniques and pedagogical strategies that help to better connect with, manage, and teach their pupils in a manner where all pupils are learning and benefiting. Teacher training programs, when conducted in the right manner and with the right content, have the power to positively impact students not only in terms of academic performance but also outside the classroom.

A study was conducted by Ramlal (2019) on Principals' Experiences Leading Strategic Planning in High-Performing Primary Schools in Venezuela. This study employed grounded theory design (theory of change) under a qualitative approach, which explored teachers' training on improving pupils' achievement in numeracy and literacy. This study was conducted in Trinidad and Tobago-Venezuela with a sample size of 44, including principals and pupils sampled purposively. Data were collected using an interview guide and observation guides. Moreover, the

collected data were coded, categorized, and analyzed using thematic analysis. The findings revealed that continuous professional development to support teachers and transform their capacity in practices increases pupils' achievement in terms of literacy and numeracy. The study by Ramal (2019) recognizes continuous professional development to support teachers and transform their capacity in practices towards increasing pupils' achievement in literacy and numeracy. Still, there was a need to conduct the study in the Tanzania context to understand how teachers perceive training programs towards improving the literacy of school-age children. Therefore, in filling this gap, the current study was conducted to discover the perception of teachers on training programs to improve the literacy of school-age children in Bunda District, Tanzania.

Friehat and Al-Khresha (2021) conducted a study focused on the role of Reading and Mathematics Project (RAMP) initiatives in terms of reading and numeracy skills in primary school students in Jordan. This study was focused on training teachers to improve students' reading and numeracy skills. This study employed a descriptive survey research design that blended qualitative and quantitative data to provide relevant and accurate information, whereby 88 sample sizes were obtained through a simple random technique in Amman, Jordan. This study used a questionnaire as the instrument for data collection. The findings in the study of Friehat and Al-Khresha (2021) show that there is an increase in numeracy and reading skills among students after teachers' training. However, the sample of the previous study involved teachers and left out students who are believed to be key informants on issues related to literacy and numeracy. Moreover, the justification for including a sample of 88 teachers from the population of 340 was not provided. Furthermore, the use of a questionnaire as the sole instrument for data collection compromises the triangulation of the findings. To fill this gap, the current study employed a mixed research method that allowed for the use of qualitative and quantitative instruments, including questionnaires, observation guides, interview guides, and achievement tests, which helped to determine the breadth and depth of the data. Also, the current study involved both students and teachers and made use of relevant sampling procedures, which ensured the validity of the study findings.

In Nigeria, the study by Counihan et al. (2022) investigated the effectiveness of literacy teacher training programs (ESSPIN and Jolly Phonics) on students' reading, writing, and arithmetic abilities in government primary schools. This study employed a quasi-experimental design. The investigation involved 536 government primary schools, whereby 5449 pupils were examined through literacy tests to identify which literacy teacher training program has an advantageous impact on learning. The findings affirm that in teachers who have completed two programs that adopted instructions and incorporated them in teaching, pupils score 6.062 ( $p < 0.001$ ) and 4.344 ( $p < 0.01$ ) in primary one and two, respectively; thus, the impact

is stronger. The findings in the study of Counihan et al. (2022) revealed that there is a positive impact of literacy teacher training programs on students' reading, writing, and arithmetic skills. However, the previous study conducted a comparative study to investigate two teacher training programs (ESSPIN and Jolly Phonics) to determine the similarities and differences, whereby the current study focused on evaluating one training program (McGovern–Dole Teacher Training Program) to find out how teachers perceive training programs given to them in terms of improving the literacy of school-age children. Moreover, this study used an achievement test as the only instrument for data collection, which compromises the triangulation of the findings. Therefore, to fill the current research gap, this study used a questionnaire, interview guides, observation guide, and achievement test as data collection instruments to strongly understand the problem and to ensure the validity and reliability of the results on the perception of teachers of training programs to improve the literacy of school-age children in Bunda District-Tanzania.

Amwayi (2017) conducted a study on the influence of numeracy and literacy training programs on implementation by early-grade teachers in public schools in Mombasa County. This study employed a descriptive survey research design that blended qualitative and quantitative data to provide relevant and accurate information, where 28 sample sizes were obtained through a simple random technique. Various instruments were used in data collection, including an interview guide, questionnaire, observation checklist, and document analysis schedule. The findings show that pedagogical skills attained by teachers in their practices have led to pupils' achievement in terms of literacy and numeracy. Moreover, this study shows that 96.3% of trained teachers incorporate different teaching strategies in the teaching and learning process. The study by Amwayi (2017) shows positive results on teachers' and pupils' performance in Mombasa County in terms of literacy and numeracy. Nevertheless, the previous study was based on incorporating different teaching strategies in the teaching and learning process, whereas the current study investigated further the perception of teachers of training programs to improve the literacy of school-age children. Therefore, to fill this gap, the current study conducted a summative evaluation study on the perception of teachers towards the McGovern–Dole Teacher Training Program in terms of improving the literacy of school-age children in Bunda District primary schools, Tanzania.

In Tanzania, the study conducted by Ruddell and Rawle (2020) focused on evaluating EQUIP-Tanzania impact training programs. This study employed a mixed-method approach, which uses a quantitative survey with the treatment district and control district in 2014, 2016, and 2018. Also, qualitative fieldwork was used in a few treatment schools to overlap with quantitative survey schools in 2016 and 2019. Various instruments were used in data collection, including an interview guide, observation schedule, and questionnaires. A simple random tech-

nique was used to select 200 government primary schools, and 200 pupils and teachers were drawn in the sample. This study was conducted to evaluate the impact of the training program implemented by EQUIP-T in seven regions of Tanzania: Shinyanga, Lindi, Tabora, Dodoma, Kigoma, Simiyu, and Mara. The findings show that the majority of standards one and two improved in literacy as the result of in-service training. Although the previous study and the current study investigate the same phenomena, they differ in context and objectives, whereby the previous study investigated impact evaluation while the current study investigated summative evaluation. To fill this gap, the current study conducted a summative evaluation to discover teachers' perceptions of the McGovern–Dole Teacher Training Program phase III to improve the literacy of school-age children implemented in Bunda District, Tanzania.

## 8. Summary of literature review and demonstration of knowledge gap

The reviewed empirical studies were from across the world, including Africa, East Africa, Tanzania, and the local context. Studies from Venezuela, Jordan, Nigeria, Kenya, and Tanzania were also reviewed. However, most of the reviewed empirical studies employed descriptive surveys, grounded theories, surveys, quasi-experimental methods, and case studies, and a few employed a mixed-methods design, while most of the reviewed empirical studies employed a qualitative method design, which limits generalizability and transferability. Some of the reviewed empirical studies were found to have contradictions in the aspects of research that might compromise the validity of the study findings. The use of inappropriate methodology, sampling procedures, and data collection instruments raises questions regarding the validity of the study findings. Therefore, the current study will fill this methodological gap by employing convergent design, relevant sampling procedures, and appropriate data collection instruments. However, the literature was inadequate to capture the perception of teachers on training programs, which justifies the current evaluation study, as this knowledge gap needs to be closed. Therefore, the current study evaluated teachers' perceptions of the McGovern–Dole Teacher Training Program to improve the literacy of school-age children in Bunda District, Tanzania. This study used a convergent design to enable the use of both probability and non-probability sampling techniques, as well as a collection of qualitative and quantitative data.

## 9. Evaluation methodology

This study employed a convergent design under mixed research methods, aiming to gather both quantitative and qualitative data simultaneously. This approach allowed for a comprehensive examination of the research problem by comparing and merging the results from both datasets

during interpretation. The convergent design facilitated the collection of a large amount of data from a diverse range of respondents within a relatively short period of time (Creswell & Creswell, 2018). The target population consisted of 1132 participants, including 75 public primary schools, 150 early-grade teachers, 75 headteachers, 19 Ward Education Officers, 1 District Primary Education Officer, and 812 standard three pupils. The sampling techniques employed in this study include systematic, purposive (expert and total population), and stratified random sampling techniques to select 32 early-grade teachers, 8 headteachers, 8 Ward Education Officers, 1 District Primary Education Officer, and 82 standard three students who had experienced the implementation of teachers' skills and knowledge during grades one and two. Qualitative data were collected using interview and observation guides, while quantitative data were collected through questionnaires and achievement tests to address the evaluation questions.

To establish the validity of the quantitative instruments, research experts from MWECAU were consulted. A pilot test was conducted in two public primary schools where the program was implemented. The reliability of the quantitative data collection instruments was assessed using Cronbach's Alpha coefficient for Likert-type items, yielding results of  $r = 0.839$  for early-grade teachers. For qualitative data, validity was ensured through peer debriefing and triangulation of the data. Quantitative data were analyzed using descriptive statistics such as frequencies, percentages, and means, which were presented in tables. Inferential statistics, specifically Simple Linear Regression analysis, were used to test hypotheses at a significance level of 0.05 using SPSS version 22. Qualitative data were analyzed using thematic analysis, which involved transcribing interviews, coding, and developing and describing themes. During the data collection process, ethical considerations such as confidentiality, anonymity, informed consent, and the proper citation of authors' works were strictly adhered to in order to avoid plagiarism.

## 10. Evaluation findings and discussion

### 10.1. The perception of teachers about the McGovern–Dole Teacher Training Program on improving the literacy of school-age children

The evaluation question aimed to find out teachers' perceptions about the McGovern–Dole Teacher Training program in terms of improving the literacy of school-age children. The evaluator utilized questionnaires for early-grade teachers and conducted interviews with headteachers, Ward Education Officers (WEOs), and the District Primary Education Officer (DPEO). The questionnaires employed a five-level Likert scale, with response options ranging from 1 = strongly disagree (SD) to 5 = strongly agree (SA). The unit of analysis for the Likert scale responses was determined, with values assigned to each category (1–5), and frequen-

cies and percentages were calculated (F, P). The percentage ranges were categorized as follows:  $\leq 20$  = extremely minority, 21–49 = minority, 50–59 = moderate, 60–69 = majority, 71–89 = very high majority, 90–99 = extremely majority, and 100 = overwhelming majority (Taherdoost, 2019). Mean scores were utilized to interpret the results, where a mean score greater than 3 indicated improvement in a specific aspect due to the program, a mean score less than 3 indicated no improvement, and a mean score of exactly 3 implied that the program's impact on the specific aspect was uncertain (Chyung & Hutchinson, 2023). Responses for early-grade teachers are summarized in Table 1.

The data in Table 1 indicate that the overwhelming majority (100%) of early-grade teachers agree and strongly agree that the program helped students demonstrate reading and understanding the meaning of grade-level text. The mean score was 4.17 for early-grade teachers. This implies that the program has been successful in improving students' reading skills and comprehension abilities. The teachers who have been trained through the program are able to effectively teach their students the skills required to read and understand grade-level text. Additionally, it suggests that the program has been effective in enhancing the overall literacy levels of students in early grades. In relation to a demonstration of reading and understanding the meaning of grade-level text DPEO during a face-to-face interview, the participants had this to say:

After being trained by MGDTP, teachers have done a great and good work to make sure that pupils they master 3Rs skills. Currently, the number of pupils who have mastered the 3Rs skills in our schools has increased compared to before the Training (DPEO, personal interview, 21 April 2023).

In addition to that, HT5 had this to say:

Currently, pupils are required to read and understand the meaning of the text before they enter standard STD III. This is the important step our school made for these years because the burden of illiterate pupils was left to make us sleepless (HT5, Personal interview, 25 April 2023).

This implies that the number of pupils who have mastered these skills has increased compared to before the training, which is a clear indication that the training provided by the MGDTP was effective. This is an important achievement, as mastering the 3Rs is a critical foundation for success in many areas of life, including further education and employment. The findings from the evaluation study are in line with the CIRO evaluation model, particularly on the outcome evaluation, which is based on the impact on the teachers and learners after employing the knowledge learned during the training. This revealed that students are able to demonstrate reading and understanding the meaning of grade-level text after teachers employed the aspect learned during the MGDTP.

The data in Table 1 show that the overwhelming majority (100%) of early-grade teachers agree and strongly agree that the program helped students by equipping them with the skills of writing and understanding the meaning of the text based on the class level. The mean score was 4.25 for early-grade teachers. This implies that the program was effective in achieving its intended outcomes. This indicates that the program provided students with the necessary skills to improve their reading and writing abilities, which are crucial for their academic success. This also suggests that the program was well designed, implemented, and delivered in a way that resonated with the teachers and students. Furthermore, the fact that all teachers agreed or strongly agreed with the program's effectiveness suggests that there is a high degree of consistency in the quality of instruction across the classrooms. This could also imply that the program was able to address the needs of a diverse group of students and provide them with a foundation for future academic success. The findings from the evaluation are not only in line with the CIRO evaluation model but also the CIPP evaluation model, particularly in terms of product evaluation, which is based on the judgment of the program outcome by assessing its merits and significance and ensuring that the needs of all participants are met. In relation to that, the MGDTP brought about the merits of improving the writing skills of students and understanding the meaning of grade-level text.

The data in Table 1 indicate that the overwhelming majority (100%) of early-grade teachers agree and strongly agree that the program was helpful to the students in terms of other subject performances. The mean score was 4.25 for early-grade teachers. This implies that the program was able to enhance students' learning abilities, such as critical thinking, problem-solving, and comprehension, which can be applied to other subjects. This also indicates that the program was able to improve students' overall academic performance and success. The fact that the mean score was 4.25 out of 5 indicates that the teachers had a high level of agreement on the program's effectiveness, and there was consistency in their perceptions across the early-grade teachers. This consistency suggests that the program was well designed, implemented, and delivered in a way that resonated with the teachers and students. The findings from the evaluation study are in line with the those by Ramal (2019), who affirmed that continuous professional development to support teachers and transform their capacity in practices increases pupils' achievement in literacy and numeracy.

The data in Table 1 show that the overwhelming majority (100%) of early-grade teachers agree and strongly agree that the program equipped teachers with knowledge of using the learner-centered approach to teach in early-grade classes. The mean score was 4.50 for early-grade teachers. This implies that the program was able to provide the teachers with the necessary knowledge and skills to implement a learner-centered approach in the classroom. This indicates that the teachers recognized the value of a learner-

**Table 1.** The summary of responses on the perception of teachers on McGovern–Dole Teacher Training Program to improve the literacy of school-age children (*n* = 32).

S/N	Statement	SD		D		U		A		SA		Mean
		f	%	f	%	f	%	f	%	f	%	
1	The MGDTP has helped students to demonstrate reading and understanding the meaning of grade-level text	0	0.0%	0	0.0%	0	0.0%	26	83.3%	6	16.7	4.17
2	The MGDTP has helped students to write and understand the meaning of grade-level text	0	0.0%	0	0.0%	0	0.0%	24	75.0%	8	25.0	4.25
3	The MGDTP increased students' performance in other subjects.	0	0.0%	0	0.0%	0	0.0%	24	75.0%	3	25.0	4.25
4	The MGDTP equipped teachers with skills that facilitated students to demonstrate literacy skills in the classroom session	0	0.0%	0	0.0%	0	0.0%	16	50.0%	16	50.0	4.50
5	The MGDTP has trained teachers on the use of learner-centered methods of teaching to early-grade classes	0	0.0%	0	0.0%	0	0.0%	18	58.3%	14	41.7	4.42
6	The MGDTP has equipped teachers with the skills to prepare and use literacy teaching aids in the teaching and learning process	0	0.0%	0	0.0%	0	0.0%	16	50.0%	16	50.0	4.50
7	The MGDTP has trained me on various techniques of classroom management.	0	0.0%	0	0.0%	0	0.0%	13	41.7%	19	58.3	4.58
8	The training session of MGDTP was conducted using participatory approaches	0	0.0%	0	0.0%	0	0.0%	11	33.3%	21	66.7	4.67
9	In your school, all early-grade teachers participated in the McGovern–Dole training program	0	0.0%	0	0.0%	0	0.0%	11	33.3%	21	66.7	4.67
10	Other teachers at the school level were trained on MGDTP by INSET coordinators	0	0.0%	0	0.0%	0	0.0%	11	33.3%	21	66.7	4.67
Grand Mean											4.46	

Source: field data (2023). SD = strongly disagree, D = disagree, U = undecided, A = agree, SA = strongly agree.

centered approach and were open to adopting new instructional strategies to benefit their students. Moreover, the fact that all the teachers agreed or strongly agreed with the program's effectiveness indicates a high level of consensus among the teachers regarding the benefits of the learner-centered approach. This also implies that the program was able to address the needs of a diverse group of teachers and provide them with the necessary tools to implement the approach effectively. In relation to the use of a learner-centered approach in teaching during face-to-face interviews with headteachers, HT4 had this to say:

The MGDTP helped to change the attitude of teachers of using read aloud as the only method

for teaching early-grade classes. Currently, teachers use sports and games, songs, role play and demonstration, which helps students to easily acquire 3Rs skills (HT4, Personal interview, 19 April 2023).

Another HT6 had this to say in relation to the learner-centered approach:

Teachers are using the learner-centered approach to teach early-grade pupils. This is one of the results of the training program. Actually, the learner-centered approach not only simplifies the teaching and learning process but also allows pupils to acquire the required knowledge (HT6, Personal interview, 28 April 2023).

Information with headteachers during face-to-face interviews revealed that teachers are now using sport and games, songs, role play, and demonstration to help students acquire the 3Rs skills (reading, writing, and arithmetic). This suggests that the MGDTP has not only helped to diversify teaching methods but has also led to a more engaging and interactive learning environment for students. The findings from the evaluation study are in line with the those by Amwayi (2017), who affirmed that pedagogical skills attained by teachers in their practices have led to pupils' achievement in literacy and numeracy. Moreover, this study shows that 96.3% of trained teachers incorporate different teaching strategies into the teaching and learning process.

The data in Table 1 show that the overwhelming majority (100%) of early-grade teachers agree and strongly agree that the program helped to prepare and use literacy teaching aids in the teaching and learning process. The mean score was 4.50 for early-grade teachers. This implies that the program has been successful in enhancing the teachers' instructional abilities and improving their students' learning experiences. This suggests that the program has enabled the teachers to have the necessary knowledge and skills to prepare and use literacy teaching aids effectively. This also indicates that the teachers recognized the value of these aids and were able to incorporate them into their teaching to enhance their students' literacy skills. Moreover, the fact that all the teachers agreed or strongly agreed with the program's effectiveness suggests a high level of consensus among the teachers regarding the benefits of using literacy teaching aids in the teaching and learning process. In relation to literacy teaching aids, WEO4 had this to say:

The MGDTP helped to update teachers with the skills of preparing teaching aids, which were taught in the teachers' colleges but were ignored. After the training, classrooms are surrounded with teaching aids that help pupils in the learning process (WEO4, Personal interview, 20 April 2023).

This information from the interview revealed that the classroom is now surrounded by teaching aids, which is helping pupils in the learning process. This reflects that the MGDTP has succeeded in addressing a gap in the skills and knowledge of teachers by providing them with the necessary training to prepare and use teaching aids effectively. By doing so, the program has contributed to creating a more engaging and interactive learning environment for students, which can help to improve their learning outcomes. During classroom observation, students used well-designed pieces of sticks in learning to count. This implies that the teacher was implementing a hands-on, manipulative-based approach to teaching arithmetic. This type of approach is commonly referred to as manipulatives-based instruction and involves the use of physical objects or manipulatives to teach arithmetic concepts.

The data in Table 1 indicate that the overwhelming majority (100%) of early-grade teachers agreed and strongly agreed that various classroom management techniques were taught during the program's implementation. The mean score was 4.58 for early-grade teachers. This implies that the training was highly effective in imparting knowledge to teachers on the techniques of classroom management with the aim of improving the literacy skills of students. Effective classroom management involves creating a positive learning environment that is conducive to learners in developing the 3R skills (reading, writing, and arithmetic) and encourages students to engage in the learning process. Teachers can use positive reinforcement, teamwork, visual aids, and effective arrangement of the classroom to manage students. The findings from the evaluation study are in line with those by Counihan et al. (2022), who affirmed that there is a positive impact of literacy teacher training programs on students' reading, writing, and arithmetic skills

The data in Table 1 show that the overwhelming majority (100%) of early-grade teachers agree and strongly agree that they participated in the McGovern–Dole training program. The mean score was 4.67 for early-grade teachers. The program was able to effectively communicate the benefits of the program to the teachers and motivate them to participate. This also indicates that the program was able to overcome any barriers that may have hindered participation, such as accessibility or scheduling conflicts. Moreover, the fact that all eligible teachers participated in the program implies that the program was able to reach its target audience and provide them with the necessary training and resources to enhance their instructional abilities. This suggests a high level of commitment and engagement from both the program implementers and the teachers, which is likely to result in positive outcomes for the students.

Generally, the other items in Table 1 show the following: regarding item 4 on the MGDTP to equip pupils with literacy skills, the teachers' mean score was 4.50 for early-grade teachers; for item 8, the use of a participatory approach during training, the mean score was 4.67 for early-grade teachers; and for item 10, on the training of teachers at the school level, the mean score was 4.67. Additionally, the average mean score of all ten statements was 4.46. The general mean scores imply the strongly agree ratings provided by early-grade teachers, which indicate that the MGDTP has succeeded in improving the literacy of school-age children. The findings from this evaluation study are in line with those found by Pettersson et al. (2016), who affirmed that the majority of standards one and two improved in terms of literacy as a result of teachers' in-service training.

## 11. Conclusions

The McGovern–Dole Teacher Training Program had a positive impact on improving the literacy skills of school-age children, as perceived by teachers. The program's effective-

ness was evidenced by the improvements in pupils' reading, writing, and comprehension abilities, as well as their enhanced performance in other subjects. Additionally, the training provided to teachers equipped them with the effective instructional approaches and skills necessary for promoting literacy development.

## 12. Recommendations

This study recommends the fostering of a positive perception of the McGovern–Dole Teacher Training Program among teachers. This can be achieved through the regular provision of teachers' training, rewarding teachers with a low number of pupils with literacy rates. This will contribute to their continued engagement, motivation, and commitment to promoting literacy development, ultimately benefiting school-age children and enhancing their overall learning outcomes.

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## Author contributions

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## Conflicts of interest

The author(s) declare no conflict of interest.

## Data availability statement

Data supporting these findings are available within the article or upon request.

## Institutional review board statement

Not applicable.

## Informed consent statement

Written informed consent has been obtained from the patient(s) to publish this paper.

## Sample availability

The author(s) declare that no physical samples were used in this study.

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