The role of Dissemination of Monitoring and Evaluation Results in the promotion of Performance of Digital Education Technology Project In Malawi

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Abstract
The study aimed to investigate the influence of Dissemination of Monitoring and Evaluation Results on the performance of Digital Education Technology (DET) project in Malawi. Methodologically the study was guided by descriptive survey correlational design. The target population was comprised of 456 persons who were involved in the management, implementation and Monitoring and Evaluation of the DET project. 204 respondents were sampled using proportionate stratified random sampling approach to ensure that all categories of respondents were represented in the sample. A table of random numbers was used to sample participants from each stratum. Questionnaire and interview guide were utilized as data collection instruments. These instruments were piloted to enhance validity and reliability. Quantitative data analysis was done using SPSS and both descriptive and inferential statistical analysis techniques were used. Frequency, mean and standard deviation were utilized as descriptive statistics while Pearson product moment correlational coefficient and regression analysis were used as inferential statistical tests. The qualitative data was analyzed using thematic analysis and this involved the identification of recurrent themes from the voices of the participants. With $r=0.367$, $r^2=0.135$, $F(1, 183)=28.309$ at $p=0.001<0.05$ the study has established that Dissemination of Monitoring and Evaluation results has a moderate positive influence on performance of DET project in Malawi. The study recommends the strengthening of Dissemination of M&E results in order to improve the performance of DET project.

Key Words*: Dissemination of M&E results, Project Performance, Digital Education Technology*

1. Introduction

Monitoring and Evaluation (M&E) is important as it ensures the implementation of the project according to the project plan. This position is echoed by Kyalo, Mulwa and Nyonje (2015) who contend that Monitoring and Evaluation is aimed at seeing to it that the project plan is followed consistent with inputs, work schedules and outputs. For this to be realized among other things M&E information has to be disseminated to project stakeholders so that they are informed hence

being in a position to make constructive contributions which may enhance project performance (United Nation Development Programm (UNDP) (2009). In Malawi the Digital Education technology project which uses mobile tablets to enhance literacy and numeracy performance of early grade learners (standard 1 and 2) was monitored and evaluated. During the M&E process of the DET project, resources were committed to the dissemination of project information to stakeholders. There is need to investigate the extent to which the Dissemination of M&E results influenced the performance of the DET project.

2. Statement of the problem

Malawi is among the developing countries in the world with an estimated population of 17million and a Gross Domestic Product (GDP) per capita of 320 USD (World Bank, 2017). Its ranking on Human Development Index (HDI) is 170 out of 186 (UNDP, 2013). In view of this there are financial hiccups in the education sector which undermine education fundamentals. For example the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) (2011) showed that only 6% of standard 6 pupils in Malawi were able to meet grade level competencies on English Achievement test yet such a fit is supposed to be reached by standard 4. In terms of numeracy performance among standard 6 learners the situation is equally not impressive as only 20.4% of the learners have reached the minimum level of numeracy (SACMEQ, 2017). Furthermore despite the fact that Malawi has gained significant strides in the area of pupil enrolment as a result of free primary education that was introduced in 1994, completion and repetition rates are worrisome. As reported by the Malawi Educational Management Information System (EMIS) (2016) completion and repetition rates are 50.9% and 27.6% respectively. These statistics show that there are challenges in Malawi's primary education sector. In this regard, Malawi has numerous projects whose aim is to improve the quality of education at primary school level. One of these projects is the Digital Education Technologies in particular Mobile Tablets aimed at boosting numeracy and literacy achievements for standards 1 and 2 pupils. Despite this project, learners' performance in these subjects is still a problem. The project however has M&E component which is aimed at enhancing the performance of the project. M&E information is disseminated to project stakeholders so that decisions to improve the performance of DET project are made from an informed position. Little is known regarding the influence of disseminating M&E results to project stakeholders on the performance of the DET project. The rationale behind this study was therefore to establish the influence of disseminating M&E results on the performance of the DET project in Malawi.

3. Objective of the Study

The objective of the study was to investigate the influence of Disseminating Monitoring and Evaluation Results on the performance of DET Project in Malawi.

4. Hypothesis of the study

The study tested the following hypothesis as per the research objective.

H_1, Dissemination of Monitoring and Evaluation Results has a significant influence on the performance of Digital Education Technology project in selected public primary schools in Malawi.

5. Literature Review

Dissemination of M&E results is associated with communicating results to relevant stakeholders which include project staff, beneficiaries and funders. This is critical as it makes all relevant stakeholders conversant with the progress of the project so that decisions regarding what should be changed or maintained are made with full knowledge of the stakeholders. As contended by Adamchak, Bond, MacLaren, Magnani, Nelson and Seltzer (2000) "monitoring and evaluation results help stakeholders understand what the program is doing, how well it is meeting its objectives and whether there are ways that progress can be improved" (p. 149). Indeed this can be achieved if results are shared to stakeholders. Adamchak et.al further stipulates that sharing results is important in ensuring social, financial and political support that is critical in improving the program. In addition publicizing results gives public recognition to the stakeholders and volunteers who have worked hard to make the program a success which is a recipe for the attraction of new funders. Based on the above discussion, it can be concluded that dissemination of M&E results is vital and every effort should be made to ensure a smooth dissemination process. As stipulated by Asian Development Bank (2011) effective communication in a project is important for the success of the project. Such a view is shared by Muszynska (2015) who cites effective communication as a critical factor that contributes to the success of a project. To this end dissemination of M&E results which is an aspect of project communication is critical for project success.

For effective result dissemination to be achieved an M&E report has to be produced and a dissemination plan has to be considered. Dissemination can take the form of oral presentation and circulation of an M&E report to the stakeholders among others. It should be noted here that satisfaction of the stakeholders with the dissemination process is an indication that the dissemination was executed competently. In this regard, the concept of dissemination of M&E result embraced clarity of the M&E report, clarity of dissemination plan, usefulness of dissemination feedback and stakeholder involvement.

As earlier own stated M&E result dissemination is associated with sharing results with stakeholders concerned with the M&E process. This is particularly important as M&E is a multi-stakeholder endevour each of which has their role to play in the monitoring and evaluation process and have interests regarding the progress of the project (Mertens and Wilson, 2012). It is therefore anticipated that M&E which can inform DET project performance can be achieved if there is adequate communication of project information in the M&E process. For instance in a study entitled "Communication and Performance in software development projects" by Brodbeck

(2001) it was revealed that communication has a positive influence on performance of 29 software development projects from 17 organizations in Germany and Switzerland. Using multiple regression analysis it was established that in a situation where life cycle stage, project methods and user satisfaction together predict 42%, project communication predicts an additional 14% of project performance. This entails that project communication is a fundamental element for project performance and dissemination of M&E results being an aspect of communication is no exception. Note should be taken that this study was conducted in Germany and Switzerland; countries that are developed and are advanced in terms of technology. This context is different from Malawi as it is a developing country and is limited in terms of technology. Performance of DET technology project is therefore likely to be different in these two different contexts.

In the context of projects involving multinational companies, communication amongst the project partners has been described as an important endevour. In a study by Badir, Buchel and Tucci (2012) entitled "A conceptual framework work of the impact of project Team and leader empowerment on communication and performance" in which a qualitative case study methodology involving three Switzerland based companies was used, it was concluded that communication amongst the project partners moderates the influence of team and leadership empowerment on project performance. Thus it was claimed that the influence of team and leadership empowerment on project performance is dependent on the level of communication of project information between the project partners. As M&E results is project information, it can be argued that M&E will have an influence on performance of DET project if results are communicated or disseminated to the project stakeholders. However it should be submitted that since the study used qualitative research methodology to establish that communication is a moderator, it ran short of establishing the magnitude of moderation as qualitative methodologies have no provisions for quantification hence the moderation claim lacks objectivity. It is therefore important that such quantification be made so that project stakeholders can be aware of the amount of benefits that can be accrued from communication of M&E results.

In view of the fact that communication of M&E results is important in a project Hobson, Mayne and Hamilton (2013) in their article entitled "a step by step guide to monitoring and evaluation" emphasize the importance of communicating results to relevant project stakeholders in Britain by providing a framework of communication which include the following elements 1) deciding on key audience 2) tailoring the results to key stakeholders 3) drawing out key lessons from the results for key stakeholders. It should be stressed that the framework of communication above is critical and its importance is echoed by Project Management Institute (2013) who describe communication as one of the crucial success factors of project performance. Nevertheless the study did not link the notion of communication to performance of DET projects. In other words the benefits in as far as DET project performance is concerned that can be accrued from the framework in question is not clear. This is in part due to the fact that the qualitative research methodology which was employed in the determination of the communication framework epistemologically has no provision of relationships among variables (Bryman, 2008) which is

critical in determining influence of variables on each other. A quantitative investigation that can provide insights on the influence of the framework of communication on project performance would be important to determine the value of the proposed communication framework during the M&E process.

Related to the foregoing, the value of communicating M&E results has been emphasized in monitoring and evaluation literature. For instance Umhlaba Development Services (2017) contend that sharing of M&E results is important to promote accountability and motivate stakeholders for action. Such a claim is echoed by Richardson (2015) who concludes that communication problems are amongst the reasons behind project failure. Furthermore communicating M&E results ensures that results are correct as feedback that will be obtained from the communication will be used to improve the credibility of the results. On the same note the notion of dissemination of monitoring and evaluation findings has been supported by UNDP (2009) as it provides methods that should be employed during dissemination and they include; printed reports, PDF copies of the results shared on internal and external internet sites and the media. However when all is said and done, the contribution that M&E result dissemination can make to the success of the project is limited. In this regard justifying the expenditure that is allocated to M&E result dissemination may lack a scientific basis. Research designs such as causal comparative or cross sectional survey with performance of DET projects as a dependent variable may be critical as they would provide in quantitative terms the contribution M&E result dissemination would make to a project.

Considering the fact that M&E result dissemination as a communication issue is demanding, the need to plan for the exercise cannot be over emphasized. As argued by Adamchak, Bond, Maclaren, Magnan and Nelson (2000) M&E result dissemination planning should take into consideration budget available, the cost of preparing and producing dissemination activities and who is responsible for carrying out the activities. It is through the consideration of the above elements that result dissemination may be a successful venture. However it should be argued that the benefits of including the mentioned aspects when planning for dissemination may remain speculative in nature unless a pragmatist (combination of positivism and constructivism) approach that links result dissemination and DET project performance is undertaken. The knowledge claims that would be made from such an investigation may be stronger and might validate the need to invest in result dissemination as an aspect of M&E process as both quantitative and qualitative approaches would be used.
From the review it is clear that dissemination of M&E results is a crucial enterprise as such stakeholder involvement is needed and that there is need to come up with a comprehensive dissemination plan. Furthermore feedback from the dissemination exercise is important as it can be used to improve the quality of M&E results. In view of this stakeholder participation, dissemination plan and use of dissemination feedback are critical elements associated with M&E

Theoretical Framework

The study was guided by diffusion theory was proposed by Everette Rogers in 1983. This theory explains how new ideas, information and new viewpoints spread across cultures. The theory stipulates that information or new ideas pass through a path of communication in order to reach a target group. The spread of ideas is influenced by a myriad of factors that include nature of the idea to be spread, the available communication channels, the social system and time of

communication of which channel of communication plays a crucial role of all factors (Westen, 2007). The diffusion theory stipulates that it is difficult to influence or change how individuals will behave and adjust their thinking having received new information. Some members will be disoriented with the new information while others will be accommodating. Communication of new information should therefore be done in a manner that it can accommodate all group members (Lewis, 2007).

The diffusion theory therefore ensures feeling of inclusion by all team members. In communicating to team members, there is need to be conscious of the communication channels to be used since some communication channels are more appropriate than others depending upon the nature of information. Ideas that are serious may be taken less serious depending upon the channel of communication. For instance using social media to share M&E results may appear informal and may not be taken seriously.

6. Conceptual Framework

In this study, dissemination of M&E results is the independent variable while the performance of DET project is dependent variable. This relationship is presented in Figure 1.

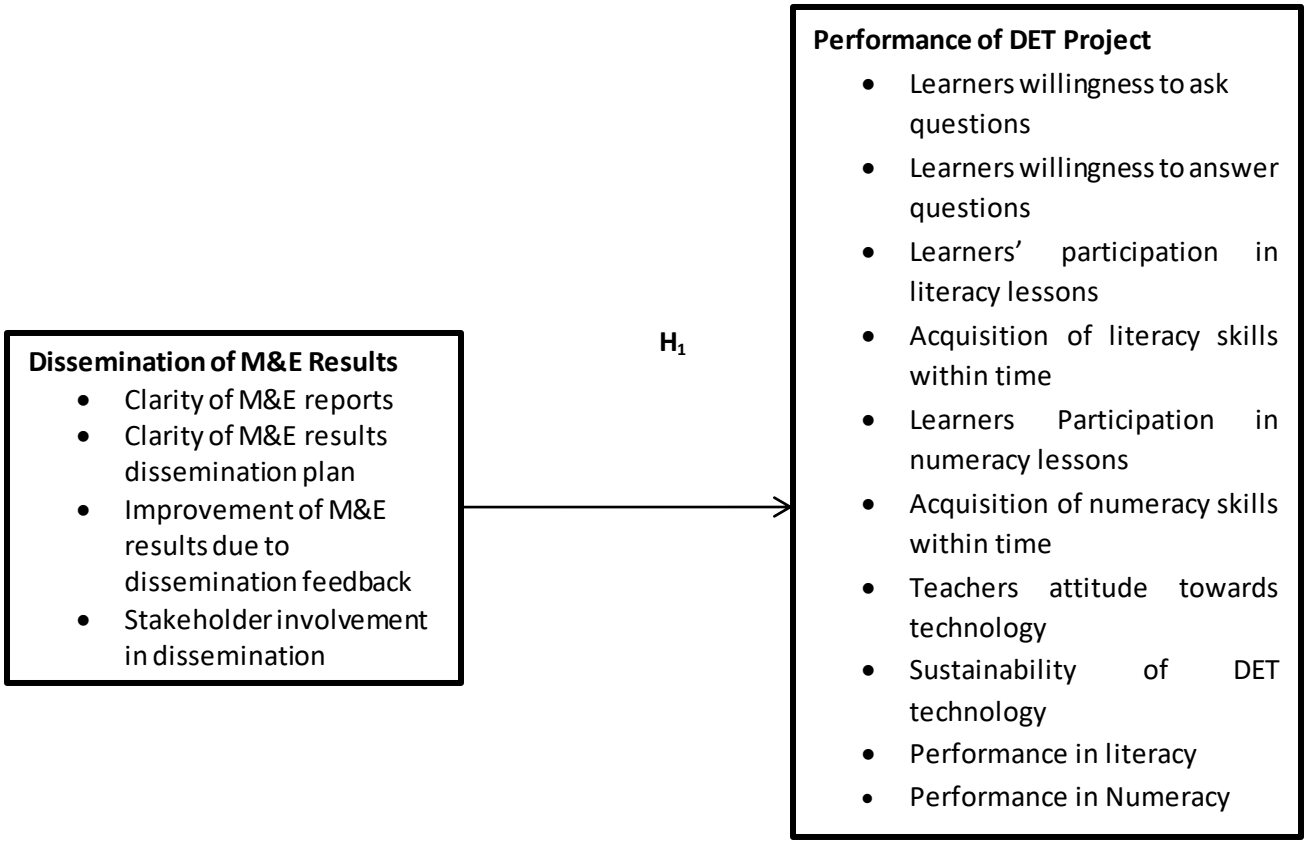

Figure 1: Conceptual Framework

Figure 1 shows the perceived relationship between dissemination of M&E results which is the independent variable and the performance of DET project which is the dependent variable. Dissemination of M&E results was guided by clarity of M&E reports, clarity of dissemination plan for M&E results. Improvement of M&E results due to dissemination feedback and

stakeholder involvement in dissemination as indicators. These elements of dissemination if executed may improve the performance of DET project. It is therefore anticipated that performance of the DET project would improve in terms of learners' willingness to ask and answer questions, enhanced learners' participation in literacy and numeracy lessons, ability of learners to acquire literacy and numeracy lessons within the recommended time and improved sustainability of the project.

7. Methodology

Mixed methods approach and in particular a descriptive cross sectional survey design was employed in this study. Both quantitative and qualitative data were gathered in order to obtain holistic insights of the research objective. The study targeted a population of 456 personnel. These people took part in the implementation and monitoring and Evaluation of the DET project. A sample size of 204 participants was included in the study and proportionate stratified random sampling strategy was used to ensure representation of all categories of the population (Bryman, 2008). Out of the 204 questionnaires which were distributed to the respondents, 184 questionnaires were returned representing a return rate of 89.75% which was appropriate as it was beyond 60% which is the minimum as proposed by Richardson (2005). Pilot testing of the questionnaires was performed and reliability testing using Cronbach Alpha was undertaken. A reliability coefficient of 0.808 (dissemination of M&E results) and 0.846 (Performance of DET project) showed that the instruments were reliable considering a benchmark of 0.7 according to Gliem and Gliem (2003).

8. Results and Discussion

The objective of the research was to investigate the influence of Dissemination of Monitoring and Evaluation Results on the performance DET project in Malawi. The performance of DET project was measured on a 5-point scale based on 10 parameters namely: learners willingness to ask questions, learners willingness to answer questions, acquisition of literacy skills within time, learners participation in literacy lessons, acquisition of numeracy skills within time, learners participation in numeracy lessons, teachers' interest in the use of digital education technology, schools' readiness to continue with the project after the project has phased out, improvement of literacy performance and improvement in numeracy performance. The Dissemination of M&E results was also measured on a 5 point scale based on clarity of M&E reports, clarity of M&E results dissemination plan, improvement of M&E results due to dissemination feedback and stakeholder involvement in dissemination as indicators.

9.1 Distribution of Respondents by Gender

The gender of the respondents was analyzed using frequencies and the results are presented in Table 1.

Description	Frequency	Percent
Male	61	33.2
Female	123	66.8
Total	184	100

Table 1: Distribution of the respondents by gender

The findings in Table 1 show that 66.8% of the respondents were females while 33.2% were males. This indicates that one gender dominates the involvement in the implementation and monitoring and evaluation of the DET project. The results suggests that females are active in the DET project than males hence the need to bridge the gender gap in the project.

9.2 Age of the Respondents

The age of the respondents was assessed using range and mean as shown in the Table 2**.**

Description	**minimum**	**maximum**	**Mean**	**Std. Deviation**
Age	19	58	35.082	10.39384

Table 2: Age of the respondents

Results in Table 2 indicate that the mean age of the respondents is 35.082 years. Furthermore the minimum age is 19 years while the maximum is 58 years. These findings mean that the respondents were mature enough to provide critical information regarding monitoring and evaluation and project performance issues. The standard deviation of 10.39384 means that the respondents were of varying ages. This entails that the DET project was accommodating such that it offered opportunities to all respondents of productive and energetic ages.

9.3 Academic Qualifications of the Respondents

The respondents were of varied academic standing. The distribution of the respondents as per their academic qualifications is presented in Table 3.

Academic Qualifications	Frequency	Percent
JC	9	4.9
MSCE	154	83.7
Diploma	16	8.7
Bachelor	4	2.2
PhD	1	0.5
Total	**184**	**100**

Table 3: Academic Qualifications of the respondents

Table 3 shows that a majority 154 (83.7%) of the respondents were Malawi School Certificate of education (MSCE) holders seconded by Diploma holders 16 (8.7%). Junior Certificate holders (JC) came third with 4.9% whereas Bachelor's Degree holders were at 2.2% while 1 (0.5%) respondent had a PhD. All the respondents received training regarding the Digital Education Technology project and the associated implementation and monitoring and evaluation aspects of the project. This entails that the participants had information about the issue under investigation

9.4 Performance of Digital Education Technology Project

The study found it important to measure the extent to which the DET project performed in Malawi. To this end 10 indicators were used and measured on a 5 point likert scale. The indicators were as follows: learners willingness to ask questions, learners willingness to answer questions, acquisition of literacy skills within time, learners participation in literacy lessons, acquisition of numeracy skills within time, learners participation in numeracy lessons, teachers' interest in the use of digital education technology, schools' readiness to continue with the project after the project has phased out, improvement of literacy performance and improvement in numeracy performance. The extent to which the DET project performed in relation to the aforementioned indicators is as per Table 4.

Description	Frequency and Percent					n	Mean	SD
	NA	LE	ME	GE	VGE			
The Project enhanced learners willingness to Ask questions	19; 10.3%	40; 21.7%	63; 34.2%	35; 19%	26; 14.1%	183	3.04	1.1826
The Project enhanced learners willingness to answer questions	1; 5%	14; 7.6%	38; 20.7%	64; 34.8%	65; 35.3%	182	3.978	0.9631
The project helped learners to acquire literacy skills within time	4; 2.2%	22; 12%	58; 31.5%	65; 35.9%	32; 17.7%	181	3.547	0.99121
The project enhanced learners participation in literacy lessons	2; 1.3%	9; 5.7%	33; 20.9%	49; 31%	65; 41.1%	158	4.0506	0.98264
The project helped learners to acquire numeracy skills within time	4. 2.2%	26; 4.4%	56; 30.9%	59; 32.6%	36. 19.9%	181	3.5359	1.0353
The project enhanced learners participation in numeracy lessons	1;. 6%	10; 5.6%	22; 12.2%	62; 34.3%	85; 47.2%	180	4.222	0.90656
The project promoted teachers interest in the use of technology	5; 2.7%	16; 8.7%	35; 19.1%	43; 23.5%	84; 45.9%	183	4.0109	1.1192
Schools were ready to continue with the project	24; 13.2%	52; 28.6%	30; 16.5%	36; 19.8%	40; 22%	182	3.0879	1.0098
The project improved literacy performance of learners	4; 2.2%	16; 8.7%	33; 17.9%	75;4 0.8%	62; 30.4%	184	3.8859	1.0098
The project improved numeracy performance of learners	3; 1.6%	7; 3.8%	36; 19.7%	75; 41%	62; 33.9%	183	4.0164	0.91673
Composite Mean						184	3.79	0.71305

NA=Not At all, LE=Little Extent, ME=Moderate Extent, GE=Great Extent, VGE=Very Great Extent
n=number of Respondents, SD=Standard Deviation

Table 4: Performance of Digital Educational Technology Project

According to Table 4, generally the DET project was perceived to have moderately performed since the indicators had means ranging from 3.04 to 4.22 measured on a 5-point likert scale. An examination of the frequencies showed that a majority of the respondents (with the highest being 47.2% and lowest being 14.1%) felt that the DET project performed to a very great extent. Learners participation in numeracy lessons was viewed as the main aspect of DET project performance since it had a mean of 4.222 and SD of 0.90656 where 147 respondents rated this aspect of performance as great extent (62;34.3%) or very great extent (85; 45.9) representing 80.2% of the respondents. Learners' participation in literacy lessons was rated second with a mean rating of 4.0506 and SD of .98264. This was followed by participants' conviction that the DET project improved learners' numeracy performance which had a mean of 4.0164 and SD of .91673. Promotion of teachers' interest in the use of technology came fourth with a mean of 4.0109 and SD of 1.1192 while learners' ability to answer questions came fifth with a mean of 3.978 and SD of 0.9631. Participant conviction that the DET project had improved learner's literacy performance was rated sixth with a mean of 3.8859 and SD of 1.0098. Ranked seventh was leaners ability to acquire literacy skills within time which had a mean of 3.547 and SD of 0.9912. This was followed by learners' ability to acquire numeracy skills within time which had a mean rating of 3.5359 and SD of 1.035. School readiness to continue with the DET intervention once the project is phased out came ninth with mean of 3.0879 and SD of 1.0098. Learners' ability to ask questions came last with mean of 3.04 and SD of 1.1826.

The composite mean of DET project performance was 3.79 with SD of .71305.This implies that the DET project overall was perceived to have performed to a moderate extent.

Interviews that were conducted revealed that the project has done well in terms of arousing leaners interest in numeracy and literacy lessons. Thus learners' participation in these subjects was perceived to have increased as it was reported that the use of tablets is motivating to the learners such that the desire to go into the learning center to have numeracy and literacy lessons sometimes came from learners themselves. One project implementer hinted that "learners are interested in this project. Leaners find the mobile tablets quite enjoyable to the extent that they ask us to open the learning centers so that they can have lessons. Dropouts are also willing to come and patronize the learning centers."

However learners' willingness to use the tablets did not just come without challenges as at first they were reluctant to use the tablets thinking that they are blood sucking devices. One project coordinator summed it all "it was really difficult for the leaners to start using the tablets. With rumors of blood sucking in this country, learners and parents thought that the tablets are blood sucking devices. Some learners were crying and even urinating themselves upon being given the tablet but now with community sensitization all these misconceptions have gone. "Thus the project enhanced learners' participation in both numeracy and literacy but there were challenges on the part of the learners which in the long run were addressed.

In terms of teachers' interest in the technology, it was reported that the technology is good such that teachers are interested in it however time was a problem for a majority of teachers. One project coordinator reported that teachers are busy with teaching regular classes such that it is difficult for them to find time to use the technology. She added that the project has no special time table in the school such that it is embedded in the normal school time table making it difficult for teachers to attend to this technology.

The issue of sustainability of the project was put to the participants during the interview. It was reported by both M&E officials and project coordinators that it is difficult for the project to continue once the funders have pulled out adding that the tablets are expensive such that the schools cannot afford to repair let alone buy new ones. One M&E official hinted that "this is a very expensive technology. One tablet costs $200. Schools are inadequately funded to buy these gadgets".

These findings contract a study by Karolcik, Cipkova and Kinchin (2016) in which they reported that digital education technology projects are failing because of teachers' lack of confidence in the use of technologies and resistance to change. Furthermore the findings are at variance with a claim made by Khaddage, Muller and Flintiff (2016) that the adoption of these digital education technologies in the formal classrooms has been not impressive as many teachers in schools and colleges are reluctant to allow their widespread access. The moderate interest of teachers in the DET project implies that headways are being made with respect to the success of digital education technology project. Additionally the overall average performance (Mean=3.79) of the DET project demonstrates that the project is moving in the right direction although more work needs to be done.

9.5 Dissemination of Monitoring and Evaluation Results and Performance of DET Project

Dissemination of Monitoring and Evaluation results is a crucial aspect of M&E process. It is for this reason that the study sought to determine the influence of Dissemination of Monitoring and Evaluation Results on the performance of the DET project. In a move to achieve this, the study established the extent to which dissemination of M&E results was executed. In this vein clarity of M&E reports, clarity of plan for dissemination of M&E results, improvement of M&E results due to dissemination feedback and stakeholder involvement in the dissemination of M&E results were used as indicators of dissemination of M&E results with measurement of the same done on a 5point scale. Table 5 presents a summary of results pertaining to the extent to which dissemination of M&E results was realized in the DET project.

Description	Frequency and Percent					n	mean	SD
	NA	LE	ME	GE	VGE			
M&E reports were clear	12; 6.5%	25; 13.6%	31; 16.8%	48; 26.1%	68; 37%	184	3.7337	1.2674
Plan for dissemination of M&E results was clear	16; 8.7%	25; 13.6%	38; 20.7%	47; 25.5%	58; 31.5%	184	3.5761	1.295
Dissemination feedback improved M&E results	10; 5.4%	26; 14.1%	42; 22.8%	52; 28.3%	54; 29.3%	184	3.6196	1.1996
Stakeholders were involved in the dissemination of M&E results	28; 15.2%	27; 14.7%	43; 23.4%	43; 23.4%	43; 23.4%	184	3.25	1.268
Composite Mean and SD						184	3.5448	1.2575

NA=Not At all, LE=Little Extent, ME=Moderate Extent, GE=Great Extent, VGE=Very Great Extent, n=number of respondents, SD=Standard Deviation

Table 5: Dissemination of Monitoring and Evaluation Results

As indicated in Table 5 generally respondents felt that dissemination of M&E results was done to a moderate extent with means ranging from 3.25 to 3.7337. When an examination of the frequencies was undertaken, it was revealed that majority of the respondents (the highest being 37% and the lowest being 23.4%) were of the view that dissemination of M&E results was done to a very great extent). Clarity of M&E reports was perceived as the main aspect of dissemination of M&E results as it had mean of 3.7337 and SD of 1.2674 where 116 respondents rated this particular aspect as great extent (48;26.1%) or very great extent 68; 37%) representing 63.1% of the respondents. This was followed by improvement of M&E results due to dissemination feedback with mean of 3.6196 and SD of 1.1996. Clarity of Plan for dissemination of M&E results came third with mean of 3.5761 and SD of 1.295. Stakeholder involvement in the dissemination of M&E results was ranked fourth with mean of 3.25 and SD of 1.268.

The composite mean for dissemination of M&E results for the DET project was 3.5448 and SD of 1.2575. This implies that generally respondents were of the view that dissemination of M&E results for the project was done to a moderate extent.

An interview that was conducted with project stakeholders indicated that the project has mechanisms of capturing how the project is performing in real time and the information is timely disseminated to concerned stakeholders at school, zonal, district, national and international levels using the Digital Technology mounted in the schools. One project coordinator at school level reported that "the information on what is happening in the learning center is captured on the satellite in real time. Thus the satellite is capable of capturing the number of hours that learners

spent in the center, number of learners that patronized the learning center and learners' performance on literacy and numeracy exercises. A report concerning these is sent to all stakeholders with the ranking of the schools at zonal, district and national levels".

In view of the sentiments above, it is clear that M&E reports are prepared and disseminated to stakeholders. Stakeholders are able to add their input to M&E reports thereby improving the quality of the reports. Thus there is also stakeholder participation in the dissemination of M&E information as coordinators at school level are also able to share the information to project implementers in the schools.

8.6 Correlation Between Dissemination of M&E results and Performance of DET project

The influence of dissemination of M&E results on the performance of DET project was established using Pearson Product Moment Correlation Coefficient. The relationship between dissemination of Monitoring and Evaluation and performance of DET project is presented in Table 6.

		Performance of DET project	Dissemination of M&E Results
Performance of DET project	Pearson Correlation	1	.367**
	Sig. (2-tailed)		0
	N	184	184
Dissemination of M&E Results	Pearson Correlation	.367**	1
	Sig. (2-tailed)	0	
	N	184	184

**. Correlation is significant at the 0.01 level (2-tailed).

Table 6: Correlation between Dissemination of M&E results and Performance of DET project

Results in Table 6, show that there is a moderate positive relationship (r=.367) between dissemination of Monitoring and Evaluation results and performance of DET project. In addition the correlation between the two variables is statistically significant at $p=0.01<0.5$. The findings mean that dissemination of monitoring and evaluation was perceived to have a moderate positive contribution on the performance of DET.

9.7 Test of Hypothesis

Further determination of the influence of dissemination of M&E results on performance of DET project was explored using simple linear regression analysis. Thus the null hypothesis tested was as follows:

H0: Dissemination of M&E Results has no influence on the Performance of Digital Education Technology in Malawi

H1: Dissemination of M&E Results has influence on the Performance of Digital Education Technology in Malawi

In order to test this hypothesis a composite mean score of clarity of monitoring and evaluation reports, clarity of plan for dissemination of M&E results, improvement of M&E results due to dissemination feedback and stakeholder involvement in the dissemination of M&E findings was obtained and used as the independent variable. The dependent variable was a composite mean of indicators that constituted performance of DET project. The linear regression model that was tested was $y=a+B_1X_1+e$ where:

y=Performance of DET project
a=constant
B_1=Beta coefficient
X_1=Dissemination of Monitoring and Evaluation Results
e=error term

Table 7 shows a summary of the results for the regression model.

Model Summaries	**R**	**R-Square**	**Durbin-Watson**	**Unstandardized Coefficient**	
				B	**Std.Error**
	0.367	0.135	1.559		
(Constant)				2.78	0.176
Dissemination of M&E results				0.253	0.048
F(1,183)=28.309, p=0.001<0.05					
a.Dependent variable: Performance of DET project					
b.Predictors: Dissemination of M&E Results					

Table 7: Dissemination of M&E Results and the Performance of Digital Education Technology Project

Results in Table 7 show that R=0.367 which means that the dissemination of Monitoring and Evaluation results had a moderate influence on performance of the DET project. The coefficient of determination was (R^2=.135) which implies that 13.5% change in performance of the DET

project can be explained by dissemination of Monitoring and Evaluation Results. At this juncture, 86.5% of change in performance of the DET project was due to other factors that are outside the model. A beta value of 0.253 means that a unit increase of dissemination of M&E results contributed to 25.3% increase in performance of DET project. Generally the model was statistically significant at P=0.001<0.05. The Durbin-Watson test was 1.559 which is closer to 2 hence there was no autocorrelation. The F ratio was found to be significant since F (183) =28.309), P=0.001<0.05. This entails that there is a statistically significant influence of dissemination of M&E results on performance of DET project. In this regard the null hypothesis was rejected while the alternative hypothesis accepted. Therefore dissemination of monitoring and evaluation results had a significant influence on performance of DET project in Malawi at 0.05 level of significance.

These findings are in resonance with Brodbeck (2001) who established that project communication predicts 14% performance of 29 software development projects in Germany and Switzerland. It is evident from the results in Table 4.22 that dissemination of M&E results predicted 13.5% performance of the DET project which entails that the relationship between dissemination and project performance cuts across different contexts i.e. developed world (Germany and Switzerland) and developing world (Malawi). The positive influence of dissemination of M&E results on performance of DET project was corroborated during interview with an M&E official when he stated that "Reports on how schools are performing in this project are sent to project stakeholders at zonal, district, national and International levels using digital technology. These stakeholders are therefore able to share ideas regarding how the project is working and ways of improving the performance of the DET project". It was further reported that these M&E reports are clear such that stakeholders are able to make sense of them. The mean rating of clarity of M&E reports was found to be 3.7337 which was moderate. The positive influence of dissemination of M&E results can therefore partly be attributed to the fact that M&E reports were clear. More effort should therefore be made to ensure that M&E reports are clear to a great extent so that more benefits to project performance can be realized.

These findings compliment a study by Badir, Buchel and Tucci (2012) entitled "A conceptual framework of the impact of project Team and leader empowerment on communication and performance" in which a qualitative case study methodology involving three Switzerland based companies was used. It was thus concluded that communication amongst the project partners moderates the influence of team and leadership empowerment on project performance. Thus it was claimed that the influence of team and leadership empowerment on project performance is dependent on the level of communication of project information between the project partners. This study has established the influence of dissemination of M&E results on performance of DET project using a quantitative approach in which 13.5% change in performance of DET project is attributed to dissemination of M&E results. With this finding therefore this study has

validated assertions by Badir, Buchel and Tucci that communication of project information improves project performance.

The importance of communicating M&E results to stakeholders has been emphasized by Hobson, Mayne and Hamilton (2013) to the point that they have proposed a framework of communicating M&E results in Britain. Thus the positive influence of dissemination of M&E results on performance of DET project as established in this study has reaffirmed the position held by Hobson, Mayne and Hamilton. More investment in dissemination of M&E should therefore be encouraged. The fact that dissemination of M&E results was moderately rated (mean=3.5448) entails that more work needs to be done to ensure that dissemination is executed to a great extent.

Dissemination of M&E results provides an opportunity for improving M&E results as stakeholders give feedback which is a basis for corrective action for the M&E report (Richardson, 2015). In this study this particular aspect of M&E had a mean rating of 3.6196 implying that the role of dissemination of M&E results in the improvement of M&E findings was moderately achieved. The positive influence of dissemination of M&E results on performance of DET project can therefore be attributed to the fact that M&E results were improved as a result of dissemination of the same which in turn positively improved the DET project. A call for improvement in dissemination of M&E results may therefore be justified.

The findings validate the diffusion theory as propounded by Rogers (1983). Through diffusion new ideas and viewpoints spread across cultures. Thus dissemination of M&E results ensures that information about the project is spread to various stakeholders. In this regard there is diffusion of project information which triggers project stakeholders to generate new ideas which may work to the betterment of the project. The positive influence of dissemination of M&E results on DET project performance can therefore be due to diffusion of information as dissemination could have provided a platform for various actors to learn how the project was working. In a way new constructive ideas were being proposed which could have worked to the advantage of the DET project.

9. Conclusion

It was the purpose of this study to establish the extent to which Dissemination of M&E results influenced the performance of the DET project in Malawi. The results indicate that Dissemination of M&E results was done to a moderate extent. The study has established that with $r=0.367$, $r2=0.135$, $F(1, 183) =28.309$ at $p=0.001<0.05$, Dissemination of M&E results had a statistically significant positive influence on the performance of DET project. Accordingly the findings have shown that 13.5% change in the performance of DET project was explained by dissemination of M&E results. Dissemination of M&E results should therefore be encouraged to improve the performance of DET project.

10.Recommendation

The study recommends that in order to maximize the benefits of M&E process on project performance, the organization should intensify the Dissemination of M&E results. The study has established that M&E results were disseminated to a moderate extent hence there is still room for improvement.

11.Further Studies

The study has established that Dissemination of M&E results had a significant positive influence on the performance of the DET project but the Dissemination was executed to a moderate extent on a scale of 1-5. Prospective researchers should therefore consider investigating factors that influence dissemination of M&E findings. The assumption is that if these factors are unearthed, they would inform strategies that can be used to enhance the Dissemination of M&E results.

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