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MJED

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Statement of purpose

The Malawi Journal of Education and Development (*MJED*) is a peer-reviewed, multidisciplinary journal published by the School of Education, University of Malawi, whose major aim is to publish outstanding critical research at the frontiers of education and sustainable development. Articles should focus on relevant social, economic, political or cultural issues or problems in education which have an impact on sustainable development, thus requiring a multidisciplinary approach which integrates different perspectives. *MJED* thus studies development from the perspective of education and education from the perspective of an analysis of its social-economic, political and cultural implications for sustainable development.

MJED is an accessible, International Journal. Although with a focus on Malawi, its aim is to include contributors and readers from different countries, across Africa and beyond. The Journal hopes to reflect this in the variety of topics, approaches and cultural backgrounds of its articles. *MJED* strives to publish articles written in a clear style, avoiding esoteric jargon, in order to address the needs and interests of the readers of different levels of expertise in many countries and disciplines.

Editorial

I am pleased to present the *Malawi Journal of Education and Development* (*MJED*), volume *7, 2021*. We are committed to publishing in the journal outstanding critical research articles on education and sustainable development. The journal articles take a multidisciplinary approach to education and sustainable development. In this issue, authors have explored a wide range of topics that warrant our scholarly attention. They also raise key issues that policy makers in the Ministry of Education could consider in policy formulation and review.

The first article by Ken Ndala and Martha Msowoya is on Non-compliance to Financing Policy in Secondary Education. The article is a timely interrogation of how innovative financial policies have failed to produce desired outcomes in secondary education. Using selected Community Day Secondary Schools (CDSS) in Lilongwe City of Malawi as a case study, the two authors succeed in demonstrating how contextual factors have conspired to frustrate policy implementation.

The second article by Peter Namphande explores school dropout from a less familiar perspective. He asks whether school dropout levels are a consequence of "choice or deprivation?" Using a selected number of schools in Kasungu as case studies, he shares perspectives and experiences of learners who dropped out of school for economic or livelihood reasons. The major finding of the study was that children dropped out of school in the district as a result of deprivation of basic capabilities.

The third article by Lusungu Gondwe, Patrick Kapito, Amos Chauma and company focuses on how teachers use feedback to improve students' writing proficiency. They raised a poignant question whether teachers should focus on skills in general or writing for communication. The article concludes that teachers' choice and use of feedback is not necessarily determined by the feedback's intrinsic potential to promote learning but rather by contextual factors, such as focus on technical skills which characterises the school and education system.

The fourth article by Enock Kamanga, Symon Winiko & Bob Chulu is a comparative study of MSCE Mathematics and GCE "O" Mathematics. They demonstrate that (1) GCE 'O' Level Mathematics is more difficult than MSCE (2) and as such, there is lack of fairness in considering the two examinations as comparable and (3) classification of students into grade categories only become comparable after linking, but not different before linking. In view of this, they suggest that linking is very important in Malawi's situation and in similar situations in order to promote fairness in high stakes decisions.

The fifth article Lydia Nkopoka, Elizabeth Tikondwe Kamchedzera & Symon Chiziwa explores workplace experiences of graduates with disabilities by following up graduates of University college in Malawi. The article shows that people with disabilities continue to experience barriers to participation and do not enjoy their employment rights fully.

Their coping strategies include perseverance, use of their money to buy assistive materials and conducting awareness training on disability issues.

The sixth article by Lisnet Mwadzaangati is an analytical study of how standard 2 Mathematics Teachers' Guide and Learners' Textbook introduces the number concept using Instructional analytic framework for Textbook Analysis. The findings show that most of the example sets that have been presented in both books are of high level, hence, capable of increasing learners' number sense if they were many. The article shows that the learners' textbook, in particular, has used real life artifacts which can enhance learners' transferring of knowledge and critical thinking.

The seventh article by Bubire Jere, Patrick Kapito and Amos Chauma explores how teachers demonstrated resilience in the teaching of reading in resource constraint contexts. Using the metaphor in "Backs against the wall but fighting on' they illustrate challenges that teachers face as they teach reading. The article reveals that, despite facing numerous challenges, teachers made concerted efforts to use interactive activities and utilised locally developed/available reading resources to ensure that learners are engaged in reading activities.

The last article by Beauty Maseko, Elizabeth Tikondwe Kamchedzera & Nertha Mgala investigated students' perceptions of education quality in secondary school double-shift schooling system (DSSS). The study revealed both positive and negative learners' perceptions towards quality education in secondary school DSSS. Most participants were against the idea of the system's abolition as they believed it enhances access to secondary education and creates free time in between shifts which, if well utilised, can help learners develop holistically.

Symon Chiziwa, PhD
Editor-in-Chief

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Non-compliance to Financing Policy: A Case of selected Community Day Secondary Schools in Lilongwe City

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Abstract
Be a challenge particularly in Sub-Saharan Africa. Many innovative financial policies have been put in place to make parents bear the costs yet school administrators do not comply with policies. A study was, therefore, conducted to analyse how finances are collected and utilized and how non-compliance with financing policies was affecting resource mobilization for some selected Community Day Secondary Schools (CDSS) in Lilongwe City of Malawi. The conceptual framework of efficiency provided a broader platform for analysis in the study. Data were collected from seven purposively selected CDSS using focus group discussions, in-depth interviews, and document analysis. Results indicated that noncompliance with the financing policy had contributed to a high shortage of teaching and learning materials which in turn might have led to poor quality and education standards in CDSS. Funds collected were not used for the intended purpose as stipulated by the policy. The study observes that compliance with the financing policy in CDSS can improve the availability of teaching and learning materials at the school level thereby improving learners' performance. Enhancing monitoring in the prudent use of the collected funds by school management is therefore strongly recommended.

Keywords: Financing, Policy, Efficiency, Effectiveness, Compliancy, Secondary education

Introduction

In many developing countries, the problems of financing secondary schools are acute. This is a result of the reciprocal expansion of the primary educational sector due to a drive for Education for all since 1990. Finding resources for Teaching and Learning Materials (TLM) to meet the expansion of the sector has been a challenge since then. Consequently, innovative financing policies have been put in place to make parents bear the costs (Lewin & Cailloids, 2001; Maestry & Bisschoff, 2009; Al Samarrai, 2007; Lewin, 2008; Batare, 2012; Archer, 2010; Adeyemi, 2011).

Globally, financing of secondary education follows different financing policies and models and these include increasing the share of the government funding allocation to secondary education, reducing unit cost, increasing internal efficiency, providing bursaries, and developing cost-sharing measures (Lewin & Cailloids, 2001). In all these

models, governments have a role to distribute funding to schools based on unit costs and equity models (Aslund, 2011). Bursaries are provided to finance education for students from low-income families aiming at ensuring equal distribution of resources. The cost-sharing policy largely allows parents to provide funding for the running affairs of the schools directly (Olembo & Ross, 1992; Bregman, 2002; Tagget, 2003; Ngware, 2007).

Most government policies allow institutions to collect funds and deposit them in government main accounts without allowing them to use the funds at the source of collection. The central government then allocates the resources to the institutions for their daily activities. Institutions with several priority needs find this approach unfavourable because for the funds to be reallocated back to the schools becomes a challenge.

Despite these models and policies, many schools in Sub-Saharan Africa face several challenges including a shortage of teaching and learning materials. The ultimate goal of educational achievement is not attained and many learners either drop out or leave school with little learning achievements. Due to the challenges faced by the schools, school administrators find it difficult to comply with the policy, that is, to use the funds collected for the intended purpose. Studies have identified several factors that influence non-compliance to finance policies (Kamau, 2016; Migosi, 2015; World Bank, 2018; Xaba & Ngubane, 2010).

A study was therefore conducted to analyze what contributes to noncompliance with the financing policy and how this affected resource mobilization for some selected Community Day Secondary Schools (CDSS) in Lilongwe City of Malawi.

Statement of the Problem

Proper financing of secondary education to have adequate teaching and learning materials is known to contribute to good learning outcomes (Lewin and Cailloids, 2001; Lewin, 2008; Njideka, et al, 2015). It is for this reason that governments put in place policies that aim at enhancing the availability of teaching and learning materials at the school level to enhance learner performance. Surprisingly, despite such a policy being implemented in CDSS in Malawi, for years the schools still operate under inadequate teaching and learning materials (World Bank, 2010; Mambo, 2012; Mlangeni and Chiotha, 2015). Thus, the performance of CDSS still lags despite policies being put in place to deal with the problem. It is for this reason that this study was carried out to explore how the funds collected are utilized.

Specifically, the study tackled the following two research questions:

1. What contributes to noncompliance with the financing policy that is aimed at providing teaching and learning materials in the selected CDSS?

2. How were funds collected and utilized in the selected CSDSS that led to noncompliance with the financing policy?

The concept of efficiency provided a platform for analysis in responding to these questions. The study focused on how Tuition fees, Textbook Revolving Fund (TRF), General Purpose Funds (GPF), and School Development Funds (SDF) were used at a school level**.**

The Concept of Efficiency

To begin with, efficiency is described as obtaining the maximum output for a given expenditure of resources. The word "efficiency" is associated with minimum expenditure of time and effort (Archer, 2010; Cornali, 2012; Seiler et al., 2013). Efficiency focuses on the means to achieve the set goals. In other words, efficiency advocates for the elimination of wastage to the fullest extent possible. Secondly, an efficient school is one with the mix of inputs used best to achieve the educational needs of the students (***Seiler et al., 2013*****). While efficiency means obtaining the maximum output** for a given expenditure of resources, effectiveness refers to the ability to achieve stated educational goals. CDSSs that are efficient are likely to be effective in achieving their set goals. "Efficiency and effectiveness are better explained by using the linkages between input, output, and outcome," (Batare, 2012, p. 174).

This study used the linkages between output and outcome to analyse sources of financial input for procuring TLM and the availability of TLM in the selected CDSSs. This was done with the view to finding out the reasons for the selected CDSSs not complying with the government policy that aimed at procuring TLM. Efficiency and effectiveness discussed above also go hand in hand with cost-effectiveness analysis. This answers the question of whether or not the procurement of TLM policy should be supported (Hallak, 1997; Seiler et al., 2013). Cost-effectiveness analysis aims at bringing the best alternatives on how educational goals can be achieved.

During the study period, efficiency in selected CDSSs looked at the ability of the school to translate parental funds TRF and SDF into required teaching and learning materials. The goal of schools, in doing this, is to increase learner performance. The sustainable development goal for social-economic growth stipulated in the National Education Sector Investment Plan (NESP) for 2020-2030 depends on the successfulness of learners graduating in secondary education.

Financing of Secondary Education and Selected Models

The importance of proper funding for secondary education is well documented in the literature (Lewin & Cailloids, 2001; Lewin, 2008; Njideka et al., 2015; Roser, et al., 2016). It is argued that the education sector cannot go without funds and that education has to be fully funded as it provides positive contributions to society. The secondary

education sector, in particular, should not be neglected because it is a level where youngsters enter the sector as children and leave as young adults. It is at this level that they learn to think, how to be, how to work, and cooperate with others (Lewin & Cailloids, 2001, p 7). It is therefore prudent that governments should prioritise financing of secondary education and make sure the policies put in place are complied with.

Despite well-documented reasons for financing secondary education, the shortage of teaching and learning materials has been the main cause of the poor performance of secondary schools in SSA. Many studies have demonstrated that poor performance has been noticed in different categories of secondary schools due to the unavailability of teaching and learning materials (Roser et al., 2016; Charles, 2002; Tagget, 2003). The World Bank in its report of 2016 "*facing forward: Schooling for learning in Africa"* notes that in Africa there is a great need to improve the learning environment including the availability of teaching and learning materials (Roser, et al., 2016). In Malawi, the problem of lack of teaching and learning materials has been highlighted by several studies. For example, Mlangeni & Chiotha (2015, p. 291) observed that "almost all CDSSs in Malawi do not have adequate facilities such as textbooks, laboratory and laboratory equipment,". World Bank (2010) and Mambo *et al*., (2012) expressed that CDSSs were largely characterized by inadequate desks, overcrowded classrooms, lack of essential teaching and learning materials, and no libraries, laboratories, and science facilities. Studies also report that practical subjects such as Physical Science, Biology, and Agriculture were rhetorically taught due to inadequate teaching and learning materials which were a result of insufficient funds for purchasing teaching and learning materials (Bweya, 2009; Kayuni, 2010; Gwede, 2005; ADF, 2001; Mlangeni & Chiotha, 2015). This predicament results in the provision of sub-standard education.

Yet this regretful situation is happening when policies and models aimed at enhancing supplying of teaching and learning material in schools are in use globally. Efficient and effective use of resources is also at the center of discussion in these models. It is believed that these policies will enhance autonomy in decision-making concerning the procurement of teaching and learning materials at the school level. As such, expectations are that with prudent use of funds available, schools will have adequate supplies of teaching and learning materials for better student performance. In Africa and Europe, bursaries are used to finance education for needy students coming from low-income families. Bursary policies also aim at ensuring equal distribution of resources (Olembo & Ross, 1992; Bregman, 2002; Tagget, 2003; Ngware, 2007). Another policy used in Europe and USA is a cost-sharing policy that seeks support from stakeholders, particularly parents. Financing models that enhance efficiency are also employed aimed at obtaining the maximum possible output for any given resource expenditure. This was done by engaging in cost-effective ways of achieving educational goals. In this way, efficiency and cost-effectiveness were incorporated into the financing of education. Archer (2010) emphasized that the concept of efficiency encourages minimum waste of resources (Seiler et al., 2013).

In the implementation of these policies, there are some traces of noncompliance with financing policies in Sub-Saharan Africa (Tawenza, 2017; Xaba, & Ngubane, 2010: Kuria 2012; Baraka, 2010). Thus, despite a series of efforts to enhance compliance with financing policy Tawenza (2017) found that the majority of the public secondary schools, in particular, have failed to comply with the policy's demands, as a result, institutions have failed to reach the targets as planned. Noncompliance with financing policy is also taking place in Malawi but little is known about the causes.

Ntsele (2014) describes noncompliance to financing policy as failure to optimize or inappropriate utilization of the funds received by an institution or an organization to meet the intended objectives in a given period. According to Migosi (2015), noncompliance with financing policy is when there are factors that hinder controlling officers from being accountable and such controlling officers are characterized by weak leadership, insufficient resources, poor oversight, lack of clarity, and poor capacity. Migosi (2015) argued that noncompliance with financing policy in public institutions like secondary schools arises from a lack of transparency and accountability. It is also argued that noncompliance with financing policy happens when there is weak leadership that may also let down the organization due to the particular behavior of its officials (Hadson & Peckham, 2019).

Community Day Secondary School Financing Policy in Malawi

aims at ensuring that public schools run smoothly. Sources of financing for this type of school include government, parents, and donors. The main government support is salaries for teachers and coordination of support that comes from donor partners. The government however put a policy in place to allow schools to collect funds for specific functions. The policy requires that CDSSs collect Tuition Fees, School Development Fund (SDF), Textbooks Revolving Fund (TRF), and General Purpose Fund (GPF) (Government of Malawi, 2006; 2008; 2014). Tuition fees are revenue for the school, just like all other fees collected by the school but controlled at the central level. GPF is for the general running of the school on a daily basis. School Development Fund (SDF) is for the maintenance of the buildings and procurement of desks and tables. TRF is exclusively for the procurement of textbooks. The policy states that the Headteacher has the responsibility to ensure that school fees are collected by the accounting personnel and where the accounts personnel are not available the bursar or the deputy Headteacher should collect the fees at an appropriate time. The policy does not allow the Headteacher to collect the fees for transparency and accountability purposes. As a way of enhancing controls to prevent loss or misappropriation of funds, the policy advises the appointment of four members of the School Management Committee and a student representative to be part of the management team for the said funds.

This policy framework was put in place to ensure that CDSSs do not lack teaching and learning materials and infrastructure thereby fulfilling the Education for All goals 2 and 6 which stipulates that "measurable learning outcomes are better achieved if schools have

improved all aspects of education quality and standards" (GoM, 2006, p. 46). A quality education system calls for effective policy implementation and prudence in the utilization of public funds that are meant to develop and sustain the system (*Holt et al., 1997; Bregman, 2008; Lewin, 2008; Meese, 2014; Hall, 2015*).

As noted above, studies have reported that most CDSSs in Malawi are running with insufficient teaching and learning materials which leads to poor learner performance. These reports have raised concerns regarding non-compliance with the implementation of the policy and the reason for this study was to find out issues that may lead to non-compliance with the policy in some selected CDSSs.

Methodology

The research employed a mixture of qualitative and quantitative approaches using a case study design. According to Creswell (2007) and Onwuegbuzie (2007), a case study is seen as an ideal design when a holistic in-depth analysis is needed. Creswell et al. (2003) describe a case study as an empirical inquiry that investigates a contemporary phenomenon within its natural context using multiple sources of evidence. Creswell (2013) also observes that the case study explores a real-life, contemporary bounded system (a case) or multiple bounded systems (cases) over time, through detailed, in-depth data collection involving multiple sources of information. Therefore, a case study was suitable for this study as it allowed a thorough in-depth analysis that contributed to a deeper understanding of the mismatch between funding and the immediate results schools acquired on the procurement of teaching and learning materials (Onwuegbuzie & Collings, 2007). In this study, the Lilongwe City district education office was considered a case because Malawi has 34 District Education Offices. Creswell (2013) notes that in a case study the focus is based on a special unit and in this study the District Education Office is a special unit. The District Education Office manages several schools.

Data was collected through close and open-ended questions. For the sake of triangulating the results, focus group discussion and document review were conducted as well. The research also followed a concurrent research design in mixed methods. This was the case due to the nature of the research problem and objectives (Creswell, 2003). This means the research used a case study approach and concurrent triangulation design. The latter design was used in the triangulation of how CDSSs financing had occurred for ten years concerning real teaching and learning materials available in selected CDSSs and how enrollment has changed over ten years. This involved examination of levels of annual parental and government contribution funds. Total annual parental funding was obtained by multiplying an annual number of learners by parental contribution per learner annually. Components of parental funding were used to segregate the data and these are the TRF, SDF, GPF, and Tuition.

The study area consisted of 22 CDSSs and 7 CDSSs were purposively sampled and all Headteachers from the selected schools were involved in the study. Also, a simple random

sampling procedure was used to select 49 teachers (representing thirty-five percent) from a total population of 139. This gave each teacher at a school an equal chance of being included in the sample (Creswell, 2007). Quantitative data were analyzed using Excel software to calculate the flow of finances in the selected CDSSs from 2004 to 2013. It also assisted in calculating funds that TRF, GPF, and SDF accumulated for ten years. In addition, it helped in producing tables and graphs which were used to analyze levels of spending against total collections and exploration of alternative strategic financial plans that can bring about change in the improvement of the teaching and learning environment in CDSSs.

Results and Discussion

As mentioned earlier, the purpose of the study was to explore how different funds provided for in the financing policy were collected and distributed and how this contributed to noncompliance with the policy. This section, therefore, discusses the results of the study.

How sources of funds contributed to noncompliance with the policy

To begin with, we look at the sources of funds. This information was provided by Headteachers through in-depth interviews and teachers in focused group discussions. The data were later cross-checked by reviewing official documents from the Headteacher's office. The data indicate that 17% of school expenditure was funded by the government while 83% was funded by parents. The figures indicated that parental funding contributed 10% towards GPF for the daily running of the school. If 10% from parental funding is added to 17% from government funding it amounts to 27% and was possibly not enough to run the school on a daily basis. This can be interpreted that funding did not favour the general running of the school. This certainly contributed to noncompliance with the policy.

The study reveals that parents consider education as an investment and are complying with the policy (Ndala, 2008). It is clear that government funding was marginal and could have negative repercussions on the procurement of TLM and general school management. As noted above by Lewin (2008) and Njidege (2016) , the government ought to take its role seriously by providing funding if schools are to attain anticipated gains. The unmet obligation of providing funding by the government could challenge the use of cost-benefit analysis which favors providing enough funding to increase efficiency. This is supported by the concern that CDSSs do not have enough teaching and learning materials due to low government funding and this affects learner performance (Gwede, 2005; Kayuni, 2010; Ngwira, 2011; Mambo et al., 2012; Mlangeni & Chiwotha, 2015).

Table 1: Textbook Revolving Fund Collection and Use, 2004-2013

Year	Enrolment	TRF Collected (MK)	Books Bought	Cost of a Book (MK)	Total Amount Spent (MK)	Funds not spent on Books (MK)	Books that would have been Bought
2004	1218	1,748,000.	Na	Na	na	Na	
2005	1,284	2,359,000	25	3,000	na	Na	786
2006	1,320	2,665,000	45	3,000	135,000	2,530,000	888
2007	1,266	3,155,000	70	4,000	280,000	2,875,000	789
2008	1,429	3,742,000	49	4,000	196,000	3,546,000	936
2009	1,497	3,972,000	39	4,000	156,000	3,816,000	993
2010	1,587	4,454,000	53	4,000	212,000	4,242,000	1,114
2011	1,672	4,945,000	40	4,000	160,000	4,785,000	1,236
2012	1,766	5,685,000	50	5,000	250,000	5,435,000	1,137
2013	1,871	6,542,000	70	5,000	350,000	6,192,000	1,308
		35,160,000			173,9000	33,421,000	8,401

Source: Researcher's Data

Table 1 shows how the collection of TRF has been for 10 years between 2004 and 2013. The table also provides how the amount collected has been used in the procurement of teaching and learning materials. The figures show that there has been an increase in the number of CDSS students over the review period and this necessitated the increase in the TRF collected. Also, over the years, the cost of a textbook increased from 3,000 MK to 5,000 MK.

It is worth noting that the parents are keen to support the government financing policy by contributing yearly to the procurement of Textbooks. This shows how committed the parents are to the policy. It is however ironic to observe how the school administrators did not comply with the policy by not procuring the textbooks as intended. Over a period under review, only 441 textbooks were bought representing the use of only 4.4% of the total amount of funds collected. If this is a pattern that is happening in all CDSSs in Malawi no wonder these schools are in dire need of teaching and learning materials. Surprisingly, the policy is not complied with by people who know better the importance of teaching and learning materials and usually they complain about the lack of adequate teaching and learning materials. This is contrary to the intention of TRF as stipulated in the policy guidelines that TRF is explicitly meant for the procurement of textbooks with the view to determining an improved learning environment. Thus, the figure indicates inefficiencies and ineffective utilization of TRF on textbooks which is against the policy demand. A close look at the figures shows that if the total amount of money collected was used for the intended purpose, on average, 1,000 textbooks would have been bought annually for all 7 schools sampled thus sharing 150 textbooks per year per school. This could have made a big impact on the availability of textbooks and also reduce the pupil textbook ratio. By the end of the review period, a school could have had 1,200 textbooks, considering the lifespan of a book at 10 years. For five key subjects like Mathematics, Physics, English, Biology, and Agriculture, at most, 240 books would have been available for a classroom of 50 students. It can be noted that non-compliance with the policy resulted in poor performance of students in these CDSS. These inefficiencies suggest that quality education in CDSSs may be a dream that will never be met.

Headteachers were asked why textbooks were not enough despite TRF. In response they explained:

> "Spending on textbooks is not easy because government funding that is meant to support the general running of the school is sporadic and does not come in time. Secondly, funding is always not enough to meet school needs. To sort out this challenge TRF and SDF are utilized for recurrent costs and general running of the school. This is the reason we have few textbooks and other teaching and learning materials" [IDI – Headteacher 2 - School B - 23/10/14].

On the same, teachers complained that:

> "In CDSSs, there is a general understanding that there is poor funding. This perception has led to an establishment that circumstances do dictate the noncompliance with a policy. Secondly, lack of supervision and monitoring on how finances are utilized has contributed to this predicament". [FGD - teacher 1 - School E - 3/11/14]

However, the Headteachers and teachers acknowledged the importance of TLM and reported that:

> "Availability of textbooks is the most critical factor in improving student performance. This is because students can prepare for a topic and that would contribute to the understanding of the subject matter" [IDI – Headteacher 3 – School C - 27/10/14].

Several studies carried out support the importance of the availability of teaching and learning materials in schools. There is evidence that the performance of students increases when teaching and learning materials are available. The World Bank (1995), Bregman (2008), DFID (2010), and Ng'ambi (2010) confirmed that textbook provision is the most cost-effective input affecting student performance. What is disturbing however is that the Headteachers opted not to comply with the policy by using the resources for other needs without seeking approval from the MIE central level.

Table 2: Amount of School Development Funds Collected and Used, 2004-2013

Year	Total Enrolment	School Development Fund Collected (MK)	Number of Desks Available	Desks Added	Price per Desk (MK)	Money Utilized on Desks (MK)	Balance after Purchasing Desk (MK)	Desks that would have been added
2004	1,218	5,838,000	na	na	na	na	5,838,000	389
2005	1,284	7,117,000	Na	na	na	na	7,117,000	474
2006	1,320	7,898,000	440	na	na	na	7,898,000	527
2007	1,266	8,991,000	422	18	1,5000	270,000	8,721,000	581
2008	1,429	9,772,000	357	65	1,5000	975,000	8,797,000	586
2009	1,497	10,748,000	374	17	1,5000	255,000	10,493,000	700
2010	1,587	11,802,000	396	22	1,5000	330,000	11,472,000	765
2011	1,672	13,066,000	278	117	1,5000	1,755,000	11,311,000	754
2012	1,766	14,346,000	294	16	1,5000	240,000	14,106,000	940
2013	1,871	15,996,000	311	17	1,5000	255,000	15,741,000	1,049

Source: Researcher's data

Table 2 shows how much of the School Development Funds were collected and used in the review period, 2004 to 2013. As indicated earlier, SDF is meant for developments at the school level including procurement of desks. The funds are controlled by School management. In the years under review, about 105 Million MK was collected and only 272 desks were procured amounting to about 4 Million MK, representing the use of 3.8% of the total funds collected. If the entire amount of funds collected were used to procure desks alone, 6,766 desks would have been bought and this would have meant an addition of 677 desks annually with 97 desks per school. This would have improved the status of pupil desk ratio in the schools. Thus, if the same collection of money was effectively devoted and utilized for the procurement of teaching and learning materials, schools would have realized an increased number of desks which would have reduced pupil: desk ratios (PDR). This implies that if wastes were minimized, by being efficient and effective enough in the allocation and utilization of funds for TLM, selected CDSSs would have not been in the predicament of inadequate TLM as the case is. Further backing for this fact was provided by the European Union (2008) which emphasized that the amount of funds does not matter but rather how efficient spending officers are in their financial allocation and utilization.

The theory of efficiency advocates the effective allocation of resources to come up with minimum waste. This brings us to light why this study agrees with MoEST (2008) who stated that the lack of teaching and learning materials in CDSSs was due to a lack of financial discipline and prudence because the findings of that study indicate that lack of teaching and learning materials in CDSSs was not due to lack of funding but rather due to misallocation of TRF and SDF for other things. The study also agrees with Bregman (2008) who reported that the lack of teaching and learning materials in CDSSs was not due to the failure of the TRF scheme.

This means that expenditure of TRF and SDF was not policy bound hence failure to serve the intended purpose of procuring teaching and learning materials in selected CDSSs.

As noted, some considerable funds that were collected as SDF were not utilized for teaching and learning materials. This was justified by Headteachers after they were asked to explain how SDF was utilized at the school level and this is what they said:

> "Construction of laboratory, library, teacher houses and repair of toilets, and purchasing of desks are greatly hampered by recurrent cost. This is because SDF and TRF are immediate funds that are utilized at school for the daily running of the school. This is the case because government funding comes very late due to bureaucratic protocol. However, even if it comes, the funds are very small to contribute to any kind of developmental project" [IDI - Headteachers 2 - School B - 23/11/14]

In contrast, on the same issue, some teachers said that:

> Lack of interest in prioritizing procurement of desks and other teaching and learning materials is the main challenge and not just a lack of funds. Lack of desks and teaching and learning materials, in general, contributes to poor learner performance, frequent transfer among learners to better schools, and even dropouts. [FGD - teacher A - School A - 20/10/14]

In a focused group, discussion teachers were asked about the situation of desks, they pointed out that:

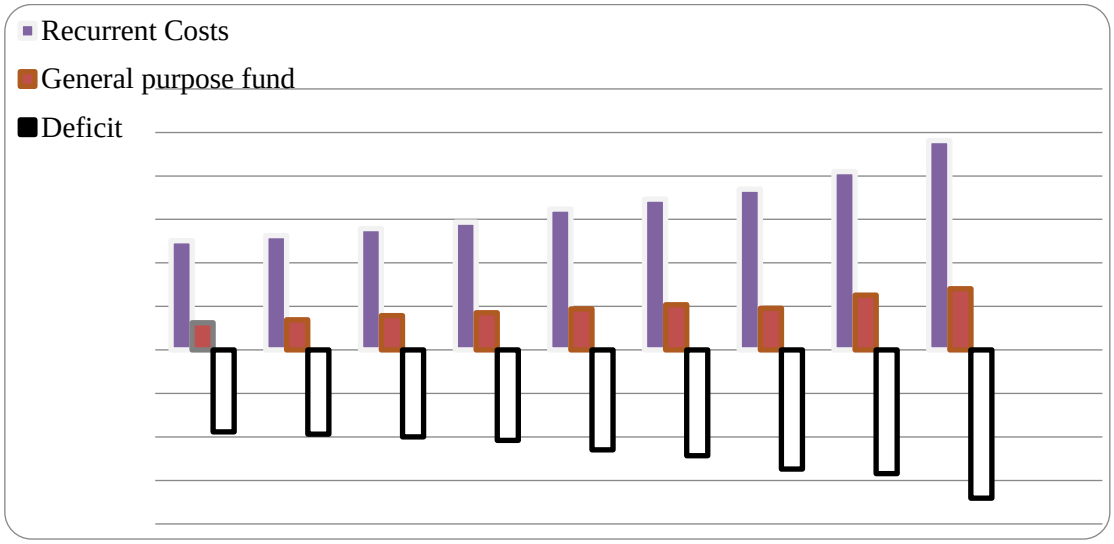
> "In form one and form two there are many students. In these classes, more than four learners struggle for a single desk that was designed to be used by a single learner. This contributes to learner absenteeism because even writing becomes a challenge". [FGD - teacher 2 - School G - 10/11/14]

On the same Headteacher suggested that:

> "There is a need to increase sources of funding other than relying on parental funding alone which cannot exploit school development. Secondly, school fees needed to be raised to a reasonable amount like K25 000 per learner per term. This would have an impact on SDF collections". [IDI- Headteachers 6 – School F- 6/11/14]

Raising school fees is not the only strategy for acquiring desks to meet the quality education in CDSSs but rather a prioritization and efficient allocation of resources. European Union (2008) emphasized that the amount of funds does not matter but efficient spending in financial allocation and utilization. Prudent use of resources is vital to encourage parents to keep on supporting the financing of schools.

Figure 1: Funding Gaps on GPF that Affect TRF and SDF

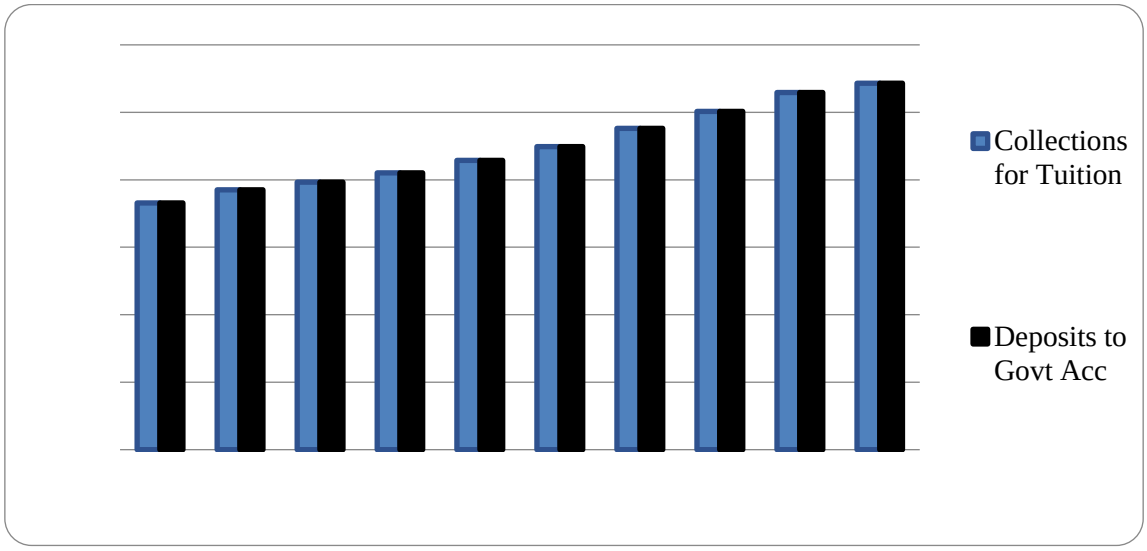


Source: Researcher's data analysis

Figure 1 gives details on the General Purpose Fund. It shows funds collected for the general running of the school and recurrent costs. It indicates total financial resources that were collected to be spent for the general running of the schools were very dismal as compared to the total expenditure needed throughout the study period. This means that the general running of the school was hampered. This is also a pointer signifying why selected CDSSs do not spend based on the policy instruction.

Funding gaps analysis in figure 1 shows that money collected did not tally with school spending needs as money spent was higher than the total amount collected. It further indicates additional money that was collected as GPF but rather utilized on the general running of the school as recurrent costs. These analyses mean that funding gaps created in GPF were sealed by TRF and SDF just as Headteachers reported. This was also the case due to a lack of government funding. This means TRF and SDF did not serve the purpose because of a shortage of funding from the government. The implication here is that spending on selected CDSSs was not guided by the demands of the policy due to insufficient funding from the government. This might have led to noncompliance with the financial policy in CDSSs.

Figure 2: Collections for Tuition and Returns to Government Account



Source: Researcher's data analysis

Figure 2 shows that since 2004 collections for tuition had been increasing steadily through 2013. It also indicates that the amount of money collected was deposited into a government account. This further illuminates that funds for tuition are not meant to be utilized at the school level just as the policy stipulates (MoEST, 2008). This is meant for the government to procure teaching and learning materials and distribute them in schools. However, it appears the government does not effectively implement this framework because research results indicate that the government rarely procured teaching and learning materials and distributed them in CDSSs. If it did, selected CDSSs would not have been in a dilemma of lacking teaching and learning materials. This further implies the government was not contributing positively to the financial needs of CDSSs. To a larger extent, setbacks in CDSSs were influenced by the failure of the government to fund CDSSs. This study, therefore, posits that inadequate teaching and learning materials in CDSSs were due to mismanagement of TRF and also clearly indicates that quality education in CDSSs was being compromised due to inefficiencies and noncompliance. These circumstances have repercussions on student performance thereby negatively affecting sustainable education and development.

Conclusion

This paper reports on a study that aimed at finding out how finances at the secondary school level-CDSSs are collected, utilized and why there is noncompliance with the financing policy. Financial systems are put in place to make secondary schools fully supported financially but are impeded by a lack of compliance with the policy by the school administrators. Bursaries and cost-sharing models are common across the globe with cost-sharing being prominent. Parents are encouraged to invest in education in support of the government. Despite parents' commitment to providing financing, it has

been revealed in this study that the government's contribution is not sustainable and this encourages non-compliance with the policy at the school level by the administrators.

The GPF which is intended to support the daily running of the school is not enough and this compels the school administrators to use funds for TRF and SDF for running the schools which is a violation of the policy. Quite disheartening is the revelation that the parents are complying with the policy yet the school administrators who know the importance of the teaching and learning materials were not. This defeats the purpose of cost-sharing and might not encourage parents to further support the government. It is worth noting that by not complying with the policy that mandates procurement of teaching and learning materials and desks at the school level, CDSSs are in dire need of teaching and learning materials and this has affected students' performance as revealed.

There is still a need for further investigations on how the governance structure at the school level plays its role, for example, whether a decision not to comply with the policy was sanctioned by a committee. It is also very surprising to learn that a lot of funds are used for the daily running of the schools without the procurement of TLM which is central in the teaching and learning process. It would be also important to investigate what are these daily activities and what sanctions are imposed on administrators who are not complying with the policies.

References

Adeyemi, T. (2011). *Financing of education in Nigeria: An analytical review:* Department of educational foundations & management. American Journal of social and management sciences. 2156-1540, ISSN Online: 2151-1559, i:10.5251/ajsms.2011.2.3.295.303, 2011, Retrieved 2nd March 2015:http://www.scihub.org/AJSMS.

African Development Fund . (2001). *Support to community day secondary schools (Education IV Project).* The Republic of Malawi. Country Department. Southern Region.

Al-Samarrai, S. (2003). *Financing primary education for all: public expenditure and education outcomes in Africa.* Institute of Development Studies: United Kingdom.

Al-Samarrai, S., & Hassan Z. (2007). *Abolishing School Fees in Malawi: The Impact on Education Access and Equity.* Education Economics, 15, p. 359-375.

Archer, T. S. (2010). *The Efficiency Theory. Scandinavian Journal of Economics*, 106, (6), 395-510.

Aslund, A., & Dombrovskis, V. (2011). *How latvia came through the financial crisis.* Washington D.C.: PIIE Press.

Batare, S. (2012). *Efficiency of public spending on education*: *Viešoji politika ir administravimas,* 11, 171–186. Lagos: Nigeria.

Bregman, J. (2008). *Textbooks and school library provision in secondary education in Sub-Saharan Africa.* Washington: USA.

Bragman, J., & Stallmeister, S. (2002). *Secondary education in Africa: Strategies for renewal*. Africa Region Human Development Working Paper Series. Washington, DC: USA.

Bweya, Y. (2009). *An examination of possible causes of and effects of student absenteeism in selected secondary schools in Zomba District:* Unpublished Master thesis. The University of Malawi.

Baraka, Y.K. (2010). Challenges Facing Public Secondary School Principals in Financial

Bregman, J. (2008). *Textbooks and school library provision in secondary education in Sub Saharan Africa.* Washington: USA.

Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approach*. Thousand Oaks, CA: Sage.

Creswell, J. W. (2007). *Qualitative inquiry & research design: Choosing among five approaches* (2nd ed.). Thousand Oaks, CA: Sage.

Creswell, J. W. (2013). *Qualitative inquiry and research design: Choosing among five approaches* (3rd Edition). Thousand Oaks, CA: Sage.

DFID .(2010). *Learning and teaching materials: policy and practice for provision*. London: Facet Publishing.

European Union . (2008). *Public expenditure financial accountability PEFA–PFM Performance measurement report for Malaw*i. Lilongwe.

Gwede, H. (2005). *Has the implementation of the new policy, conversion of DECS to CDSS ensured improvement of quality education in CDSS in Malawi?* Unpublished master thesis. The University of Massachusetts. Amherst.

Hudson, B., David, H., & Stephen, P. (2019). *Financing, Policy failure, and the policy-implementation gap: can policy support programs help? Published online:26-Feb 2019. Issues*, Nairobi: Unpublished Kenyatta University M. Ed Thesis.

Kamau, K. W. (2016). *Financial Management Practices in Secondary Schools*: *Problems and issues,* Nairobi: Unpublished Kenyatta University M. Ed Thesis.

Kayuni, H. (2010). Chaos-complexity theory and education policy: Lessons from Malawi's community day secondary schools. *Bulgarian Journal of Science and Education Policy (BJSEP),* 4, (1).

Kuria L.K. (2012). Financial Management in Public Secondary Schools in Thika District, Kenya. Nairobi: *Unpublished M.Ed. Thesis; Kenyatta University Library.*

Mambo, M., Cole, P., & Ndala, K. (2012). *Education Sector Plan Review Report*. September.

Mattei, P., and Roberts, J. (2011). Noncompliance and sanctions in English schools. *British Journal of Educational Studies*, 59(1), 41-62.

Migosi, Joash; Ombuki, Charles, Ombuki, Kennedy N.; Evusa & Zablon .(2015). Determinants of Noncompliance of Public Procurement Regulations in Kenyan Secondary Schools. *International Journal of Educational Administration and Policy Studies*, 5(7), 154-159.

Ndala, K. (2008). *Development of education plans: The case of Malawi from 1964 to 2001*. *Malawi Journal of Education and Development.* 1 (2), 59-74.

Njideka E., Uchendu, E. & Akam C. (2015). Need for adequate funding in the Administration of Secondary Education in Nigeria: Global Journal of Education Research, (14), 119-124.

Tawenza. (2017). *Improving policy compliance in secondary education: Is the policy respected in schools?* Dar Es Salaam: Uwazi. *Unpublished M.Ed. Thesis*

Roser, M. & Ortiz-Ospina . (2016). Financing Education Our World in data. Accessed on 2nd March 2015, www. ourworldindata. or/financing-education

World Bank. (2018). Learning to realize education's promise. Washington DC, World Bank.

Xaba, M. & Ngubane, D. (2010). Financial accountability at schools: challenges and implications. *Journal of Education*, 50, 2010.

Choice or Deprivation? Primary school drop-outs in Kasungu district, Malawi

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Abstract

A functional education offers intrinsic as well as instrumental benefits to both society and individuals. Lack of functional education constitutes a deprivation of basic capabilities. This study was carried out in Kasungu district which is one of the main tobacco-growing districts in Malawi. Previously, learners who dropped out of school would take up tobacco farming which would lead to an economically fulfilling life than their friends who went further with education. With poor returns from tobacco, the primary school drop-out rate has remained high. The study was, therefore, carried out rate to find out the underlying reasons for the high drop-out. The study followed a qualitative design and the populations of interest were mainly primary school drop-outs and their guardians. Purposive and snowball sampling was done to identify participants. Twenty learners who dropped out of school and heads of households took part in the study. In addition, an official from the District Education Office, a head teacher, and a village head also participated in the study. Data were gathered through in-depth, semi-structured interviews and observation of phenomena. The Capability Approach by Amartya Sen was used as the analytical framework. Data were analyzed by a coding system in which relevant and related passages to the research concerns were placed under themes. The major finding of the study was that children dropped out of school in the district as a result of deprivation of basic capabilities. Notwithstanding the efforts made by the Government of Malawi to keep children from poor families in school, such as abolishing school fees, and abolishing the mandatory requirement for school uniforms, children from poor households still had a feeling of deprivation which made them feel uncomfortable remaining in school.

Keywords: School drop-out, functioning, capability, deprivation

Introduction

Democracy is increasingly being accepted as a desirable form of government due to its focus on civil liberties and citizenship rights. In terms of democratic governance, the 1990s experienced remarkable political changes across the globe (Davies, 1999). According to Davies (1999), the percentage of democratic states grew from 25% in 1973 to 68% in 1992. The 1990s have been remarkable due to the collapse of communism; the

end of the apartheid era in South Africa; the fall of military and civilian dictatorships in Latin America, South East Asia, and Sub- Saharan Africa (Heater, 1999).

Malawi emerged from a civilian dictatorship to multiparty democracy in 1993 following external and internal pressure to change the system of government and promote respect for human rights, transparency and accountability, and the rule of law (Rose, 2005). The change to a multiparty system of government resulted in the inclusion of a bill of rights in the country's constitution to ensure that the political and civil rights of citizens were safeguarded. Of interest to this paper was the extension of social rights by the first government in multiparty democracy. This was done through the abolition of school fees in primary schools hence making primary education free, and also abolishing the mandatory requirement of school uniforms (Kadzamira & Rose, 2001). This was considered the right move towards universal primary education. The impact of free primary education in terms of increasing access to education for children from poor households was immediate as primary education enrollment rose from approximately 1.9 million to nearly 3 million (Kadzamira & Rose, 2003). The World Bank (2006) states that educational attainment is generally associated with enhanced democracy, and lower crime. In addition, education has an intrinsic value, enabling people to lead fuller lives as informed and active citizens in society.

Till now, primary education in Malawi is officially free. However, the gains made in primary enrolment have over the years been threatened by high levels of learner dropout. Currently, the dropout rate at the national level stands at 4.0% with more girls dropping out than boys at the rates of 4.1% and 3.9% respectively. More worrying is that the trend appears to be getting worse with dropout rates over the past three years showing an increase from 3.2% in 2018; 3.4% in 2019; and 4.0% in 2020. Kasungu's dropout rate stands at 1.4%, with girls also having a higher rate at 1.6% than boys at 1.2% (Ministry of Education, 2020). Although Kasungu's rate is lower than the national average, it is still a matter of concern considering the changing economic fortunes in this tobacco-growing district. The justification for the choice of Kasungu district for this study is provided in the next section.

Statement of the problem

The abolition of school fees in primary schools in Malawi resulted in an increase in school enrolment by approximately 50% (Evans & Rose, 2007). This was seen as a welcome development, especially when we consider the social benefits of primary education. Completion of primary education has been hailed for several benefits such as increased economic returns, lower fertility rates in women, reduced infant and child mortality, better child health and education, reductions in gender inequality, and later ages of marriage (Lloyd, Mensch & Clark, 2000). However, despite primary education being free, there have been high rates of primary school drop-out. Of particular interest to this study was Kasungu district. Before economic liberalization and structural adjustment programmes, children in Kasungu could drop out of school and take up tobacco farming

and realize more income, and lead more fulfilling lives economically than many of their counterparts who would continue with education. With economic liberalization and structural adjustment policies, the earnings from tobacco dropped remarkably. However, Kasungu district still maintained high rates of primary school drop-out. The study was, therefore, set out to explore whether primary school drop-out in this tobacco-growing district was a matter of choice or a result of deprivation. Specifically, the study set out to answer the following research question: *What factors cause children to drop out of school in Kasungu district?*

Conceptual framework

The study used the Capability Approach by Development Economist Amartya Sen as a conceptual framework. The Capability Approach was chosen because of its focus on choice where there are a range of alternative lifestyles. In his book, *Development as Freedom* Sen (1990) argues that development should focus on enhancing the capabilities of people to lead the kinds of life they have reason to value. It should give people the freedom to seize opportunities available to them to create their own well-being. Capabilities can on one hand be influenced by public policy, and on the other hand, public policy can be influenced by the participatory capabilities of the people. In this sense, freedom enhances the ability of the people to help themselves and also to influence the world around them i.e., human agency.

Freedom plays both constitutive and instrumental roles. Constitutive roles of freedom point to the expansion of freedom as a primary end in itself. Examples of the constitutive roles of freedom include avoiding premature mortality, avoiding starvation and malnourishment, freedoms associated with being literate and numerate and enjoying political participation. Instrumental roles of freedom point to the expansion of freedom as a principal means of development. This concerns how different types of freedoms, rights, opportunities, and entitlements contribute to the expansion of human freedom in general and thus to the promotion of development. The enhancement of one type of instrumental freedom, therefore, results in the advancement of other freedoms.

Related to freedom and capability is the concept of functioning. Functioning reflects the various things a person may value doing or being. There is a range of functions from elementary ones such as being well nourished and being free from avoidable diseases to more complex ones such as taking part in public life and having self-respect. Functionings differ from Capability in the sense that Capability is the substantial freedom to achieve alternative functioning combinations; or put simply, the freedom to achieve various lifestyles. Capability can, therefore, be referred to as 'means' to various ends, while functionings are 'ends' in themselves. Functionings are, therefore, a set of a person's achievements or accomplishments, while Capabilities are a set of 'real opportunities' or alternatives available to him or her.

This study, therefore, sought to find out if children drop out of school as a matter of choice. Given the quality and relevance of education, do children drop out of school due to the availability of opportunities that would make their lives better and more meaningful than if they had continued with schooling? The study also, on the other hand, established if cases of dropout were a result of capability deprivation. It also sought to find out what type of deprivations or forms of unfreedom, if any, forced children to drop out of school.

Methodology

This was a qualitative study that was aimed at getting the views of school dropouts, school managers, community leaders, and heads of households regarding school drop-out (Flick, 2011). Semi-structured interviews were conducted with 20 children who dropped out of school and their respective household heads. As Cohen et al. (2011, p. 433) advise "it is important to understand the world of children through their own eyes rather than the lenses of adults." An official from the district education office, a head teacher, and a village headman also contributed to the study as key informants. Besides interviews, unstructured observations of phenomena were also made (Burns, 2000). Thomas (2011, p.165) refers to unstructured observations as practices where the researcher watches informally but methodically in and among the participants, recording important facets of what is happening. The unstructured observations were done to aid data triangulation.

Participants for the study were purposively selected. The district education office assisted in identifying schools in areas with the highest learner dropout. From these schools, dropouts were identified and followed to their houses. It, however, turned out that the majority of pupils had moved from their villages to other locations either through getting married or for other reasons. As a result, snowball sampling was subsequently employed.

The interviews were transcribed and the text was screened to look for ‘relevant text’ to the research concerns and conceptual framework (Auerbach & Silverstein, 2003). Data were analysed through a coding process and the findings were presented as narratives.

Participation in the study was voluntary. Written permission was obtained from the District Education Manager before visiting schools. In addition, informed consent was obtained from all adult participants. The learners who dropped out of school gave their informed assent after obtaining the consent of their parents. This was important considering that the learners were minors (Litchman, 2013). To maintain privacy and confidentiality, the study participants have been kept anonymous.

Findings and discussion

The study set out to explore the reasons why learners drop out of primary schools in Kasungu district. The findings of the study showed that children dropped out of school as a result of deprivation. This was caused by threats to survival at the household level and a lack of government commitment to honour its roles in educational provision. As noted earlier, the first democratic government after multiparty elections in 1994

introduced free primary education, and school uniform was not mandatory. The reason was to shift the cost of education from the parent to the government. This was a pro-poor initiative meant to keep children from poor households in schools. According to the Ministry of Education/ UNICEF (1998), the government's priority under the Free Primary Education (FPE) was to: provide sufficient learning materials and teachers; be responsible for the provision of classrooms, furniture, teachers' houses, sanitation facilities, and boreholes; abolish all forms of fees; introduce community schools, and encourage the participation of girls in education. The role of the community was to work with the government in creating a better learning environment for the learners through their labour contribution in the provision of infrastructures, such as classrooms, furniture, and teachers' houses among other things. This would ensure ownership of education services by the community and guarantee that school management was adjusted to the needs of the clients. However, several factors that led to school drop-out pointed toward the failure of the government to fulfill its role in educational provision.

Lack of teaching and learning materials

It was noted that despite the government's commitment, it was unable to provide teaching and learning materials to learners. This resulted in pushing back the cost of schooling to the household. As a result, poor households were negatively affected. An official from the education office support this observation:

"It is indeed the responsibility of the government, or to be precise our office, to provide learning materials. This is the mandate of the Ministry of Education to procure and supply resources to all pupils in schools. It should, however, be acknowledged that there has been some time since the last consignment of materials was given to schools." ***An official from the District Education Office***

On the other hand, parents and school dropouts presented a broad picture of the causes of school drop-out. In most cases, school drop-out was not a result of a single factor, but a combination of several factors. However, it was noted that despite having a combination of factors, the proximate causes of drop-out had mostly to do with school-related factors. For example, a sixteen-year-old standard seven boy had earlier dropped out of school due to hunger but returned to school after an NGO started issuing out free maize to most needy households. However, the boy dropped out later on citing the following school-related reasons as the proximate causes of dropout:

"*I did not have school clothes, exercise books, and pens."* ***A boy who dropped out in class 7***

A Headteacher agreed with this observation as he pointed out that the poverty levels prevalent in the area

"Of course, primary education is free, but there are some other costs such as education materials like pens, exercise books, etc. that parents may not afford if they are so poor.

Of course, parents have been freed from buying school uniforms, but some can't afford even exercise books for their children… Such things can force learners out of school even though education is free." ***Headteacher***

Rose (2005), however, points out the tension that governments in sub-Saharan Africa faced following the introduction of multiparty democracy. Rose (2005) argues that the advent of a multiparty system of government in Malawi and other countries in Sub-Saharan Africa resulted in pressure to reduce the role of the state and expand the role of the private sector. As a result, there was reduced expenditure on social services such as education. To encourage ownership and relevance, parents had to play a major role in educational provision. In practice, however, parents came in to provide services to cover up for governments' failure.

Perceived relevance and ownership of education

Most parents who were interviewed looked at the relevance and benefits of education in terms of human capital. This is where education would give the individual knowledge and skills which would command a price on the market. Most parents expected their children to get a job after schooling. However, due to economic factors, school graduates rarely got jobs. This led to frustration. One parent made the statement below, regarding her son who had completed secondary education, after she was asked about the relevance of education:

"Their education is good and useful. It makes a difference in life. You can become a teacher or a clerk when you get educated and you cater for yourself. Of course, my first-born boy does not have a job. He has been working at the estate without pay as a volunteer for seven years. He goes there every Tuesday. We had hoped that if a vacancy would appear, they would consider him, but up to now, that has not happened" ***A mother of a school drop-out.***

Parents seldom looked at the intrinsic role and wider benefits of education in terms of capabilities such as being able to read and write, taking part in public life, being taken seriously by others, making informed choices, plus other benefits. Instead, a lot of emphases was placed on the instrumental role of education as a bridge to a better future for its beneficiaries.

One boy who dropped out of school told his father that he did not see the benefits of going to school since his brothers who went further with schooling were just living an ordinary life like any other villager. To him, education did not make a difference in the lives of his brothers:

"The other reason he was citing was that all his brothers who continued with school up to form two are just staying in the village and also doing farming like anyone else, so he did not see any reason why he should proceed with education. Of course, I explained to

him that people have different fortunes and your luck may be different from the luck of your brothers but he did not listen." ***Father of a standard 7 drop out***

Although some parents acknowledged that education was good, they were unable to explain how good education was in its own right. Parents agreed to the benefits of education, but some showed dismay at the education that their children were getting. One parent indicated that her children were getting a good education, but her example showed her dismay at the fact that her children could not read and write even after four years of primary education:

"Their education is very helpful. Even if a child drops at one point, it's good that they should be enlightened. Look at these children, this one (pointing) is in standard three, that one (pointing) is in standard four, but all of them do not know how to read and write." ***Mother of a standard 6 drop out***

The observation from parents on the relevance of education agrees with the outcome of a study conducted in six African nations. The study concluded that enrollment and completion rates of primary education were not very good and consistent indicators/ predictors of outcome. Quoting Ellis (2003), Ibrahim (2005:8) reported that:

> Kenya had the lowest completion rate, at 63 percent, but 65 percent of its sixth-grade students achieved minimum literacy skills— a better outcome than in any other country. Malawi's completion rate was almost identical to Kenya's, at 64 percent, yet only 22 percent of its sixth-grade students could demonstrate minimum literacy skills.

Due to the low value that the community places on education, most parents react silently by withdrawing their children/ wards from school, instead of making efforts to change the state of affairs in their favor. It can be argued that communities looked at themselves as 'beneficiaries' of education and not as clients. Parents did not have a sense of ownership of education services, and as a consequence chose to remain apathetic to whatever happened in the school. Poor parents did not have the agency to influence change. As a result, they withdrew their labour from activities that were meant to improve the learning environment. For instance, observation data at one school that the researcher visited showed that the school only had two permanent classrooms. Some of the classes were held in temporary shelters made from grass, while the rest were held under trees. The Headteacher of the school lamented about the community's attitude towards the school:

"I should not hide; the community here is a difficult one. In terms of development, this school opened in 1998, but since that time, we can't point to any type of development work that has taken place apart from the kiln that was used to construct the two classroom blocks that you have seen. It's proving difficult to mold bricks for more classrooms to do away with these temporary shacks. When we call for a meeting they do not turn up. Even the chiefs do not show interest so that these temporary sheds were constructed by the learners." ***Headteacher***

One parent whose daughter dropped out of a private primary school due to lack of school fees said her daughter could not go to a government school where there were no school fees because, even in government schools, there were some demands on the parents which she could not meet:

"*Even in government schools, they sometimes request for contributions and they frequently invite parents for some issues and I am too busy for that.*" ***Mother of a girl who dropped out from a private school***

The lack of agency by parents and learners could be a result of a lack of meaningful decentralization in education management in Malawi where teacher recruitment and deployment are centrally done. Porter (2014) states that despite efforts for accountability and decentralization in Malawi, there is inconsistent and limited decision-making and participation by parents and learners in education matters. This is due to patterns of patronage and centralization of power. He further argues that the allocation of resources and distribution of services are highly centralized and inefficient. Rose (2003) describes community participation in education in Malawi as extractive where the role of the community is reduced to resource mobilization. This kind of participation as Yamada (2014) argues may result in the re-concentration of powers to school head teachers.

Access to educational services

Many parents acknowledged the role the government played in expanding access to educational facilities by opening up schools in areas that were hitherto not served by schools. One parent explained:

"We used to walk long distances. Schools were far and wide at that time. For example, Lisandwa 3 was at Kamphulu, and another school was at Chatalala. These days schools are closed. They are just on the veranda." ***Mother of a school drop-out***

It was, however, noted that access to education was limited by the use of school uniforms. Although school uniform was not mandatory, some schools emphasized on learners wearing school uniform due to its perceived benefits in fostering discipline and as a mark of identity as shown in the following except:

"…it is not mandatory for learners to wear school uniforms. However, on the other hand, schools see it necessary for learners to put on school uniforms because it enforces discipline and is a form of identity. If a learner is in school uniform he/ she is bound to be well behaved even if he is not on the school premises, because he/she is likely to be identified as a school learner. However, those who are truly needy are not chased away from school, but we encourage the use of school uniforms. For example, at one time a learner was hit by a car and died while coming from school. However, because he was putting on civilian clothes and was so shabby, it took some days before his body was identified." ***An official from the District Education Office***

A girl who dropped out in class six informed this study that she did not voluntarily drop out of school. Responding to the question of why she dropped out of school, she said:

"I did not drop out of school as such. I was chased away from school because of my school uniform and also I did not have exercise books." ***A girl who dropped out in standard six***

For other pupils, wearing civilian clothes singled them out as being poor which brought a feeling of shame. As a result, they would voluntarily drop- out of school if they had no uniform even if their schools allowed them to attend school without a uniform. One parent explained that:

"We tried to encourage her to remain in school and that we will try where we can manage to buy her requirements. But she felt uncomfortable with the clothes she was wearing at school. You know she is a big girl now and needs several clothes to wear, and needs to be well dressed when in the company of her friends" ***Father of a standard 6 drop out***

This finding supports the views of Bourguignon (2005) who argues that efforts to equalize the functionings of people such as equalizing incomes through cash transfers in favor of the poor can lead to stigmatization and social exclusion of the poor. Instead, policymakers should aim at equalizing the capabilities each one has to enjoy various states of being (Alkire, 2002).

Conclusion

This paper has explored the causes of primary school drop-out in Kasungu district in Malawi. Using Amartya Sen's capabilities approach as a conceptual framework, the study asserted that school drop-out was a result of capability deprivation. The study noted that poor households had limited command over functions such as adequate diet, and healthy lives. As a result, their attention was centred on survival hence the education of their children took a secondary role. The lack of support by the government to make provision for learning materials provided the proximate reasons for children from poor households to drop out of school. Many households which made a lot of effort to keep their children in school lamented the lack of employment for school graduates. This was because the benefits of education were narrowed to the functioning of getting gainful employment. Without employment, many households did not see the relevance of education and hence opted to take learners out of school. It can, therefore, be argued that school drop-out could be a household reaction to an education that was deemed irrelevant to the needs of the poor.

As noted in the study, a combination of negative factors forced children from poor families out of school. These factors included perceived lack of relevance of education, the cost of learning materials, and the mobilization of support from parents/ households to supplement the financial gap in state funding (Barnett, 2013). As a way out of the

problem, the study agreed with Chimombo (2007: 62) who argues that 'if education is expected to help the poor lift themselves out of poverty, then in the poorest countries, education itself needs first to be lifted out of poverty.'

References

Alkire, A. (2002). *Valuing Freedoms: Sen's Capability Approach and Poverty Reduction.* New York: Oxford University Press.

Auerbach, C. a. (2003). *Qualitative Data: An Introduction to Coding and Analysis.* London: New York University Press.

Barnett, E. (2013). An analysis of community participation in primary schools in Malawi. *International Journal of Educational Development, 33*, 497-507.

Bourguignon, F. (2006). From Income to Endowments: The Different Task of Expanding the Income Poverty Paradigm. In D. a. Grusky, *Poverty and Inequality*. California: Stanford University Press.

Burns, B. (2000). *Introduction to Research Methods.* London: Sage Publications.

Chimombo, J. (2007). Improving School Participation through Free Primary Education in Malawi: Reality or Rhetoric? *Malawi Journal of Education and Development, 1*, 49-74.

Cohen, L., Manion, L., and Morrison, K. (2011). *Research methods in education.* London: Routledge.

Davies, L. (1999). Comparing Definitions of Democracy in Education. *Compare: A Journal of Comparative and International Education, 29*(2), 127-140.

Evans, G. and Rose, P. (2007). Support for Democracy in Malawi: Does Schooling Matter? *World Development, 35*(5), 904-919.

Flick, U. (2011). *Introduction to Research Methodology: A beginner's Guide to Doing a Research Project.* New Delhi: Sage Publications.

Heater, D. (1999). *What is Citizenship?* Cambridge: Polity Press.

Kadzamira, E. and Rose, P. (2003). Can Free Primary Education Meet the Needs of the Poor. *International Journal of Educational Development, 23*, 501-516.

Kadzamira, E and Rose, P. (2003). *Educational Policy Choice and Policy Practice in Malawi: Dilemmas and Disjunctures.* Institute of Development Studies.

Litchman, M. (2013). *Qualitative education research: A user's guide.* London: Sage.

Lloyd, C. B., Mensch, B. S., and Clark, W. H. (2000). The Effects of Primary School Quality on School Dropout among Kenyan Boys and Girls. *Comparative Education Review, 44*(2), 113-147.

Ministry of Education/ UNICEF. (1998). *Free Primary Education: The Malawi Experience 1994-1998: A Policy Analysis Study.* Lilongwe: Ministry of Education, Sports and Culture and UNICEF.

Ministry of Education. (2020). *Education statistics.* Lilongwe: Malawi, Directorate of Education Planning.

Porter, C. (2014). Turning Old Problems into New Problems: The Role of Young Citizens in Improving Accountability in Education in Malawi and Kenya. *Compare: A Journal of Comparative and International Education, 44*(3), 356-378.

Rose, P. (2003). Community Participation in School Policy in Malawi: Balancing Local Knowledge and International Agency Priorities. *Compare: A Journal of Comparative and International Education, 33*(1), 47-64.

Rose, P. (2005). Privatisation and Decentralisation of Schooling in Malawi: Default or Design? *Compare: A journal of Comparative and International Education, 35*(2), 153-165.

Sen, A. (1999). *Development as Freedom.* Oxford: Oxford University Press.

Thomas, G. (2011). *How To Do Your Case Study: A Guide for Students and Researchers.* London: Sage.

World Bank. (2006). *World Bank Report 2006: Equity and Development.* New York: The World Bank.

Yamada, S. (2014). Determinants of 'community participation': The tradition of local initiatives and the institutionalisation of school management committees in Oromia region, Ethiopia. *Compare: A Journal of Comparative and International Education, 44*(2), 162-185.

Focus on skills or writing for communication? Malawi's secondary school teachers use of feedback to promote students writing proficiency in English

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Abstract

Writing in English is among the major challenges facing Malawi's secondary school students and it is cited as a major contributor to the poor performance of students during national examinations. Improving students' writing proficiency is thus regarded as one of the solutions to improving students' performance in national examinations. Apart from the approach to teaching, resources used, and nature of tasks teachers employ in the teaching of writing, the quality and nature of feedback on students' writing is regarded as one of the key factors in promoting students' writing proficiency. Recent studies on students' writing suggest that viewing writing as a communicative activity that goes beyond the display of technical/mechanical writing skills promotes students' writing proficiency through its emphasis on meaningful and purposeful communication with the reader. Our study aimed at exploring whether the nature of feedback provided by secondary school teachers of English went beyond focusing on technical aspects of writing to promote the communicative aspects of writing. The study utilised Kulhavy and Stock's (1989) three-cycle feedback model. The study employed the qualitative research approach and was exploratory. The study revealed that though teachers used a wide variety of feedback believed to promote writing proficiency, contextual factors influenced the teachers to focus on technical aspects at the expense of the communicative aspects of language. We conclude that teachers' choice and use of feedback are not necessarily determined by the feedback's intrinsic potential to promote learning but rather by contextual factors, such as a focus on technical skills which characterise the school and education system. Our findings imply that if the school and national education conceptions of writing are informed by the view of writing as acquisition and display of technical skills of language, and not meaningful communication through print, students' development of writing for communication will be compromised which will, in turn, perpetuate the poor performance during national examinations. We are of this view as in such a skills-focused context, teachers, despite their content and pedagogical knowledge of proven and effective feedback practices for promoting writing proficiency, teachers are likely to neglect the communicative aspect of writing.

Introduction

In most anglophone developing countries, English, though a foreign language, is the official medium of communication in the crucial areas of government, judiciary, business and education (Kayambazinthu, 1998). In Malawi, English was elevated as the official language in 1968, four years after independence from the British colonial masters.

Most education systems which have adopted English as a medium of instruction give special attention to the teaching and use of the English language in their schools. For instance, in Malawi English is the medium of instruction in upper primary school, secondary school and tertiary institutions with all subjects except Chichewa being taught in English. Furthermore, English is a "key subject" to passing national examinations and is the gateway to passing national examinations, certification, and employment. About the importance of English in Malawi's education system, Mmela (2006) states that tests that allow students to progress from primary to secondary school require a high level of English proficiency in terms of text comprehension and writing. This is so because students' transition from one school level to another is determined by their ability to pass national examinations with English proficiency serving as the final determiner for getting a passing score (Matiki, 2001). As for English writing proficiency, its significance is exhibited through the fact that, in national examinations, all subjects taught in English are assessed through students' written responses. Thus, facilitating students' development to communicate appropriately and accurately through writing is key to helping students succeed in the high-stakes national examinations.

In this paper, English language proficiency in writing means the ability to use writing for communication in meaningful communicative contexts while displaying the knowledge and appropriate use of the mechanical and technical aspects of writing (skills) (Yuyun, et, al. 2018). We should state that we regard the technical aspects of writing as important, but that we believe going further to promote the communicative aspects of writing will facilitate students' ability to communicate their ideas and views in writing. We assume that in some cases students may possess the required content knowledge and skills but their failure to communicate through writing in English may result in their poor performance during examinations. In such cases, the students fail because they cannot display their knowledge and skills through writing in English. Thus, promoting the communicative aspects of writing is critical in the academic domain as it helps students to communicate their ideas ably and clearly in writing and consequently helps them do well in examinations.

Thus, English language teachers have the responsibility of helping students acquire the required writing proficiency in English at a level that will enable the students to excel in academic and sociocultural contexts. Chanda (2008) suggests that to develop English language proficiency, students need to be provided with a lot of opportunities to practice using the language. He further argues that practice is important in language learning as it helps students develop the necessary language skills and confidence, which are essential for attaining proficiency. This suggests that to equip the students with the required proficiency in the language, English language teachers should provide their students with appropriate materials and exercises for practice.

Furthermore, for practice to be meaningful the students must be assessed regularly (Scarino & Liddicoat, 2009). In a bid to ensure that students are assessed adequately, the Ministry of Education Science and Technology (MoEST, 2014) has implemented the Secondary School Curriculum and Assessment Reform (SSCAR) throughout the country. The SSCAR puts much emphasis on continuous assessment as a way of helping measure the performance of students through practice work administered by the teachers. In this regard, assessment is used as an

important tool for enhancing meaningful practice since students take assessment-based practice work more seriously than normal class practice work.

However, Mayer (2003) states that practice by itself is not enough to cause learning. She argues that the provision of feedback after practice is needed to maintain, as well as improve the performance of students. This is supported by Brown (2018) who argues that feedback is a key element of successful instructional practices which lead to improvements in student learning outcomes. Similarly, Lipnevich and Smith (2009) posit that for practice to facilitate learning, students need to receive feedback about the discrepancy between the actual and the desired state and effectively process that information to improve performance.

Scarino and Liddicoat (2009) assert that for an assessment activity to promote learning, it should provide information to be used as feedback by teachers, and their students in assessing themselves and each other to modify the teaching and learning activities in which they are engaged in. This implies that feedback ought to be understood as a response or information that is given to students upon completion of a task or exercise to improve performance. This use of feedback makes it a means to learn and not an end to the learning process. This, therefore, entails that when feedback is given appropriately on students' work, students will be able to use it to attain the required level of proficiency in the target language by putting more effort to achieve the desired goal. This argument is in line with Andersons' (2003) assertion that feedback helps in improving learning since it gives students specific guidance on their strengths and weaknesses.

However, it has been observed that even though teachers in most primary and secondary schools in Malawi engage students in several practice activities, students' proficiency in the English language is critically low (Mmela, 2006). In addition, Matiki (2001), notes that although English is taught and used as the medium of instruction, not all students have the required proficiency in the language. Furthermore, Malawi National Examinations Board (MANEB) Chief Examiners reports for Malawi School Certificate of Education (MSCE) English examinations cite poor writing skills as among the major factors that contribute to students' poor scores during national examinations (MANEB, 2018). As several factors such as large class sizes and students' low proficiency in spoken English have been cited as factors behind the students' writing problems, we have decided to focus on feedback as we have not come across a similar study conducted in the SADC region. Our decision to focus on feedback is based on our belief that despite being in a poorly resourced context, the nature and quality of feedback provided to students can both motivate and enhance their writing proficiency. Our belief is supported by Clarke (2005:67) who states that feedback is "the most powerful single moderator that enhances achievement".

Most studies related to feedback tend to focus on how feedback affects student achievement in examinations, teachers' and students' perceptions and beliefs about feedback, as well as the relationship between teacher variables and the nature of feedback they give to students (Lipnevich and Smith, 2018; Schachter, 1991). However, even though these studies discuss the issue of feedback at length, we have not come across a study that explores how teachers use feedback to enhance writing proficiency in sub-Saharan English as a foreign language context.

Bearing in mind the important role that teachers play in the teaching of writing and the importance of teacher feedback in promoting students' development of writing proficiency, the study sought to explore whether the nature of feedback provided by Malawi's secondary school teachers of English goes beyond focusing on technical aspects of writing to promote the communicative aspects of writing. We are of the view that promoting the communicative aspects of writing in the teaching and learning process will help the learners to develop their ability to communicate their ideas clearly and purposefully. The writing was purposively chosen considering the crucial role it plays in determining one's success in examinations (almost all test items are responded to in writing) requiring students' high proficiency in writing.

Statement of the problem

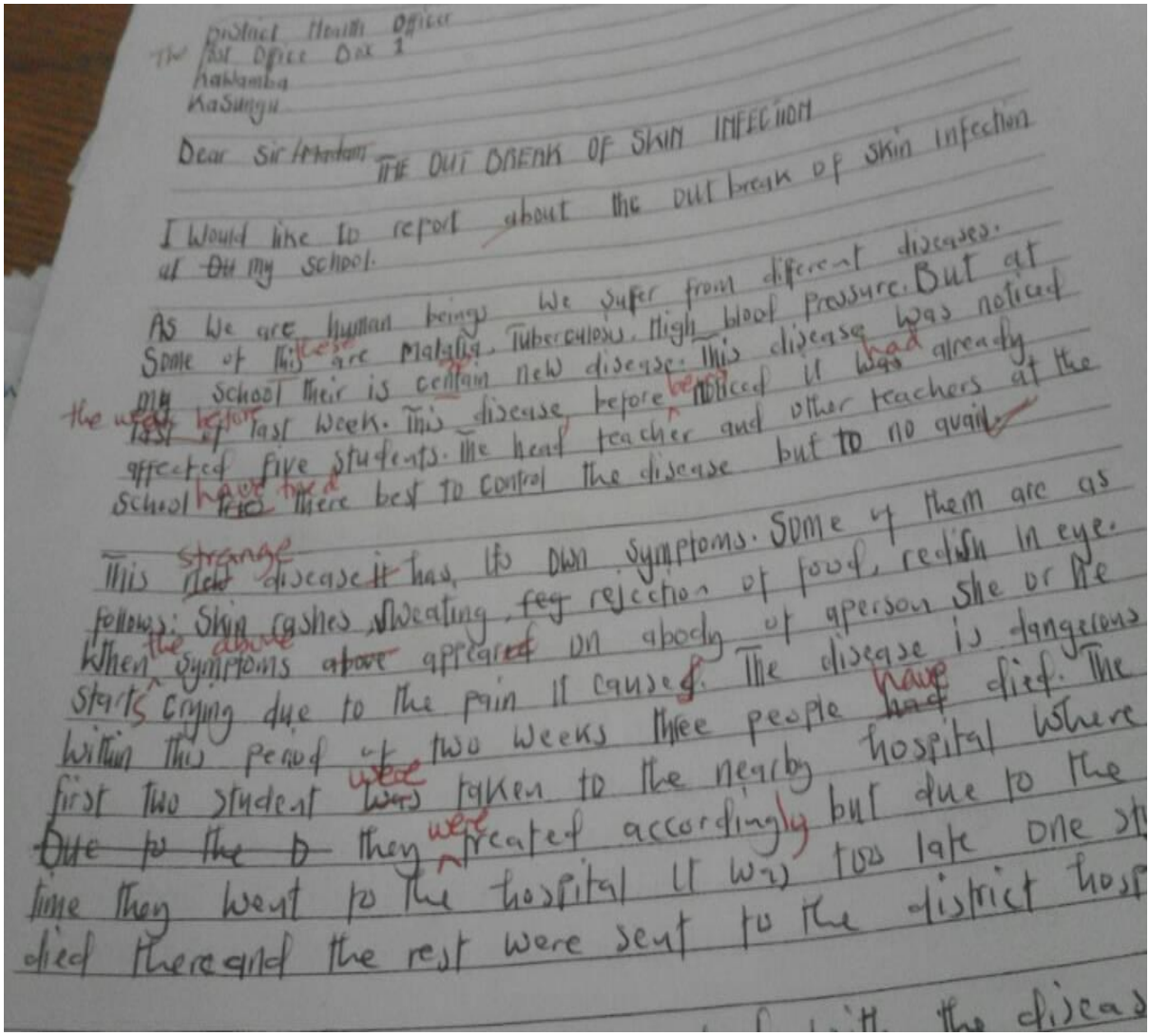
Education Management Information Systems (EMIS) reports (MoEST, 2018) and MANEB results show that Community Day Secondary School (CDSS) students in Malawi fare badly in national assessments. Among the major factors behind their failure is lack of resources, unqualified teachers, and low levels of English language proficiency. Among the major factors cited as contributing to CDSS students' failure in national examinations is their low proficiency in writing in English. We believe that, among other factors, the students' low proficiency in writing in English could be a result of teachers failing to provide feedback that promotes the communicative aspects of students' writing, like expressing their views and ideas appropriately and fluently. We assume that the students might have the required knowledge of the subject content, spelling, punctuation, grammar and vocabulary, but failure to express their ideas fluently negatively affects their performance. Our view is that providing the students with the appropriate feedback which promotes using writing to communicate successfully, may promote students' writing ability. Our study therefore aimed at exploring whether the nature of feedback provided by Malawi's secondary school teachers of English goes beyond focusing on technical aspects of writing to promote the communicative aspects of writing.

The study focused on the following two research questions; 1) What type of feedback do teachers give on their students writing compositions? 2) Does teachers' feedback focus on providing feedback that promotes communicative aspects of writing?

Conceptualisation of feedback

Feedback is defined as the response following an action, for example, a comment after a speech or any task that is specially designed to correct a situation (Black & William, 1998). In a classroom situation, the feedback that students receive often serves as a summary of their performance and provides information on how they can improve (Lipnevich & Smith 2009). Hence, feedback can be defined as any helpful information or criticism that is given to someone to say what can be done to improve performance or a product. To relate these two definitions to the language teaching and learning process, feedback can be said to be any useful information that can be provided to either the teacher or student to promote the effectiveness of a learning process. This assertion concurs with Ur's (1996, p.242) definition that feedback is "information that is given to the student about his/her performance on a learning task, usually to improve performance". Furthermore, "feedback has also been said to be information that

gives room to recipients", in this case, students, "to make a comparison between actual performance with some established standard of performance" (Shute, 2008: 175). From the three definitions of feedback, it can be observed that for feedback to be effective it must point out the mistakes or errors that have been noted while at the same time providing information that will help the student improve performance. In a classroom setting, feedback comprises information, whether a message or display that is presented to the student following his or her input to shape the perception, cognition, or action of the student (Moreno, 2004). This means that the main goal of feedback in the classroom or elsewhere is to enhance learning, performance, or both while provoking the formation of accurate, targeted conceptualisations and skills. Narciss and Huth, (2004), state that such feedback may be used in conjunction with assessments which have diagnostic components as well as being personalised for the student. On the other hand, Shute (2008) posits that feedback might be likened to "a good murder" in that effective and useful feedback depends on motive (the student needs it), opportunity (the student receives it in time to use it) and means (the student is able and willing to use it). Thus, even though feedback may point out where a student has gone wrong, it is the students' effective use of feedback information which helps students to improve for the better. This conceptualization of feedback is well presented in Kulhavy and Stock's (1989) model of feedback presented in Figure 1 below:



The District Health Officer
Post Office Box 1
Nambumba
Nasungu

Dear Sir/Madam,

THE OUT BREAK OF SKIN INFECTION

I would like to report about the out break of skin infection at my school.

As we are human beings we suffer from different diseases. Some of these are Malaria, Tuberculosis, High blood pressure. But at my school their is certain new disease. This disease was noticed the week before last of last Week. This disease before been noticed it was already affected five students. The head teacher and other teachers at the school have tried there best to control the disease but to no avail.

This strange disease it has its own symptoms. Some of them are as follows: Skin rashes, Sweating, fog rejection of food, redish in eye. When the above symptoms appeared on abody of aperson she or he starts crying due to the pain it caused. The disease is dangerous within the period of two weeks three people have died. The first two student was taken to the nearby hospital where ~~Due to the D~~ they were treated accordingly but due to the time they went to the hospital it was too late one st died there and the rest were sent to the district hosp

with the disease

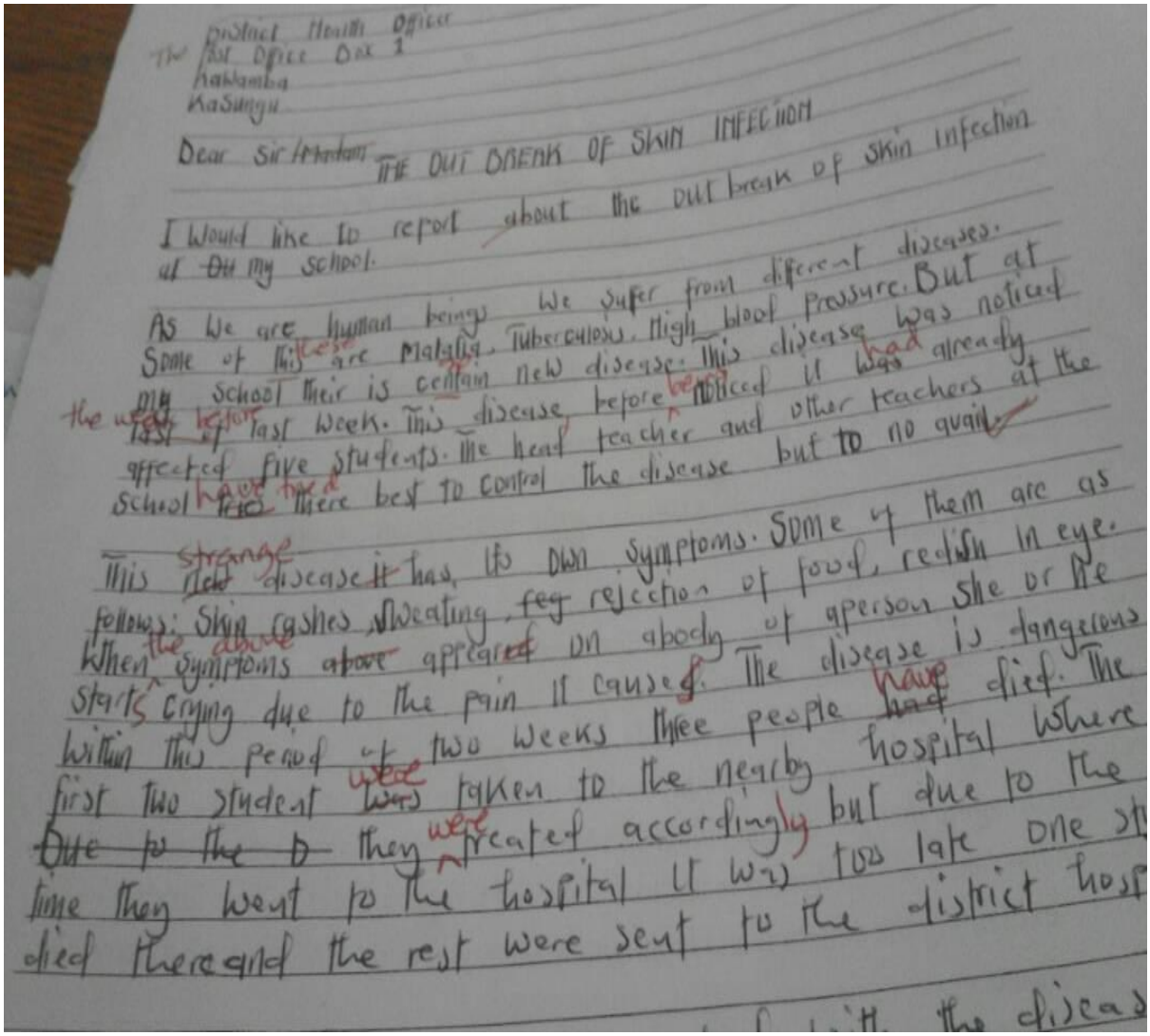


Figure 1: Kulhavy and Stock (1989) three-cycle feedback model

The model postulates that there are three key components in feedback namely input, learner, and output. The model states that there are three cycles to the feedback process and that feedback is a recursive process. The first cycle depicts instructional task demands, the second represents feedback message, and the third is a criterion task demand. As explained by Lepnivich and Panadero (2021), in the first cycle the perceived task demand is compared to the set of existing cognitive referents available to the learner. In the second cycle, the feedback message is compared to the cognitive referents retained from the initial cycle. These two cycles are followed by cycle three, where the perceived stimulus is again the original task demand that is compared to the cognitive referents which have been modified by the feedback message. Thus, in this model, feedback is not a once-off event but an ongoing process where tasks are provided in consideration of learners' cognitive abilities and the feedback is provided to address issues at both the learners' current cognitive abilities and to scaffold the learner toward the next level of performance, which is the desired output of instruction. With this model, students are expected to work on a task, receive feedback, and incorporate the feedback into their original text to improve it, instead of providing feedback as a way of making learners aware of their mistakes for purposes of using the feedback in future tasks.

From the discussion above, it can be concluded that for feedback to promote meaningful language learning and use, it must contain information that should tell the student whether his/her performance is desirable, in addition to giving guidance to the student by telling him/her what ought to be done to do better. Regarding the above definitions of feedback and Kulhavy and Stock's model of feedback, it is therefore important to point out that the term feedback, in this paper, refers to information or response that is given to a student upon completion of any written English language composition task to enhance the students' writing proficiency.

Types of feedback

Lipnevich and Smith (2009: 319) state that "students receive one or more types of responses to the work that they produce; a grade, a statement of praise or concern, and some level of feedback on the specifics related to their performance". Harris, et al, (2015) postulated that generally there are two kinds of feedback; explicit feedback such as a grammatical explanation or overt error correction and implicit feedback such as confirmation checks, repetition, recasts or clarification requests. These forms of feedback are further divided into direct and indirect error feedback. Direct or explicit feedback is provided when the teacher writes the correct form in students' compositions while in the latter, the teacher just indicates indirectly the location of the error. The indirect corrective feedback only locates and indicates the type of error committed by the student. Ferris and Roberts (2001) sum up the definition of the two terms by stating that directive feedback are corrections made by the teacher while indirect feedback is the indications made by the teacher by underlining or giving codes.

Forms of feedback have further been classified into qualitative and quantitative feedback. Qualitative feedback can be defined as a response that is given to students' work in form of words, for instance, teachers' written comments on a student's text. On the other hand, quantitative feedback is given in terms of grades and marks. Entwistle (1987) argues that in most subjects, English inclusive, teachers are interested in assessing knowledge of facts rather than an understanding of concepts and principles. This has resulted in placing much emphasis on quantitative indications of achievement. This is a case whereby teachers' feedback focuses on grades and marks and not a qualitative judgment of the strengths and weaknesses of the students and in cases where qualitative judgment is used may lack a justifiable rationale for its usage.

Timperley (2007) states that not all forms of feedback are equally useful in promoting meaningful learning. The scholar argues that learning can be promoted when feedback is presented as information intended to guide the students in the construction of knowledge and instil intrinsic motivation. In other words, she posits that meaningful learning is not promoted when feedback is presented as reinforcement intended to automatically increase or decrease performance. Thus, if feedback is used mainly to serve as information rather than reinforcement, it can be more effectively used in promoting learning as it can be actively interpreted by the student than simple "right-wrong" feedback (Mayer, 2003: 239). In addition, Black & William (1998) assert that the action taken by the student in response to feedback depends heavily on several variables, one of which is the nature of the message in the feedback provided by the teacher. This claim is supported by a study carried out by Thorndike (1931)

which showed that a group of students given detailed feedback learned more rapidly and more completely than the group that was given only "right-wrong" feedback. Thorndike's study, therefore, suggests that students can use the information in feedback to help revise their plans for giving responses. Thus, Thorndike's study posits that "the most useful information i.e., feedback, came on errors students made since students were able to learn from their mistakes" (Mayer, 2003: 257).

Research approach and design

Since the study was exploratory, it was guided by the qualitative research approach (Cresswell, 2007). This approach is therefore considered the best that could provide the necessary data for the study since the study was aimed at exploring, understanding and describing how teachers and students of English make use of feedback to enhance writing proficiency. The study was guided by a phenomenological research design. Creswell (2007:57) states that a "phenomenological study describes the meaning for several individuals of their lived experiences of a concept or phenomenon" under study. The research design was suitable in that it helped in guiding the researchers towards relevant data and provided an appropriate lens for exploring, describing as well as interpreting the data in terms of how the various participants understand and experience the phenomenon under study.

Research site and participants

This paper is part of a larger study which was conducted in Zomba district in Malawi's eastern region. The researchers purposively chose four Community Day Secondary Schools (CDSSs) located within Zomba district. Community Day Secondary Schools are ranked as the last of the 4 main categories of secondary schools in Malawi. They are characterised by large classes, shortage of teaching and learning materials, unqualified teachers, and poor results (pass rates) in national examinations. Generally, children from disadvantaged communities are the main groups which are selected to these schools. Furthermore, classes in these schools are usually large with the schools in our study having an average of 100 students per class with two having 126 students in a class. We thus found it worthwhile to study teaching and learning practices in the CDSSs, with a focus on writing as it is the language skills through which the students' performance in national examinations is measured. We were of the view that such a study could contribute to the efforts being made to improve the quality of education offered to the 'disadvantaged' CDSS students.

In the main study, eight teachers of English language, two from each school, were selected from the four CDSSs as participants. These were teachers teaching forms 1 and 3. We focused on these classes as they are not 'examination' classes and thus more convenient to engage in research activities. All teachers were qualified to teach at Secondary School with a Diploma in Education as a minimum academic qualification and all had a teaching experience of at least 5 years. Ten students from each school were randomly sampled to use their exercise books as a resource for document analysis. These exercise books were the main documents that were studied. For purposes of this paper, of interest to us were composition exercises (letters, reports, and general narrative compositions) since these are by nature supposed to be meaningful and communicative.

Data generation and analysis

Data was generated mainly through document analysis of students' exercises which the teacher provided feedback on, and interviews with the teachers. There were 8 interviews in total. Though in the main study the students were interviewed to explore their attitudes towards specific feedback, that component is not included in this paper as our focus is on the nature of feedback and not students' attitudes. Content and thematic analysis were used to analyse the data. The process of analysing data involved making sense of the data through noting patterns, themes, and categories from regularities. The interviews were audio recorded by the researchers and transcribed. The researcher drew out themes and categories that emerged from the data which were then grouped and interpreted alongside field notes and summaries that were taken during the interview process. Wherever necessary, the data was codified and re-read. Later, the data were categorised and the researcher made speculative inferences about them before making summaries of the research findings (Cohen et al., 2007).

Discussion of findings

The findings are discussed by themes on the analysis of data generated in line with the research questions. The general themes are the types of feedback teachers used. For each type of feedback, there is a discussion of its nature and whether the way it is implemented goes beyond the focus on technical skills to cater for communicative aspects of writing. To establish the types of feedback the teachers provided, data was generated using in-depth interviews with teachers of the English language and document analysis of students' marked compositions written in English. The analysis established that teachers in the participating schools used the following types of feedback to enhance writing proficiency in the English language among their students: Direct or explicit feedback; Indirect or implicit feedback; Quantitative feedback; and Qualitative feedback.

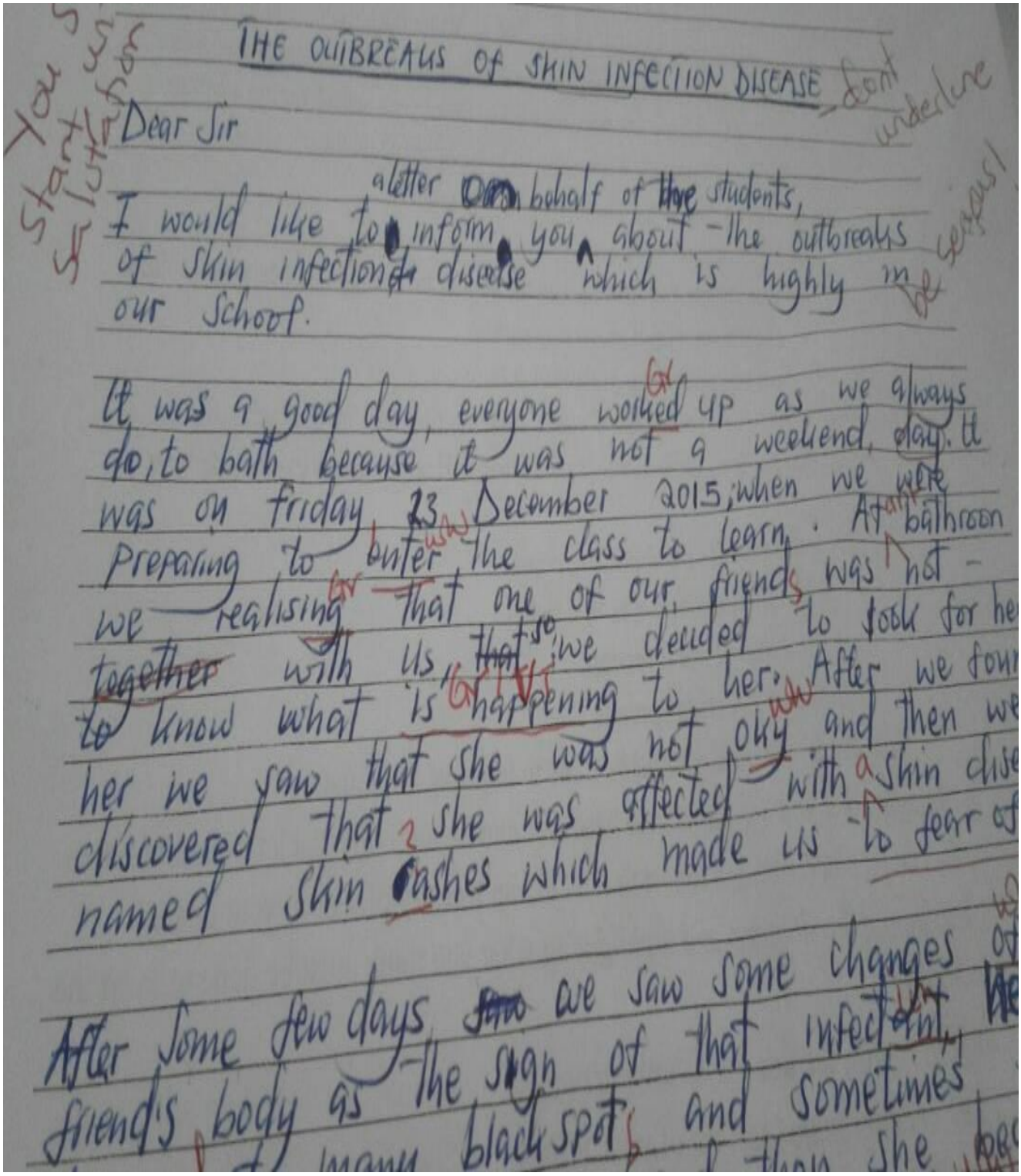
Direct or explicit feedback

Findings from in-depth interviews with teachers of the English language revealed that teachers used direct or explicit feedback as a way of enhancing writing proficiency. According to Bitchener (2008), direct feedback is the provision of the correct linguistic form or structure above or near the linguistic error. The researcher established that six out of the eight teachers who participated in the study used this type of feedback by way of correcting all the mistakes or providing the correct form of the error made by the students during the writing process. The participants revealed that they used direct feedback because it helps in enhancing the students' ability to use the language which consequently contributes to improvement in the quality of compositions they write.

In this study, it was observed that teachers used direct feedback when the students' compositions had what the teachers termed serious errors. In this case, teachers claimed that serious errors refer to errors or mistakes made by students during composition writing which teachers considered to be difficult for the students to correct on their own. In most cases, where direct feedback was used by the teachers, it was done by providing the correct form of a word, phrase or sentence on top of the wrong one but not the whole paragraph.

From the findings of the study, we opine that the teachers were using this strategy in cases where the students did not know the correct form of an English expression, phrase, or word. This means that through the use of direct feedback, teachers were able to provide and guide the students on the appropriate usage of some expressions used when writing in English.

Figure 2 exemplifies teachers' use of direct feedback as a way of enhancing writing proficiency among their students.



THE OUTBREAKS of SKIN INFECTION DISEASE

Dear Sir

a letter behalf of students,
I would like to inform you about the outbreaks
of skin infection disease which is highly in
our School.

It was a good day, everyone worked up as we always
do, to bath because it was not a weekend day. It
was on friday 23 December 2015; when we were
Preparing to enter the class to learn. After bathroom
we realising that one of our friends was not -
together with us, so we decided to look for her
to know what is happening to her. After we found
her we saw that she was not okay and then we
discovered that she was affected with a skin disease
named skin rashes which made us to fear of

After some few days we saw some changes of
friend's body as the sign of that infection, the
many black spots and sometimes

Figure 2: Direct feedback

In connection to this, Kluger and Denis (1996) argue that students' learning can be promoted when feedback is presented as information which is intended to guide the students in the construction of new knowledge. This, therefore, entails that when students are provided descriptive or direct feedback on their performance, such kind of feedback serves to describe the mistake a student made and how it can be resolved. Consequently, such feedback according to Black and William (1998) leads to the highest improvement in performance.

However, even though most of the teachers interviewed stated that direct feedback helps students improve their writing proficiency, the teachers acknowledged that they were not using this type of feedback effectively because it was involving considering that on average each class had more than 100 students. Teachers claimed that it was not possible to correct the whole text considering the nature and size of the classes they handled. The quote below illustrates the situation;

I usually write the correct spelling or I cross out the wrong sentence and tell the student how to write a good sentence by following the rules of grammar. In that way, a student can know how a good sentence is supposed to be written. In terms of paragraph writing, I simply tell them what is supposed to be contained in each paragraph like topic sentence and supporting sentences etc. You know it is very difficult for me to correct all mistakes made by the students, the classes are just too big. [Interview with T2]

The quote above and Figure 1's focus on providing feedback on 'correct spellings' and emphasis on 'following rules of grammar' suggests that the teachers' 'explicit/direct' feedback was focused on the technical aspects, and not the communicative aspects of writing. Thus, teachers were using direct feedback to treat mechanical errors because they felt the students required explicit teacher direction and assistance. Furthermore, the quote above, reveals that teachers acknowledged that their use of direct feedback was not effectively exploited because of the students' large class sizes. This concurs with Murcia (2001) who posits that most writing teachers report that they have many students in one class and thus have a limited amount of time to provide quality feedback to all mistakes made by students, let alone comment on the communicative aspects of their writing.

Indirect/implicit feedback

The study found that teachers in the participating schools used indirect feedback as a way of enhancing proficiency in writing in their students. From the study, it was established that teachers who use implicit or indirect feedback only locate and indicate the type of error committed by the students by underlining and using a correction symbol or code or simply underlining or highlighting the error without using codes.

Coded feedback Using Correction symbols or codes

One of the common forms of feedback used by teachers was the use of correction symbols or codes. Correction symbols or codes refer to the indication of types and locations of students' mistakes through the use of correction codes as suggested by Oshima and Hogue (1997). In

composition marking, the application of correction codes is "normally done by underlining the mistakes and using some kind of symbol to focus the attention of the students on the kind of mistake they have made" (Byrne, 1988, p.125). In this study, it was noted that teachers' use of the coding technique involved using several codes (either in the body or in a corresponding margin) to refer to the different aspects of language such as word order, spelling and verb tense.

Table 1 below presents some of the codes used by teachers in the participating schools and what the codes refer to when provided to students.

Table 1: Correction symbols used when providing indirect feedback

Correction code	**Meaning**
P	Punctuation
∧	Word missing
>	New paragraph
WW	Wrong word
WO	Word order
?	Not clear
Vt	Verb tense
Sp	Spelling
Gr	Grammar
SVA	Subject-verb agreement

Source: Analysed Field Data, 2017

Similarly, Figure 3 below shows how teachers were using codes as a tool for providing indirect feedback to the students.

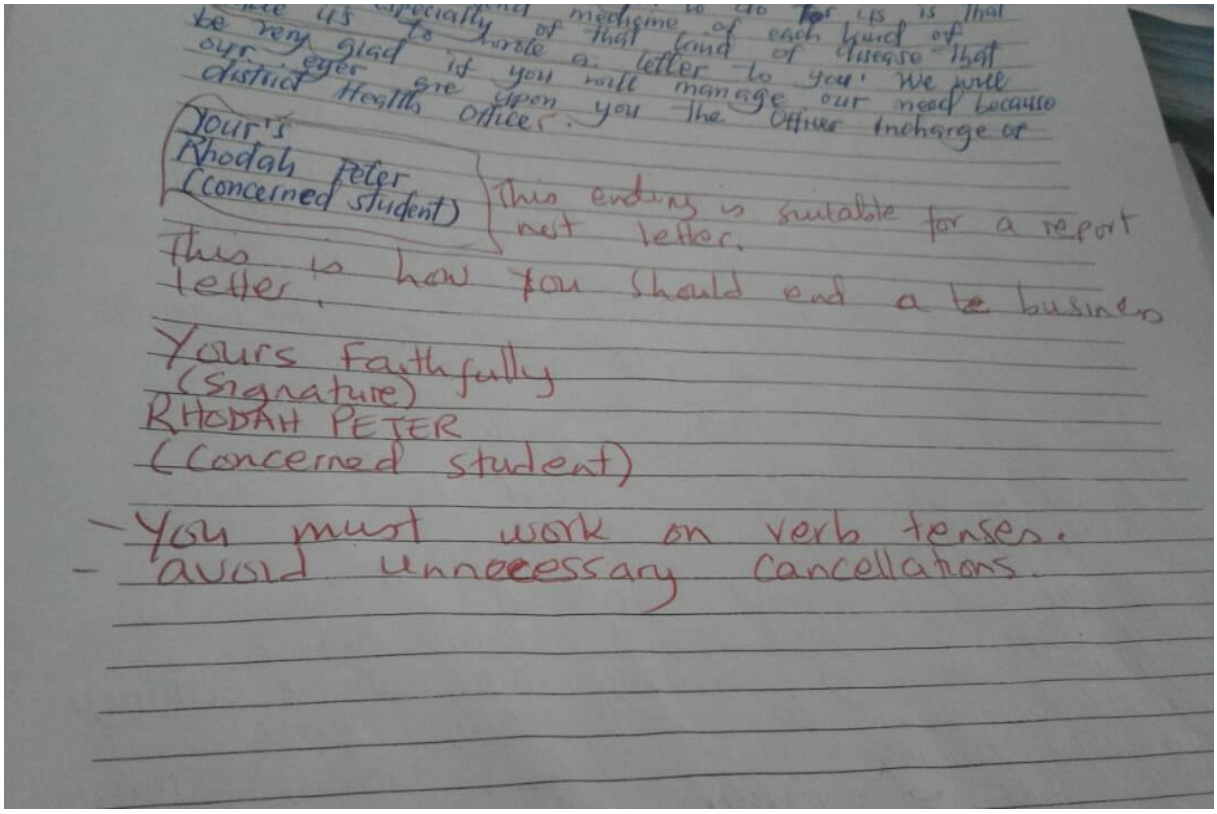


Figure 3: Teachers' use of correction symbols/codes

Source: Field data, 2017

In the figure above, it is noted that the teacher mainly uses symbols or codes to provide feedback on technical or mechanical writing issues such as spellings, omission of words or letters and use of 'inverted' forms like 'okay'. It is also noted from Figure 2 that in the case of the comments like 'you should start with the salutation' and 'don't underline', the focus is still on technical and not communicative aspects of writing. Furthermore, the comment 'be serious', which is based on the student's handling of the technical aspects of the introduction and not the message conveyed, suggests an emphasis on skills at the expense of meaningful communication.

The study further established that teachers preferred using correction codes because they look at it as a convenient way of giving feedback due to the large classes they handle. For instance, one teacher stated that even though he does not look at the use of correction symbols as an effective way of providing feedback to students' written work, he usually utilises this type of feedback because of the large classes he handles. He stated:

Imagine, I teach English in forms 4 and 3 and the thing is, whether I like it or not I am supposed to give and mark composition exercises to the students and each class has more than a hundred and twenty students. If I am to give each student the correct form of each mistake they make- of course, that's the kind of feedback I prefer- considering the nature of students we have in our CDSSs, how many compositions will I have to rewrite? So, because of the workload, I

have to handle and the limited time available to cover the syllabus, I end up using codes because I find them easier to give. [Interview with T1]

The quote shows that the effort and time required to mark exercises (compositions) in large classes, and the subtle lamentation of the poor writing abilities of students in Community Day Secondary Schools (CDSSs), make the teacher resort to feedback practices that he knows will not be an effective form of feedback in promoting writing proficiency. The quote further reveals that teachers' use of a particular type of feedback is determined by contextual factors such as class size and students' competence, and not just its perceived or proven advantages, in this case, teachers using correction codes as a convenient way of providing feedback to students.

Apart from convenience, it was also established that correction codes were also a way of ensuring that students correct their own mistakes and hence gain autonomy over their writing ability. For instance, one teacher stated that:

"I do not correct all the mistakes made by my students because I look at that as spoon feeding. So, whenever I come across a wrong spelling, for example, I simply put ``SP". [Interview with T4]

The teacher further explained that giving students the correct form of each mistake they make is detrimental to the development of the students writing proficiency as they may develop a habit of looking up to the teacher to give them the correct form. Similarly, Teacher 5 indicated that whenever her students made what she considered to be "a simple mistake", she simply indicated the error with a code and asked the students to correct the mistakes before giving them the correct form. This practice is further collaborated by Teacher 8, who indicated that in using correction codes, she is simply indicating an error which might have been overlooked by the student during the writing process. She observed that:

…most of the mistakes are made by students in confusion during the writing process where the time is not enough and there are so many things the student needs to get right at the same time; the student knows the right form but produces the wrong one. [Interview with T8]

The teacher's use of the expression 'there are so many things the student needs to get right and the reference to 'the right form' suggests a skills-view of writing which emphasises language forms while backgrounding meaning. The teachers' views on the need to focus on form-based 'mistakes', as expressed above, resonates with Harmer (2001: 111) who posits that "the use of codes has the advantage of encouraging students to think about what the mistake is so that they can correct themselves". Thus, the use of correction codes is believed to have the potential to encourage students to look at writing as a skill that can be improved by training students in looking for areas of improvement (Hedge, 2000).

To ensure that students use the codes efficiently, most of the teachers indicated that they make sure that students understand the meaning and use of the codes. For instance, Teacher 7 stated that:

I always make sure that students understand the codes that I use — I teach them the meanings of the codes when they come in form one. For example, I tell them that gr stands for grammar, SP for spellings etc. in addition; I show them how to make corrections using the codes I have given them so that they can correct their work. I then follow up on what has been done by the students to address their mistakes based on the feedback I give them. [Interview with T7]

In the quote above, by stating that 'I teach them meanings of the codes' and 'follow up on what has been done by students, the teacher suggests that he tries to create an environment where the students can be aware of their mistakes through the codes and then work on them independently of the teacher before the teacher checks whether the mistakes have been corrected. Such an approach could be said to support student autonomy in correcting own mistakes which could result in meaningful learning. However, the fact that the codes focus on technical or mechanical issues and not the message of the text is more likely to make the students view writing as a technical activity devoid of meaningful communication. Such an overemphasis on technical skills, backgrounds and communicative aspects of writing in turn hinders students' development of writing proficiency (Bua-lit Collective, 2018).

Quantitative feedback

Quantitative feedback refers to the kind of feedback provided to students in the form of quantities like numbers (Entwistle, 1987). The study revealed that teachers' use of quantitative feedback involved giving students feedback in form of grades or marks on their exercises. It should be pointed out that in the study, the grade and marks of the words are being used interchangeably. In-depth interviews with teachers revealed that most of the teachers use quantitative feedback because in most cases students are not interested in feedback that would help them improve their writing skills but are only interested in the mark/grade given by their teachers after an exercise. In addition, the participants stressed that their use of marks/grades when marking compositions was influenced by the country's education system which focuses on measuring what students can do through the use of marks that teachers use to present their final evaluation of a student's performance. Furthermore, the participants revealed that they valued the use of marks as it helped them to know the performance of each student in relation to the rest of the class, which informs pedagogical decisions. The following quotes present the views of different participants in relation to their use of marks as feedback.

When marking students' exercises, I usually give them a grade which summarises how well each student has performed in a particular exercise or exam….you know what, when I give a grade the student will be able to know where s/he stands compared to his classmates or in relation to the exercise. For example, when I give a student 20/40 when the highest has scored 35/40, s/he will be able to know that s/he still has a long way to go. So, I think this pushes the students to start working hard…… [Interview with T4]

Similarly, another teacher stated that;

I used to give a combination of grades and comments after marking compositions but mhhh I stopped when I realised that most of the students are not interested in the comments that I give them ndiye (so) I stopped. I just give them marks sinanga ndi zomwe amafuna (because that's

what they want). Moreover, when recording in the school progress reports they don't need a lot of comments, we just indicate the grade kaya (maybe) 1, 2 or whatever grades the student has managed to obtain. [Interview with T3]

The two quotes above suggest that students are more interested in the grade type of feedback they get and not the qualitative feedback that would assist them to understand what they are struggling with and how they may improve. This could be attributed to the students' realisation of the belief that they should put effort into improving their grades. Since the grading for writing in the Malawi education system, to a larger extent, focuses on technical aspects of writing, both the students and teachers are very likely going to disregard the communicative aspects of writing to focus on the examined technical skills. This scenario, on the part of T3, is more of a coerced thing as shown by the teacher's comments 'I stopped when I realised most of the students are not interested in comments' and 'I just give them marks because that's what they want. Thus, even though the teacher is aware of appropriate forms of feedback for promoting the students' writing proficiency, the students' exam-oriented preoccupation with skills-focused grades creates a hostile environment for the teacher to implement what he believes is an appropriate and effective form of feedback. This concurs with Panadero and Lipnevich's (2022: 1) assertion that though "feedback is essential for improved performance and can contribute to enhanced achievement on the task, it is also known that learners often dread it and dismiss it, and its implementation can be complicated for several reasons".

Furthermore, education practices in the school system, such as the focus on quantifying performance in the records meant for teacher accountability (among other uses) are also blamed for the focus on grades at the expense of meaningful comments on students' writing. This is exhibited in T3's assertion that 'when recording in the school progress reports they don't need a lot of comments, we just indicate the grade'.

It was also established that teachers were conscious of the need to go beyond the provision of mere quantified grades and provide the students with more information on their writing, as shown in the following quote.

I give both marks and comments — I let them know that I have given you these marks because you have problems in the following areas, for example you never used punctuation marks. So, I tell them I have deducted so many marks because of this particular problem for them to remember next time they will be writing a composition. When it comes to grammar, I let them know that for each mistake I deduct ½ mark, so they make sure that they avoid making mistakes for fear of losing a lot of marks. [Interview with T3]

The quote above, despite its intention to provide more feedback on students' writing, falls short of commenting on the content of the texts. This is shown by the examples she mentions as areas she would highlight to the student in her explanation of the grade she gives. She only mentions technical aspects of 'punctuation' and 'grammar' without referring to what the student is communicating in the composition. This suggests that much as the teacher understands the importance of providing more 'verbal' feedback to complement the quantitative grade, such feedback is focused on form rather than meaning conveyed by the student.

Qualitative feedback

The study revealed that the teachers used qualitative feedback to enhance students' writing proficiency in English. Qualitative feedback refers to feedback that is given in form of qualities or words (Entwistle, 1987). The study established that teachers who used qualitative feedback focused more on providing feedback to students in form of written comments on the overall performance of the students to enhance writing proficiency.

The most common forms of qualitative feedback widely used by teachers included praise, advice, and criticism. For instance, Figure 4, exemplifies some of the comments teachers write upon marking a composition exercise.

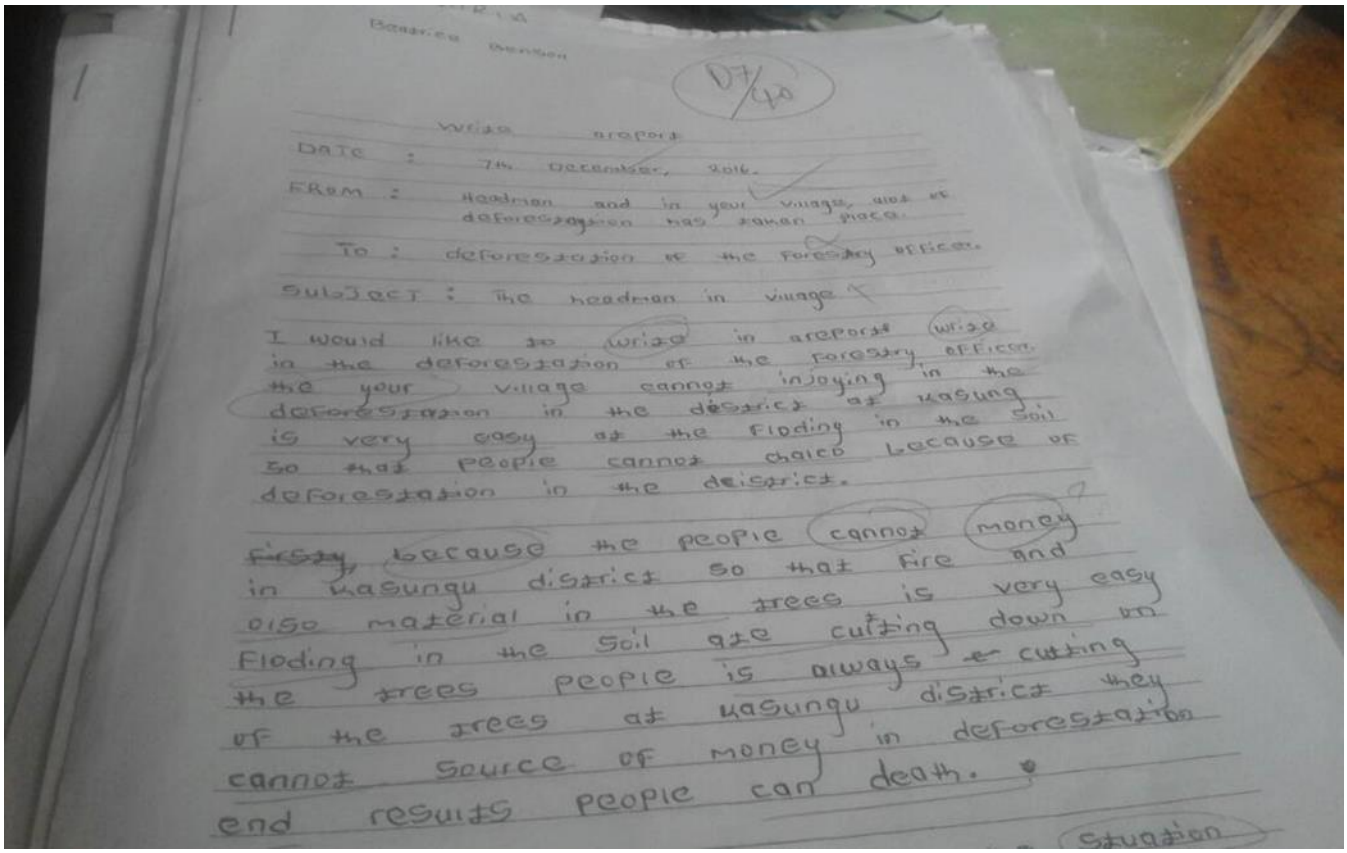


Figure 4: Qualitative feedback

A look at Figure 4 supports our claim that teachers' feedback is mainly focused on technical aspects of writing while backgrounding the communicative component of writing. The comments 'this ending is suitable for a report, not a letter and the 'right' example of a proper ending which the teacher provides, together with the advice on grammar; 'work on verb tenses', are all focused on technical aspects of writing. No comment attempts to engage the student on the meaning conveyed in the letter. Thus, the case of Figure 3 suggests that though qualitative feedback is said to be a more appropriate form of feedback for promoting writing proficiency, the focus on technical aspects of writing compromises the students' development of writing proficiency.

Apart from the qualitative feedback provided in students' texts, the teachers also indicated that another form of qualitative feedback they used was uncoded feedback in the students' texts which they supplemented with whole class feedback during subsequent lessons. In this case, the teacher highlights the mistakes or errors in the students' texts without providing explanations but uses these errors to provide whole class feedback on the general errors that were observed in the compositions. According to Shirazi and Shekarabi (2014), uncoded feedback refers to instances when the teacher underlines an error, circles an error, or places an error tally in the margin, but, in each case, leaves the student to diagnose and correct the error. From the analysis of students' marked composition scripts as well as in-depth interviews with teachers, it was established that most teachers use this method when providing feedback to the students. The participants revealed that they provide this kind of feedback by simply underlining or circling the error without providing any guidance as to how the error can be corrected. Figure 5 shows teachers' use of uncoded feedback.

Figure 5: Uncoded feedback

As to why they use this kind of feedback, the respondents stated that it was easy and convenient for them to either circle or underline and take note of the students' errors and revise them later in class unlike correcting all errors. Teacher 5 stated that:

……. I don't give specific comments on my students' mistakes. I just highlight by underlining the specific mistakes and then I prepare a lesson based on the mistakes made e.g. if I found out the major mistake made by the students is poor sentence construction, I just prepare a lesson on sentence construction. [Interview with T 5]

The approach stated by T5, where she plans a remedial lesson to address challenges in her students' writing could be an appropriate way of dealing with large classes as it would provide an opportunity for her to teach based on her students' needs and challenges. However, her remedial lesson's focus on 'specific mistakes' like 'poor sentence construction' suggests that such lessons are technical and thus disregard the meaning-making component of writing which is key to the development of proficiency in writing.

Conclusion

The paper has established that teachers used a wide variety of feedback which included explicit, implicit, qualitative, as well as quantitative feedback. It has further established that though the teachers were aware and used forms of feedback that had the potential to promote students' writing proficiency in English, factors such as class size, students' general competence in English, students' attitudes towards the use of grades, and examinations' focus on the technical aspects of writing resulted in the neglect of the use of feedback focussed on writing as a communicative and meaningful activity. Thus, both writing and feedback practices for students' writing were conceived as a technical enterprise where the focus was masterly on technical aspects of writing and not writing for meaningful purposes. Such a scenario could be one of the factors contributing to poor results in all subjects in CDSSs as the students may not be able to express their ideas in examinations due to their low levels of writing proficiency in English. Furthermore, there was no case where students were made to incorporate the teachers'

feedback to improve their texts. Emphasis was on making students aware of their mistakes with the expectation that they will use the feedback in their next assignments. We thus argue that deliberate efforts should be made to promote writing for communicative purposes, without neglecting the skills, at both classroom and national assessment levels so that students attain the writing proficiency they require to succeed in the other curriculum subjects and beyond the school.

References

Anderson, L.W. (2003). Enhancing the quality of teacher decision-making. New Jersey: Lawrence Erlbaum Associates Inc.

Baumeister, R.F., Hutton, D. G., & Cairns, K.J. (1990). Negative effects of praise on skilled performance. Basic & Applied Social Psychology, 11(2), 131-149.

Bitchener, J. (2008). Evidence in support of written corrective feedback. Journal of Second Language Writing, 17 (2), 102-118.

Black, P. & William, D. (1998). Inside the black box: raising standards through classroom assessment. Phi Delta: Kappen.

Bright, J. A., & G. P. McGregor. (1970). Teaching English as a Second Language: Theory and techniques for the secondary stage. Longman Group Ltd.

Brown, G. T. L. (2018). Assessment of student achievement. New York: Routledge.

Byrne, D. (1988). Teaching writing skills. Longman Group UK Ltd.

Chanda, C. (2008). Teaching and learning English in secondary schools: A Zambian case study in improving quality. London: Commonwealth Secretariat

Chander, J. (2003). The efficacy of various kinds of error feedback for improvement in the accuracy and fluency of L2 student writing. Journal of Second Language Writing, 12(3), 267-296.

Cheng, S. Y., Lin, C. S., Chen, H. S., & Heh, J. S. (2005). Learning and diagnosis of individual and class conceptual perspectives: An intelligent systems approach using clustering techniques. Computers & Education, 44(3), 257-283.

Chiwaya, M.V. (2005). An investigation to the relationship between selected teacher variables and formative assessment in English language at the MSCE level (Masters' thesis). University of Malawi, Chancellor College, Zomba.

Clarke, S. (2005). Formative assessment in the secondary classroom. London: Hodder Education.

Chiwaya, M.V. (2005). An investigation to the relationship between selected teacher variables and formative assessment in English language at the MSCE level. Unpublished Master's thesis, University of Malawi, Chancellor College, Zomba.

Cohen, L., Manion, L., & Morrison, K. (2007). Research methods in education (6th ed.). London: Routledge.

Corpuz, V.A.T. (2011). Error correction in second language writing; teachers' beliefs, practices and students' preferences. Unpublished masters' thesis, Queensland University of Technology.

Cresswell, J.W. (2007). Qualitative inquiry and research design: choosing among the five approaches (2nd ed.). London: Sage Publication.

Entiwistle, N. (1987). Understanding classroom learning. London: Hodder and Sloughton.

Ferris, D., & Roberts, B. (2001). Error feedback in L2 writing classes: How explicit does it need to be? Journal of Second Language Writing, 10(3), 161-184.

Harmer, J. (2007). How to teach English. London: Pearson Education Limited.

Harris, L. R., Brown, G. T., & Harnett, J. (2015). Analysis of New Zealand primary and secondary student peer-and self-assessment comments: Applying Hattie and Timperley's feedback model. Assessment in Education: Principles, Policy & Practice, 22(2), 265–281.

Hattie, J. & Timperley, H. (2007). The power of feedback. Review of Educational Research, 77 (1), 81–112.

Hedge, T. (2000). Teaching and learning in the language classroom. Oxford: Oxford University Press.

Hyland, K. & Hyland F. (2006). Feedback on second language learning. Language teaching, 39 (2), 83 – 101.

Kayambazinthu, E. (1998). The language situation in Malawi. Journal of multilingual and multicultural development, 19 (5&6), 369-433.

Kluger, A. N. & DeNisi, A. (1996). The effects of feedback interventions on performance: A historical review, a meta-analysis, and a preliminary feedback intervention theory. Psychological Bulletin, 779(2), 254-284.

Kulhavy, R. W. (1977). Feedback in written instruction. Review of Educational Research, 47(1), 211-232.

Kulhavy, R. W. & Stock, W. (1989). Feedback in written instruction: The place of response certitude. Educational Psychology Review, 7(4), 279-308.

Kuthemba-Mwale, J.B., Kambilonje, M., Milanzie, I., Hau, S., Kaphweleza-Banda, M., Namathaka, L., Banda, M., Chilambo, M., Mputeni, M., Chauluka, W., & Ntapaonga

(2000). Presidential commission on the quality of education in Malawi final report. Zomba: Centre for education research and training: UNIMA.

Lantolf, L.P., & Thorne, S.L. (2006). Social-cultural theory and genesis of second language development. Oxford: Oxford University Press.

Lee, I. (1997). ESL students' performance in error correction in writing: Some implications for teaching. System, 25(4), 465-47.

Lipnevich, A. A. & Panadero, E. (2021). A Review of Feedback Models and Theories: Descriptions, Definitions, and Conclusions. Frontiers in Education. 6, 16-39.

Lipnevich, A. A., & Smith, J. K. (Eds.). (2018). The Cambridge handbook of instructional feedback. London: Cambridge University Press.

Lipnevich, A. A., & Smith, J.K. (2009). Effects of differential feedback on students examination performance. Journal of experimental psychology, 15 (4), 319-333.

Malawi National Examinations Board. (2014). Chief Examiners report: English. Zomba: MANEB.

Ministry of Education, Science and Technology. (2018). Education Management Information Systems (EMIS) report. Lilongwe: Malawi.

Matiki, A.J. (2001). The social significance of English in Malawi. World English 20 (2), 200 - 210.

Mayer, R.E. (2003). Learning and instruction. New Jersey: Merril Prentice Hall.

Jossey-Bass publishers.

Ministry of Education, Science and Technology. (2013). Syllabus for English Forms 3 and 4. Domasi: Malawi Institute of Education.

Mmela, E. (2006). Implementing integrated literacy approaches in an English classroom in Malawi. Unpublished doctoral dissertation, Virginia Polytechnic Institute and State University, Blacksburg.

Moreno, R. (2004). Decreasing cognitive load for novice students: Effects of explanatory versus corrective feedback in discovery-based multimedia. Instructional Science,32,99-113 from http://phil-race.co.uk/downloads/.

Murcia, M.C. (2001). Teaching English as a second language (3rd ed). United States: Heinle & Heinle Thomson Learning.

Oshima, A., & Hogue, A. (1997). Introduction to Academic Writing. Addison Wesley: Longman.

Pandero, E. & Lipnevich, A. A. (2022). A review of feedback models and typologies: Towards an integrative model of feedback elements. Educational Research Review 35, 1-18.

Petty, G. (2004). A practical guide: teaching today (3rd ed.). Cheltenham: Nelson Thornes.

Scarino, A., & Liddicoat, A.J. (2009). Teaching and learning languages: a guide. Australia: Commonwealth Australia.

Schachter, J. (1991). Corrective feedback in historical perspective: journal of second language research. Retrieved from https://doi.org/10.1177/026765839100700202

Shute, V.J. (2008). Focus on formative feedback. Review of educational research, 78(1), 153 - 189.

Shirazi, M.A., & Shekarib, Z. (2014). The role of written corrective feedback in enhancing linguistic accuracy of Iranian Japanese students' writing. Iranian Journal of Language Teaching Research, 2(1), 99 – 118.

Silver, R. & Lee, S. (2007). What does it take to make a change? Teacher feedback and students' revisions. English Teaching: Practice and technique, 6 (1) 25 – 49.

Spiller, D. (2009). Assessment: feedback to promote learning. Waikato: University of Waikato.

Timperley (2007). The power of feedback. Review of educational research, 77 (1), 81-112.

Thorndike, E. L. (1931). Human learning. The Century Co. https://doi.org/10.1037/11243-000

Ur, P. (1996). A course in language teaching: theory and practice. Cambridge: Cambridge University Press.

Yuyun, I., Meyling, M., Laksana, N., & Abenedgo, D. (2018). A Study of English Proficiency Test among the First Year University Students. Journal of Language and Literature. 18 (1), 1-6.

Linking of MSCE and GCE '0' level mathematics paper

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Abstract

Several examination agencies, higher learning institutions, employers, policymakers, media houses and the public at large, make high-stakes decisions based on test scores. These test scores are obtained from different tests that are taken as comparable even though they are administered in different years, with different conditions and to different examinees. However, these scores are not equated or statistically linked to account for the differences in terms of difficulty, which leads to inappropriate interpretations of students' performance. This paper illustrates this scenario by using the Malawi School Certificate of Education (MSCE) and General Certificate of Education Ordinary Level (GCE 'O' Level), which are used in the Malawian educational system. The study used a single group with a counterbalanced design to link MSCE and GCE 'O' Level Mathematics Paper 1. The findings reveal that (1) GCE 'O' Level Mathematics is more difficult than MSCE (2) and as such, there is a lack of fairness in considering the two examinations as comparable and (3) classification of students into grade categories only becomes comparable after linking, but not different before linking. Therefore, the study suggests that linking is very important in Malawi's situation and in similar situations to promote fairness in high-stakes decisions.

Keywords: Comparability, linking, fairness, equivalent, high-stakes, interpretations

Introduction

Scores are the end product of assessment and they have an impact on decisions such as admissions, placement, diagnosis and employment. These decisions may affect individuals and institutions. Sometimes, scores' properties are misunderstood, taken for granted, ignored or presumed to be something they are not. For example, scores from different assessments are often treated as if they are interchangeable, even when they are not (Millman & Greene, 1989; Azeem, Gondal & Faisol, 2014). These comparisons should not be done casually unless there are statistical procedures, such as linking or equating to adjust scores on different tests or test forms (Angoff, 1971; Kolen & Brennan, 1995; Albany, 2006). Linking is the practice of pairing or matching scores on two test forms with no strong claim that the paired scores have the same substantive meaning. Equating is the process used to adjust scores on equivalent test forms. Equating is essential for tests that are used to make high-stake decisions, and continually produce new editions with the expectation that scores from these editions have the same meaning over time (Dorans, Moses & Eignor, 2010).

In Malawi, comparisons within and across examinations are always made. For example, applicants use either MSCE or GCE 'O' Level certificates to seek admission into universities

and employment. The Malawi National Examinations Board (MANEB) recommends the equivalence of MSCE grades to those of the IGSCE and GCE 'O' levels. They assume that a pass in grades 1 to 6 on MSCE is equivalent to a pass at GCE 'O' Level (Kadzanja, 2004). This assumption is summarised in Table 1 below.

Table 1
Equivalence of grades on MSCE, IGSCE and GCE O- Level

MSCE	IGSCE	GCE 'O' LEVEL
1 & 2	A	A
3 & 4	B	B
5 & 6	C	C
7	D	D
8	E	E
9	F	F

Even though MANEB, institutions of higher learning and employers in Malawi use MSCE and GCE 'O' levels as equivalents as indicated in table 1 above, there is no empirical evidence to support the same. Let alone, there have not been any studies in Malawi or beyond to justify the use of those test scores interchangeably. Therefore, there is a gap in knowledge about the equivalence of these tests. Without a study such as the current one, according to Popham (2003), such interpretations are unwarranted. In addition, these comparisons could be confusing as they are psychometrically indefensible and erroneous. It is, therefore, important to ensure valid and reliable score comparability between such tests (Dorans, 2008).

This study aims at justifying score comparability between MSCE and GCE 'O' Level statistically by linking Mathematics paper 1. The objectives of the study are (1) to assess the difficulty indices for MSCE and GCE 'O' Level, (2) to determine the amount of information provided by the two tests (3) to link MSCE to GCE 'O' Level statistically and (4) to show the effects of using MSCE and GCE 'O' Level on students' classification. Thus the study is relevant in informing practice related to the use of and reliance upon test linking before coming up with generalizations to test scores. The significance is underscored by the high-stakes decisions at student, school and state levels based on the precision of tests utilizing similar linking methods.

Literature review

High-stakes tests are important for a decision about students and evaluate teachers who taught the students (Popham, 2003). The decisions made from such tests are selection, placement and certification. Therefore, these tests need a lot of precision such as rewarding or penalising students and teachers. Such tests have to be reliable and valid (Mughogho, 2013). MSCE and GCE 'O Level are good examples of high-stakes examinations and are administered each year to different learners every year and as such, they are supposed to be similar across the years even though they might be different in content. This notion of similarity is known as comparability. One definition of comparability is the interchangeability of scores whereby scores obtained from different tests are used in the same way (DePascale, Dadey & Lyons, 2016; Bennet, 2003; Winter, 2010; Way, Davis, Keng & Strain-Seymour, 2016).

Winter (2010) notes that comparability requires that a test and its variations must measure the same set of knowledge and skills at the same level of content-related complexity. Tests should produce scores at the desired level of specificity that reflects the same degree of achievement on those constructs and the scores should have similar technical properties such as reliability, decision consistency and sub-score. Comparability can be defined along two interrelated dimensions: content comparability such as the assessed content and score comparability such as an achievement level or scale score (Winter, 2010). Therefore, tests cannot be said to be similar or equivalent unless they produce scores that have similar statistical properties. Thus, to justify the equivalence of MSCE and GCE 'O' Level, there should be statistical procedures accompanying their scores that show similar specifications.

Linking ensures comparability of scores. A score from one test is compared to a score of another test such that the scores can be used interchangeably. The product of a linking analysis is a set of equations or a table that allows the user to convert a student's score on one test to a score on another test that the student did not take (Dorans, Moses, & Eignor, 2010). Different ways to perform linking are equating, linking tests in transition, concordance, vertical scaling, calibration, projection, and moderation (Linn, 1993; Dorans, 2000; Holland & Dorans, 2006; Dorans & Walker, 2007; Dorans, Moses, & Eignor, 2010). Linking is an umbrella term that encompasses the term equating and other linking methods. Dorans et al., (2007) summarise these linking methods into three basic categories: predicting, scale aligning, and equating. However, equating is at the pinnacle because its goal is to produce interchangeable scores. Equating is the statistical process that is used to adjust scores on different test forms so that scores on the forms can be used interchangeably (Kolen & Brennan,1995). This study differentiates equating from linking and prefers linking of MSCE and GCE ‘O’ Level rather than equating.

Equating is the process of establishing equivalent scores on two instruments (Crooker & Algina, 1986). The goal of equating is to eliminate the effects on scores on the unintended differences in test form difficulty. The purpose of equating is to ensure the student's test scores have the same meaning relative to the construct being measured regardless of which form of a particular test is administered to a student (Kolen & Brennan, 2004). After the equating process, a test score could accurately reflect the examinee's true ability and could determine if he or she is fairly authorized to be engaged in an occupation or is honestly accepted into an educational institution. Therefore, equating ensures that examinees are treated fairly by adjusting for differences in the test difficulty of different test editions to produce interchangeable scores (Von Davier, Holland & Thayer, 2003; Kolen & Brennan 2004; Bari, 2013). However, equating does not adjust for differences in content (Chen & Holland, 2009). Equating is based on a set of properties which include the same specifications property, the equity property, observed score equating property and the group invariance property (Kolen & Brennan, 2004). For example, only tests that measure the same construct can be equated. A mathematics test cannot be equated to a reading test. Likewise, height cannot be equated to weight. A short test that produces poorly replicated scores cannot be equated to a long test that produces very stable scores. Even reading tests from different test publishers cannot be equated to each other unless they are built essentially to the same specifications and targeted for

basically the same populations (Andrea, 2012). According to literature, not all **linkings** are **equating**. Looking at the properties of equating MSCE cannot be equated to GCE 'O' Level because they are examinations published by different publishers but the two tests can be linked using other methods.

Since equating has a strong connotation among the linking processes, it can be considered vague, irrelevant, impractical, trivial or hopelessly stringent if it is applied to different tests. Kolen & Brennan (2004) calls for the effort to try to meet the equating assumptions before an equating is to be done. MSCE and GCE 'O' Level are not parallel test forms, as such, they cannot meet these assumptions as they cannot be equated. However, Dorans & Hollands (2000) argue that even if the equating assumptions are violated, equating can be still carried out. For example, there have been practical situations of equating tests with high but different reliabilities with no evidence of problems but this process is known as linking and not equating (ibid). Thus, the study prefers to use the term linking to refer to the functions used to connect the scores on MSCE to GCE 'O' Level rather than equating.

Since equating assumptions cannot be met, the study adopts other linking methods such as scale aligning. Scale aligning is not used to achieve comparable scores rather it transforms scores from two different tests to a common scale (Holland, 2007). Scaling is confused with equating because the statistical procedures used are alike. Scaling has been divided into five subcategories: Battery Scaling, Anchor Scaling, Vertical Scaling, Calibration and Concordance. Firstly, Battery scaling takes place when two tests that measure different constructs are administered to the same group. The scores on the two tests in battery scaling are transformed to a scale to give comparable scores. Battery scaling is useful for comparing the strengths and weaknesses of examinees that are similar to those in the reference population (Holland, 2007). However, the battery scaling will not be applicable for examinees that are outside the population. MSCE and GCE 'O' Level cannot be linked using Battery scaling because the people who write the two examinations are different. Secondly, anchor scaling takes place where two tests measuring different constructs are administered to different populations of examinees. According to Holland (2007), this is an approximation of battery scaling because anchor scaling uses different populations whilst battery scaling uses the same population. Anchor scaling might be considered weaker but the use of anchor measure in both constructs helps achieve some accuracy and helps to provide strength to the linking. Anchor scaling is divided into two: scaling on a hypothetical population, which is similar to projection, and scaling to the anchor, whereby linking functions are used to put each of the tests onto the scale of anchor measure (Holland, 2007). At least anchor scaling can be used to link the two examinations such as MSCE and GCE 'O' Level since these are two tests measuring different constructs and are administered to different populations. However, this type of linking requires that both populations of examinees who take the tests are available. Thirdly, vertical scaling refers to the scale aligning which involves the linking of tests of similar constructs and similar reliability. An example of vertical scaling may be to link PSLCE[1]Next is calibration. This

[1] and MSCE. Primary School Leaving Certificate (PSLC) and MSCE are the examinations that are written in Malawi when a pupil is graduating from primary school (Standard 8) and secondary school (Form 4) respectively.

occurs when the tests being linked measure the same construct have different reliability and are administered to the same population of examinees. Calibration is used when linking tests of the same framework but built on different test specifications. Sources of different reliability of the tests may include tests of different lengths. These tests may share the same content but may have different statistical specifications and different content specifications. In operation, the alignment of the scores to a scale will not increase the reliability of the short test. Finally, Concordance refers to the scale aligning of tests that measure similar constructs, have the same difficulty, and have similar reliability. Concordance is similar to equating but the difference is that concordance links tests that are built to different specifications and Concordances were not created with the idea of using their scores interchangeably (Dorans & Walker, 2007). Apart from that, the tests linked using concordance may have different uses. However, Concordances are expected to be sensitive to the choice of the population (Dorans & Walker, 2007). Dorans (2004), asserts that a convenience sample in concordance is likely to be examinees that have taken both tests (a single group design). Some factors to consider are the amount of time that occurs between the two tests, the order of administration of the two tests, and repeat testing on either test. In an equating with a single group design, these factors can be controlled in advance while in concordance, these factors are not typically controlled in advance (Kolen, 2007). Thus, a concordance sample should be carefully screened so that the concordance results are not distorted by practice effects or learning that might occur between the administration of the two tests. This study, therefore, has been guided by literature in such a way that has grasped linking as its main aspect of findings and not equating.

There are several techniques and methodologies used in equating and linking test forms. These techniques and methodologies are derived from the two major testing theories: Classical Test Theory (CTT) and Item Response Theory (IRT) (Mohandas, 1996). The study has employed both theories. CTT is the traditional approach to measurement. It assumes that a test taker has an observed score **(X)** and a true score **(T).** The observed score **(X)** is estimated as a true score **(T)** plus or minus some unobservable measurement error **(E)** (Crooker & Algina, 1986).

The major components of CTT are linear equating and "equipercentile" equating. In linear equating, scores on two tests are equivalent if they correspond to equal standard-score deviates. Linear equating reflects the ability level of the students and the spread of scores onto the reference scale scores (Angoff, 1971; Beard & Pettie, 1979). It is used when two test forms are equally reliable and parallel. In Equipercentile Equating, scores on test A and test B are considered equivalent if their respective frequency distributions for a specific population of examinees are identical (Hambleton and Swaminathan, 1985). It is used when two test forms are equally reliable and parallel measures. Both forms: Form A and Form B are measures of the same underlying trait and the percentile ranks can be considered to be equal. Thus "equipercentile" equating can be used to put two test scores, A and B, onto the same scale when they share the same percentile in equivalent groups. It is also necessary that both test A and test B measure the same ability (Huynh & Ferrara, 1994). According to literature, it is difficult to equate MSCE and GCE 'O' Level using linear equating or "equipercentile" equating because these two examinations are not parallel.

Since literature indicates that the equating of tests based on raw scores in CTT is not desirable for reasons of equity, symmetry, and invariance; Equating based on Item Response Theory (IRT) overcomes these challenges if the item response model fits the data (Kolen, 1981). One of the basic assumptions in IRT is that the latent ability of a test-taker is independent of the content of a test. The relationship between the probability of answering an item correctly and the ability of a test-taker can be modelled in different ways depending on the nature of the test (Hambleton, Swaminathan, & Rogers, 1991). According to IRT, a test-taker with high ability should have a high probability of answering an item correctly (Wiberg, 2004). IRT rests on two basic assumptions: the performance of an examinee on a test item can be predicted by a set of factors called traits, latent traits, or abilities and the relationship between the examinee's item performance and the set of traits underlying item performance can be described by a monotonically increasing function called an item characteristic function (ICF) or item characteristic curve (ICC). This function specifies that as the level of the trait increases, the probability of a correct response increases (Hambleton, Swaminathan, & Rogers, 1991; Stage, 2003). IRT is more theory grounded and models the probabilistic distribution of examinees' success at the item level. The strength of IRT over CTT is that IRT is based on the assumption that there is a mathematical function that describes the relationship between an examinee with high proficiency and the probability that an examinee will answer the item correctly (Dorans, 1990). Since MSCE and GCE 'O' Level are different examinations, they cannot be estimated using the CTT which emphasises that the tests are supposed to be parallel or equivalent. Therefore, IRT theory fits well in calibrating the MSCE and GCE 'O' levels because IRT is independent of the content of a test.

The IRT framework encompasses a group of models, and the applicability of each model in a particular situation depends on the nature of the test items and the viability of different theoretical assumptions about the test items. For test items that are dichotomously scored, there are three IRT models, known as three-, two-, and one-parameter models (Skaggs & Lissitz, 1986; Hambleton, Swaminathan, & Rogers, 1991; Fan, 1998). For polytomously scored tests, there are some models such as Graded Response Model (GRM) by Samejima (1969), Partial Credit Model (PCM), Generalised Partial Graded Model (GPCM), Rating Scale Model (RSM) and Nominal Response Model (NRM) by Bock (1972). These models have been explained by Hambleton & Swaminathan, (1985); Hambleton, Swaminathan & Rodgers, (1991); Van der Linden & Hambleton, (1997) Clauser (1998); Wright & Masters, (1982); Ostini & Nering, (2006); Stone & Zhu (2015) and Wright & Stone, (1979). This study has dwelt much on NRM polytomously scored tests of MSCE and GCE 'O' Level.

There are four equating or linking designs. Firstly, a single group design where two test forms are administered to the same group of examinees and if possible on the same day. The advantage is that the same group of people take that test twice while the disadvantage is the order of effect and fatigue. Secondly, single group design with counterbalancing where examinees are divided into two equivalent groups. The first group takes "test form A" first and later "test form B" while the other group takes "test form B" first and later "test form A". The test is supposed to be taken close enough if it is equating. This is the best design because it reduces order and effects and fatigue. Thirdly, random group design where two randomly

selected groups of equivalent ability take different forms of a test. The random samples are to be of an efficient size and are taken from the same testing population and a test written at the same time. The test, therefore, is spiralled and packed in A/BA/B order. For example, when one examinee is given "test form A", the other will be given "test form B". The advantage is that this method minimises time and avoids the effects of fatigue since examinees write examinations once. The disadvantage is where the examinees are seated systematically i.e. boy-girl, boy-girl. This design cannot work well with the current study because the test used in the study have different lengths. Finally, non-equivalent groups with Anchor-Test (NEAT). This is a design that involves the use of common items in two forms to be equated. Two test forms are given to two different groups of examinees simultaneously. The advantage is that it minimises time because the tests are administered once to examinees and enhance security and minimise leakages due to item exposure inherent. Further details on the designs refer to Hambleton & Swaminathan, (1985); Crooker & Algina, (1986); Kolen, (1988); Kolen and Brennan, (1995) and Ryan & Brockmann, (2011).

In conclusion, the literature review has looked into the issues of comparability of test scores. The emphasis is that test scores that are compared must measure the same set of knowledge and skills at the same level of content-related complexity. The literature has also highlighted the use of tests equating to compare tests that measure the same construct. The literature has guided that MSCE and GCE 'O' Level can be compared statistically through linking and not equating because MSCE and GCE 'O' Level are different and not parallel to each other. The literature suggests scale aligning where anchor scaling and concordance can link MSCE and GCE 'O' Level. However, there is still a gap in literature as none of the studies has compared such examinations administered by different bodies statistically. Not only that, the literature has guided the study in terms of CTT and IRT theories which are used in equating and linking. Both theories have guided the study such that each theory is dependent on the other in the study. Finally, the literature has guided equating design to link MSCE and GCE 'O' Level where the study is inspired by "Single Group Counterbalancing Design."

Methodology

Any research is guided by a set of beliefs to generate knowledge (Creswell, 2014). This study used a quantitative approach, which assumes that social reality is objective. The reality of whether the two sets of examinations are comparable or not was assumed to be out there waiting to be uncovered through this investigation.

Population and sampling

The study population include all candidates who write MSCE and GCE 'O' Level examinations and these were represented by 523 examinees. The study used purposive sampling to select eight schools (two national secondary schools, one district boarding secondary school, two conventional day secondary schools, one community day secondary school and two private secondary schools) that were included in the study. The schools were purposively selected to ensure the representativeness of school-type characteristics. From these schools, the sample size with a sampling error of 0.5 % and confidence level of 95 % was 523 candidates. Thorpe

and Favia (2012) recommend that when using Polytomously score IRT designs, the sample should have at least five hundred participants.

These candidates (examinees) were found at a time when they had few weeks to finish their secondary school education since they had already completed the MSCE syllabus which is also equivalent to finishing GCE 'O' Level syllabus.

Study Design

The study used a single group with counterbalanced design also known as Equivalent Group Design (Livingston, 2004; Ryan & Brockmann, 2011). A single group was used to have common examinees taking both tests. The 523 students took both tests in a counterbalanced way (Kolen & Brennan, 2014) to eliminate the order effect. Counterbalancing is alternating the arrangement and distribution of test papers to create randomly equivalent groups that take the test forms. The arrangement of papers was such that Test Form A (MSCE) was placed first then the next paper was Test B (GCE 'O' level) and the third paper was Test Form A (MSCE) again and the fourth one was Test B (GCE 'O' level) and so on. Kolen & Brennan (2014) say that the counterbalanced design minimises the problem of order effects that are encountered by a single group. In the study, eight schools were divided into two equivalent groups. In practice, this design usually produces good results even if the groups differ somewhat (Ryan & Brockmann, 2011). Kolen (2007) recommends that if other methods of linking such as concordance are used, instead of equating, this is the best design to use.

Data collection

The study used the data from the administration of 2011 MSCE and GCE 'O' Level mathematics paper 1 to 523 Form four students from eight selected schools within Zomba City. Mathematics was chosen because it is core and is taught in every school in Malawi which means that it had large samples as compared to other subjects. The GCE 'O' Level Mathematics Paper 1 had 24 questions having 80 marks, while the MSCE Mathematics paper 1 had 20 questions having 100 marks. Both papers were given 2 hours. The difference between the papers is that GCE 'O' Level mathematics paper 1 does not allow the use of calculators while MSCE paper 1 allows the use of calculators.

Both the CTT and IRT were used to analyse the data. CTT was used for descriptive statistics and the linking function. IRT of the Polytomous scored item Nominal Response Model (NRM) which was introduced by Bock (1972) was used to analyse the item parameters. CTT was used because Kolen (2007) asserted that in concordance or scale aligning IRT linking is not applicable. Thus, IRT accounts for the difficulty of each item and the ability of the examinees to answer those items correctly while CTT accounts for the linking of the forms that are deemed to be equivalent. Raw data was entered using an excel spreadsheet and then imported to SPSS where it was coded and then saved using ASCII.DAT program for easy analysis by MULTILOG 7.03 which was developed by Thissen, (1991). The data was then calibrated using the marginal maximum likelihood (MML) using MULTILOG, Thissen (1991) and it used NMR to come up with item parameters. In the NR model, the propensity to endorse option *k* of item *j* is given by the following:

$$P_{jk}(\theta) = \frac{e^{z}jk}{\sum_{x=0}^{mj} \quad e^{z}jk}$$

where$z_{jk} = a_{jk}\theta + c_{jk,a_{jk}}$ is the *option discrimination* parameter, and c_{jk} is called the *option extremity* parameter (Stone and Zhu, 2015).

Results and Discussion

The following are the results of "Linking MSCE and GCE 'O' Level Mathematics Paper 1". The data were obtained from the administration of two forms, MSCE (Form A) and GCE 'O' Level (Form B). These forms are deemed to be equivalent even though they are administered by different examination boards to different people. Form A, (MSCE), had 20 items scoring 100 marks and Form B, (GCE 'O' Level), had 24 items scoring 80 marks. The two tests had a reliability score of 0.9042 and 0.7717 respectively. Being built on different specifications, the two tests were highly correlated at 0.8 with the significance at$p < 0.05$. Firstly, the results of descriptive statics are presented followed by a discussion of the results.

The descriptive statistics for both papers were calculated using SPSS packages. Before analysis, scores from both tests were converted to a percentage so that they reflect the same value in their calculations. The t-test was carried out to test the significance of the difference between the statistics for the two examinations. The results of the descriptive statistics and their corresponding t-test are given in table 2 below.

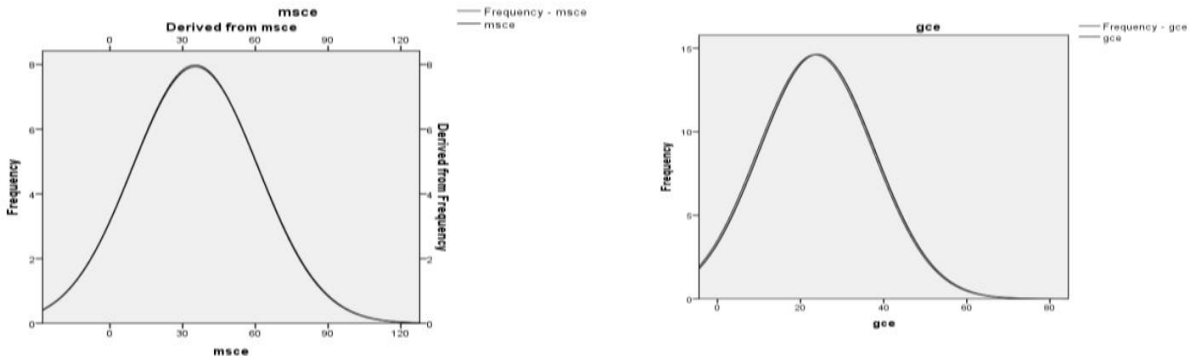
Table 2
Descriptive statistics for MSCE and GCE 'O' Level Mathematics paper1 and Dependent T-test for two forms

	MSCE (Form A)	GCE 'O' LEVEL (Form B)	r	t	df	p-value	95% CI Lower	95% CI Upper
Number of examinees	523	523						
Mean	35.14	23.52						
Std. Error of Mean	1.13	.61						
SD	25.80	13.92						
Skewness	0.52	0.72						
Kurtosis	- 0.78	0.21						
Reliability	0.90	0.77						
Correlation (MSCE and GCE 'O' Level Forms)								
T-Test (MSCE vs. GCE 'O' Level Forms)			0.8	9.39	522	.00	9.19	14.05

The results of the descriptive statistics in table 2 above show the central tendency for MSCE and GCE 'O' Level. MSCE had a mean score of 35.14 (SD = 1.13) while GCE 'O' Level had mean score 23.52 (SD = 0.61). The skewness is 0.52 for MSVE whereas the skewness for GCE 'O' level is 0.72 implying that even though both forms are positively skewed, they have differences in their statistical information. Reliabilities for the two tests are also different. MSCE tests have a reliability score of 0.90 whereas GCE 'O' level has a reliability score of 0.77. Since the groups taking the tests were equivalent, the statistics are supposed to be the same. The differences in descriptive statistics come about because of the differences in the difficulty of the tests. This finding implies that there were differences in difficulty across the two forms, which do not warrant meaningful comparisons. This means the ability levels assessed by the tests are different. In addition, the mean difference was tested using a dependent t-test to check if the difference was statistically significant. The result indicated that indeed the

difference was statistically significant ($t(522) = 9.389,\ p = .000 < 0.05$) at 0.05 level of significance. Graphically the results are as shown in figure 1 below.

Figure 1: The graph showing the distribution of the MSCE and GCE 'O' Level test scores



The graphs show that MSCE scores are slightly skewed but GCE 'O' level scores are highly positively skewed indicating that although the tests were administered to equivalent groups, the latter is a more difficult exam than the former.

In discussion, the study aimed to find out if MSCE and GCE 'O' levels have similar difficulty indices. The results that have been observed indicate that the two examinations have different levels of difficulty and hence they are not equivalent. According to Winter (2010), responses on the tests then do not reflect the same level of achievement on the construct. Therefore, the fact that these two examinations are not equivalent is an indication that the two tests are not comparable. Any comparison made between the two tests is meaningless and should be avoided.

Amount of information

The information function for each test was generated to evaluate how well the tests differentiate examinees.

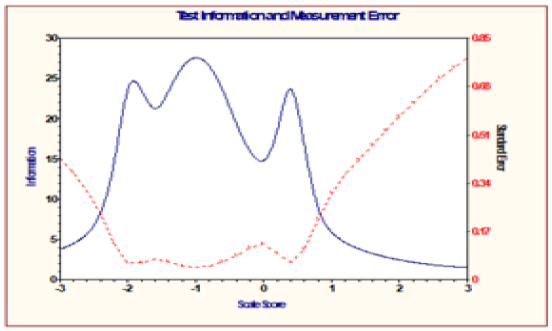


Figure 2
Total information on MSCE item parameters

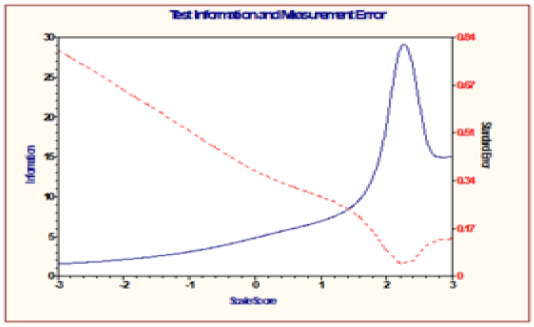


Figure 3
Total information on GCE 'O' Level

According to the graphs, both examinations provide enough total information regarding students' abilities. MSCE provides information amounting to 27 whereas GCE 'O' level

provides information amounting to 28. Conventionally, a good test is required to provide over 20 maximum information about examinees. The graphs imply that both tests provide enough information regarding students' abilities. However, the graphs also reveal that the abilities assessed by MSCE and GCE 'O' Level examinations are different. Specifically, the range of abilities assessed by the MSCE mathematics exam and GCE 'O' Level mathematics exam are different. MSCE provides limited information for high ability examinees, and more information for limited ability examinees whereas GCE 'O' Level examination provides a lot of information for high ability examinees, but limited information for low ability examinees. In conclusion, therefore, these two examinations assess examinees of a different range of abilities and are not equivalent. They differentiate examinees differently.

More importantly, they have different reliabilities such that they cannot be equated (Holland, 2007). Equating is expected to satisfy all the five conditions of equal construct, equal reliability, equity, population invariance and symmetry (Kolen and Brennan, 2014). Since it has different reliabilities, the process will be called linking instead of equating.

Linking results for MSCE and GCE 'O' Level

The study has indicated that MSCE and GCE 'O' Level are different examinations. To make them comparable, linking should take place and that would maintain fairness to test takers. Kolen and Brennan (2014) argue that "Linear linking corrects for the differences in difficulty between the two test forms. The linear linking function is represented by:

Table 10 below shows results for the raw-to-raw score conversion of MSCE to GCE 'O' Level by a linear linking method. The first column in Table 10 contains the raw scores from MSCE and the second column contains the equivalent scores from GCE 'O' Level equivalent after linking. From the table, a person who scores 1 on MSCE is equivalent to a person scoring 5 on GCE 'O' Level. From score number 1 on MSCE to score number 8, MSCE was a harder form while from score number 10, GCE 'O' Level became harder. That means, if a person gets a 100% in MSCE it is equivalent to a 58% in GCE 'O' Level.

Table 10
Raw-to-raw conversion of MSCE (Form A) and GCE O level (Form B)

Converted scores as percentages			
ı A scores	Form B equivalent Scores	Form A scores	Form B equivalent Score
1	5.10009302	51	32.06753452
2	5.63944185	52	32.60688335
3	6.17879068	53	33.14623218
4	6.71813951	54	33.68558101
5	7.25748834	55	34.22492984
6	7.79683717	56	34.76427867
7	8.336186	57	35.3036275
8	8.87553483	58	35.84297633
9	9.41488366	59	36.38232516
10	9.95423249	60	36.92167399
11	10.49358132	61	37.46102282
12	11.03293015	62	38.00037165
13	11.57227898	63	38.53972048
14	12.11162781	64	39.07906931
15	12.65097664	65	39.61841814
16	13.19032547	66	40.15776697
17	13.7296743	67	40.6971158
18	14.26902313	68	41.23646463
19	14.80837196	69	41.77581346
20	15.34772079	70	42.31516229
21	15.88706962	71	42.85451112
22	16.42641845	72	43.39385995
23	16.96576728	73	43.93320878
24	17.50511611	74	44.47255761
25	18.04446494	75	45.01190644
26	18.58381377	76	45.55125527
27	19.1231626	77	46.0906041
28	15.10176724	78	46.62995293
29	20.20186026	79	47.16930176
30	20.74120909	80	47.70865059
31	21.28055792	81	48.24799942
32	21.81990675	82	48.78734825
33	22.35925558	83	49.32669708
34	22.89860441	84	49.86604591
35	23.43795324	85	50.40539474
36	23.97730207	86	50.94474357
37	24.5166509	87	51.4840924
38	25.05599973	88	52.02344123
39	25.59534856	89	52.56279006
40	26.13469739	90	53.10213889
41	26.67404622	91	53.64148772
42	27.21339505	92	54.18083655
43	27.75274388	93	54.72018538
44	28.29209271	94	55.25953421
45	28.83144154	95	55.79888304
46	29.37079037	96	56.33823187
47	29.9101392	97	56.8775807
48	30.44948803	98	57.41692953
49	30.98883686	99	57.95627836
50	31.52818569	100	58.49562719

Table 10 above is the desired conversion table that can be used to convert MSCE mathematics scores to GCE 'O' level mathematics scores. One distinguishing characteristic of converted (and equated) scores is that the relationship between the two scores is symmetric. If a 25 on

MSCE mathematics corresponds to an 18 on GCE 'O' level mathematics, then an 18 on GCE 'O' level mathematics corresponds to a 25 on MSCE mathematics. This symmetry does not mean that a 25 and an 18 can be used interchangeably as measures of the same construct. Instead, they can be thought of as occupying the same location in a rank ordering of scores in some group of people.

Effects of using MSCE and GCE 'O' Level on students' classification

Fairness is the key element that can be demonstrated by the effects of using MSCE and GCE 'O' Level on students' classification. In testing and measurement, the key elements of fairness are objectivity and validity of scores provided by the applied instruments (tests or other measures) and the consequences of the instruments use (Camilli, 2006; AERA et al., 2014; Dorans & Cook, 2016). According to Kane (2010), there are two types of fairness. First is procedural fairness which focuses on how test takers are treated, that is the same tests or equivalent is given to anyone. The second one is substantive fairness which focuses on how well testing programs function for different groups of test takers. In this study, the interest was in substantive fairness.

The study observed the effects of using MSCE and GCE 'O' Level on students' classification based on substantive fairness. The issue of fairness to test takers can be observed in the classification of students into pass-fail categories.

Table 12: Classifications of Students into Pass-Fail Categories

Table 12
Pass Rate and Classification of Candidates into Different Grade Boundaries Before and After Linking

	Scores Before Linking				Scores After Linking			
Grade/Form	**Cuts**	**N**	**%**	**Absolute Difference (%)**	**Cuts**	**N**	**%**	**Absolute Difference (%)**
A (1 & 2)								
MSCE	**70**	67	12.81	12.31	**70**	67	12.81	1.73
GCE 'O' Level	**70**	3	0.50		**70**	58	11.08	
B (3 & 4)								
MSCE	**55**	61	11.66	9.37	**55**	61	11.66	0.77
GCE 'O' Level	**55**	12	2.29		**55**	57	10.89	
C (5 & 6)								
MSCE	**33**	125	23.90	1.15	**33**	125	23.90	5.55
GCE 'O' Level	**33**	119	22.75		**33**	154	29.45	
D (7 & 8)								
MSCE	**20**	81	15.49	13.96	**20**	81	15.49	4.97
GCE 'O' Level	**20**	154	29.45		**20**	107	20.46	
F (9)								
MSCE	**0**	189	36.14	8.79	**0**	189	36.14	5.93
GCE 'O' Level	**0**	235	44.93		**0**	158	30.21	

Table 12 represents the classification of the students into pass-fail categories using the cross-tabulation of the actual scores obtained from the MSCE and GCE 'O' Level Mathematics Paper 1 before linking and later comparing them with the scores obtained after linking.

From table 12 above, before linking the pass rate on MSCE was 63.96% whereas the pass rate on the GCE 'O' Level was 54.99% which represents a difference of 8.97% having those who wrote GCE 'O' Level being on the lower side. After linking the two papers things turned around showing that the pass rate of MSCE was at 63.96% while the pass rate for GCE 'O' Level was 71.88% indicating a difference of 7.92 with GCE 'O' Level having a higher pass rate than

MSCE. This implies that there were about 77 students (False negatives) who wrote GCE 'O' Level test form would have passed, but they failed the test simply because there was no linking and that is unfair. Therefore, linking test scores is important to promote fairness among test takers.

Linking affects the classification of students. It helps to reduce false negatives, which is a test result which wrongly indicates that a condition does not hold. MSCE and GCE 'O' Level Mathematics Paper 1 examinations being high-stakes educational tests, false negatives should be avoided where possible. In this study, linking such tests has proved to be important in promoting fairness and reducing these false negative errors.

Conclusions and recommendations

The study aimed at linking MSCE and GCE 'O' Level Mathematics Paper 1 to justify their score Comparability. The study used the single group counterbalancing methods or equivalent group design. The data was collected from 523 candidates who were about to write MSCE examinations, Both CTT and IRT procedures were used for data analysis. Then the study linked the two tests using the linear linking formula. Substantive fairness was analysed by tabulating examinees in the pass-fail classification decisions. The results proved that MSCE and GCE 'O' levels are different in terms of difficulty and reliability. Thus, judging examinees based on these two examinations is unfair because those writing MSCE have an advantage over those who write GCE 'O' Level. They both provide enough information about students' abilities, although covering different ranges of skills. The study recommends that to promote fairness to test takers, those using MSCE and GCE 'O' Level examinations results should consider linking the scores before classification for meaningful comparisons. Chulu & Sireci (2011) recommended that MANEB should be equating its examinations and this study has revealed that equating and linking is essential in testing programmes.

References

Albany. (2006). *Summary of New York State Test Equating Procedures: 2002-2005.* The State Education Department. The University of State New York.

American Educational Research Association, American Psychological Association, National. (2014). *Standards for education and psychology.* Washington, DC: AERA.

Andrea, S. (2012). *Programme for International Student Assessment (PISA).* The United Kingdom.

Angoff, W. (1971). Scales, Norms and Equivalent Scores. In R. L. Thorndike (Ed.), *Educational Measurement* (pp. 508 – 600). Washington DC: American Council on Education.

Angoff, W. H. (1984). *Scales, Norms and Equivalent Scores.* Princeton NJ: Education Testing Service.

Azeem, M. G. (2014). Achievement vs. Proficiency: Construction of Math Proficiency Assessment Using Item Response Theory. *Middle East Journal of Scientific Research, 19*(2), 258-267.

Bari, M. A. (2013). *The Impact of Anchor Item Exposure on Mean/Sigma Linking and IRT True Score Equating Under the Neat Design*. Department of Psychology and Research in Education, School of Education, and the Faculty of the Graduate School of the University of Kansas.

Beard, J. G., & Pettie, A. L. (1979). *A Comparison of Linear and Rasch Equating Methods Basic Skills Assessment tests.* A paper presented at the American Educational Research Association, San Francisco.

Bennett, R. (2003). Online assessment and the comparability of score meaning. In *Educational Testing Service.* (ETS-RM-03-05). Princeton, NJ.

Bock, R. D. (1972). Estimating item parameters and latent ability when responses are scored in two or more nominal categories. *Psychometrika, 37*, pp. 29-51.

Camilli, G. (2006). Test Fairness. In R. L. Brennan (Ed.), *Educational Measurement* (pp. 221-256). Westport, CT: American Council on Education/Praeger.

Chen, H., & Holland, P. (2009). *Construction of chained true score equipercentile equatings under the KE framework and their relationship to Levine true score equating.* Research Report No. RR-09-24. Princeton, NJ: Educational Testing Service.

Chulu B. W., & Sireci, S. G. (2011). Importance of Equating High-Stake Educational Measurements. *International Journal of Testing, 11*, 38-51.

Clauser, B. (1998). *Equating performance assessment with the Rasch rating-scale model using international and external links.* Paper presentation, annual meeting of the American Educational Research Association.

Cook, L. L., & Eignor, D. R. (1991). An NCMF instructional module on IRT equating methods. In *Educational Measurement: Issues and Practice* (Vol. 10, pp. 37-45.).

Crooker, L., & Algina, J. (1986). *Introduction to classical and modern test theory.* Mason, OH.

De Ayala, R. J. (1992). *The Nominal Response Model in Computerized Adaptive Testing.* Paper presented at the Annual Meeting of the National Council on Measurement in Education, San Francisco.

DePascale, C., Dadey, N., & Lyons, S. (2016). *Score Comparability across Computerized Assessment Delivery Devices: Defining comparability, reviewing the literature, and providing recommendations for states when submitting to Title 1 Peer Review.* Report commissioned by the Council of Chief State School Officers (CCSSO) Technical Issues in Large-Scale Assessment (TILSA) State Collaborative on Assessment and Student Standards (SCASS).

Dorans, N. J. (1990). Equating methods and sampling designs. *Applied Measurement in Education, 3*(1), pp. 3-17.

Dorans, N. J. (2000). *Distinctions among classes of linkages.* (College Board Research Note [RN-11]). New York: The College Board.

Dorans, N. J. (2008). The Practice of Comparing Scores on Different Tests. In *R&D Connections No. 6.*

Dorans, N. J., & Cook, L. L. (2016). *Fairness in Educational Assessment and Measurement.* Routledge.

Dorans, N. J., & Holland, P. W. (2000). Population invariance and the equitability of tests: Basic theory and the linear case. *Journal of Educational Measurement, 37*, 281-306.

Dorans, N. J., & Walker, M. E. (2007). Sizing up Linkages. In N. J. Dorans, M. Pommerich, & P. W. Holland (Eds.), *Linking and aligning scores and scales.* New York: Springer.

Dorans, N. J., Moses, T. P., & Eignor, D. R. (2010). *Principles and Practices of Test Score Equating.* Princeton, New Jersey: ETS RR-10-29 Educational Testing Service.

Fan, X. (1998). Item response theory and classical test theory: an empirical comparison of their item/person statistics. *Educational and Psychological Measurement, 58*(3), p. 357(25).

Hamberton , R. K., Swaminathan, H., & Rogers, J. H. (1991). *Fundamentals of item response theory.* New York: Sage publications.

Hambleton, R. K., & Swaminathan, H. (1985). *Item response theory: Principles and Applications.* Boston, MA: Kluwer-Nijhoff.

Harris, D. I. (1991a). *Equating with non-representative common item sets and non-equivalent groups.* Paper presented at the annual meeting of the American Educational Research Association, Chicago.

Heh, V. K. (2007). *Equating Accuracy Using Small Samples in the Random Groups Design.* Ohio: University of Ohio.

Holland, P. W. (2007). A framework and history for score linking. In N. J. Dorans, M. Pommerich, & P. W. Holland (Eds.), *Linking and aligning score and scales* (pp. 5 – 30).

Hollands, P. W., & Dorans, N. J. (2006). Linking and Equating. In R. L. Brennan (Ed.), *Educational Measurement* (4 ed., pp. 187-220). Westport, CT: Greenwood.

Huynh, H., & Ferrara, S. (1994). A comparison of equal percentile and partial credit Equatings for performance-based assessments composed of free-response items. *Journal of Educational Measurement, 31*, 125-141.

Kadzanja, M. H. (2004). *Education System of Malawi.* . Retrieved August 4, 2016, from Embassy of the United States. Lilongwe Malawi: Lilongwe.usembassy.gov/advising_service6.

Kane, M. (2010). Validity and Fairness. *SAGE Journals*.

Keller, R. R., Kim, W., Nerring, M., & Keller, L. K. (2007). *What Breaks the Equating? A Preliminary Investigation into threats to a five-year equating chain.*

Kolen, M. J. (1981). Comparison of traditional and item response theory methods for equating tests. *Journal of educational measurement, 1a*, 1-10.

Kolen, M. J. (1988). Traditional Equating Methodology. *Education Measurement Issue and Practice, 7*(4), 29-37.

Kolen, M. J. (2007). Data collection designs and linking procedures. In N. J. Dorans, M. Pommerich, & P. W. Holland, *Linking and aligning score and scales* (pp. 31 – 55).

Kolen, M. J., & Brennan, R. L. (1995). *Test Equating: Methods and Practices.* New York: Springer-Verlag.

Kolen, M. J., & Brennan, R. L. (2004). *Test equating, linking, and scaling: Methods and practices* (2 ed.). New York: Springer-Verlag.

Kolen, M. J., & Brennan, R. L. (2014). *Test equating, linking, and scaling: Methods and practices.* New York, NY: Springer-Verlag.

Linn, R. L. (1993). Linking Results of Distinct Assessments. *Applied Measurement in Education, 6*, pp. 83-102.

Livingston, S. A. (2004). *Equating Test Scores (without IRT).* Princeton, NJ: ETS.

Lord, F. M. (1977). Practical applications of item characteristic curve theory. *Journal of educational measurement, 14*, 117-138.

Lord, F. M. (1980). *Applications of item response theory to practical testing problems.* Hillsdale, N.J: Lawrence Erlbaum Associates, Inc.

Lyrén, P. E. (2009). *A Perfect Score: Validity Argument for College Admission Tests.* PhD Thesis, University of Umeá.

Millman, J. &. (1989). The specification and development of tests of achievement and ability. In R. L. Linn (Ed.), *Educational Measurement* (3 ed., pp. 335-366). New York: American Council on Education and Macmillan.

Mislevy, R. J. (1992). *Linking educational assessments: Concepts, issues, methods, and prospects (policy information Rep.).* Princeton NJ: ETS.

Mohandas, R. (1996). *Test equating, problems and solutions: Equating English test forms for the Indonesian junior secondary school final examination administered in 1994.* Unpublished doctoral dissertation, Flinders University of South Australia.

Mughogho, K. K. (2013). *Estimating Equating Accuracy on 2007 and 2009 MSCE English paper I Examination Based on Anchor Test Length.* University of Malawi, Chancellor College.

Ostin, R., & Nerring, M. L. (2006). *Polytomous item response theory models.* Thousand Oaks, CA: Sage Publications, Inc.

Petersen, N. S., Kolen, M. J., & Hover, H. D. (1989). Scaling, Norming, and Equating. In R. L. Linn (Ed.), *Educational Measurement* (3 ed., pp. 221-262). New York: American Council on Education and Macmillan.

Popham, W. J. (2003). *Spotlight on High-Stakes Testing.* Harvard Education Press.

Ryan, J., & Brockmann, F. (2011). *A Practitioner's Introduction to Equating: with Primers on Classical Test Theory and Item Response Theory.* Centre Point Assessment Solutions One Massachusetts Avenue, NW, Suite 700 Washington, DC 20001-1431.

Samejima, F. (1969). Estimation of latent ability using a response pattern of graded scores. *Psychometrika*.

Sireci, S. (2005). Unlabelling the disabled: A perspective on flagging scores from accommodated test administrations. *Educational researcher, 34*(1), pp. 3-12.

Skaggs, G., & Lissitz, R. W. (1986). An Exploration of the Robustness of Four Test Equating Models. *Applied Psychological Measurement, 10*, 303-317.

Stage, C. (2003). *Classical Test Theory or Item Response Theory: The Swedish Experience.* Santiago, Chile: EM No 42, 2003 Centro de EstudiosPúblicos.

Stone, C. A., & Zhu, X. (2015). *Bayesian Analysis of Item Response Theory Models Using SAS.* Cary, NC: SAS Institute Inc.

Thissen, D. (1991). *MULTILOG: Multiple, categorical item analysis and test scoring using item response theory (Version 6.0) [Computer program]*. Chicago: Scientific Software.

Van der Linden, W. J., & Hambleton, R. K. (Eds.). (1997). *Handbook of modern item response theory.* New York: Springer.

von Davier, A. A., Holland, P. W., & Thayer, D. T. (2003). Population invariance and chain versus post-stratification equating methods. In N. J. Dorans (Ed.), *Population invariance of score linking: Theory and applications to Advanced Placement Program Examinations.*

Way, W. D., Davis, L. L., Keng, L., & Strain-Seymour, E. (2016). From standardization to personalization: The comparability of scores based on different testing conditions, modes, and devices. In F. Drasgow (Ed.), *Technology in testing: Improving educational and psychological measurement* (Vol. 2). Abingdon, UK: Routledge.

Wiberg, M. (2004). *Classical Test Theory vs. Item Response Theory an Evaluation of the Theory Test in The Swedish Driving-License Test.* EM No 50, 2004 ISSN 1103-2685 University of Umeá.

Winter, P. (2010). Comparability and test variations. In P. Winter (Ed.), *Evaluating the comparability of scores from achievement test variations* (pp. 1-11). Washington, DC: Council of Chief State School Officers.

Wright, B. D., & Masters, G. N. (1982). *Rating Scale Analysis.* Chicago MESA Press.

Wright, B. D., & Stone, M. H. (1979). *Best Test Design.* Chicago MESA Press University of Chicago.

Work Place Experiences of Graduates with Disabilities: A Case of One of the Colleges in Malawi

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Abstract

This paper explores the workplace experiences of graduates with disabilities. Qualitative methodology was used. Semi-structured interview guides were used to collect data. The sample comprised seven graduates with disabilities. Data were analysed thematically. The findings revealed that graduates with disabilities experienced barriers to participation and did not fully enjoy their employment rights. Their coping strategies include perseverance, the use of their money to buy assistive materials and conducting awareness training on disability issues. The paper concludes that graduates with disabilities continue to face barriers at their workplaces. Inclusive workplace guidelines must be enforced to create a supportive environment.

Keywords: College, workplace, experiences, graduates, disabilities

Introduction and Background

There has been much focus on non-discrimination enforcement in workplaces and rights for people with disabilities (Halvorsen & Hvinden, 2011). People with disabilities and their inclusion in all social activities including education and employment are major features of government policies in every country (Ministry of Health and Care Services, 2013) including Malawi. This is in line with the UN Standard Rules and Equalisation of Opportunities for Persons with Disabilities – UNSREOPD (UN, 1993) which encourages the States to recognize the principle of equal primary, secondary and tertiary educational opportunities for children, youths and adults with disabilities, in integrated settings. Concerning employment, UNSREOPD encourages the States to recognize "the principle that persons with disabilities must be empowered to exercise their human rights, particularly in the field of employment. In both rural and urban areas, they must have equal opportunities for productive and gainful employment in the labour market."

Malawi is a signatory to international standards and frameworks and in response to such standards and frameworks; Malawi has legislations and policies that advocate for inclusion and inclusive education. For example, legislation such as the Constitution of Malawi, Education Act (GoM, 2013), Disability Act among others and the National Policy on Equalisation of Opportunities for Persons with Disabilities-NPEOPD (Ministry of Persons with Disabilities and the Elderly, 2006) and National Special Needs Education Policy Guidelines (MoEST, 2009). Concerning education, Rule 6 of the UNSREOPD 7 stipulates that in both rural and urban areas, they must have equal opportunities for productive and gainful employment in the

labour market. Furthermore, laws and regulations in the employment field must not discriminate against persons with disabilities and must not raise obstacles to their employment.

The Inclusive Education Policy, awareness campaign on disability issues and change of attitudes of people without disabilities towards people with disabilities, for example, has led to positive outcomes in academic achievement among people with disabilities such that over the past few years, there has been an increased in the number of students with disabilities obtaining their diplomas and degrees from different colleges and universities in Malawi such as the University of Malawi and Domasi College of Education. In these institutions, most students with disabilities pursue programmes such as Bachelor of Arts Humanities, Bachelor of Education and Bachelor of Political and Administrative Studies.

In terms of employment, about 62% of people with disabilities are in employment (NSO, 2010) with the majority of them in informal employment such as farming while some are in self-employment like tailoring and tin smithing. On the other hand, the National Statistics Office (2018-2019) found that 77. 4% of people with disabilities are in formal employment and the majority of them are engaged in piece work locally known as *ganyu.* This percentage suggests that a good number of people with disabilities are in employment.

As it will be explored in the literature, there is a range of research into the attitudes of employers and co-workers towards employees with disabilities. While such research provides insight into the way people respond to people with disabilities, there has been little detailed investigation of the workplace experiences of Malawian graduates with disabilities. The aim of this qualitative study, therefore, was to address this gap, specifically by seeking to gain insight into the workplace experiences of employees with disabilities who graduated from one of the university colleges in Malawi. The following were research questions that guided the study:

1. What kind of jobs are graduates with disabilities engaged in?
2. How inclusive are workplaces for graduates with disabilities?
3. What challenges do graduates with disabilities encounter in their workplaces?
4. How do they cope with these challenges?

Literature review

It is noteworthy that the literature on this topic is scarce; therefore, most of the literature reflected in this paper is from elsewhere to glean what others have done and are doing in the area. Hence this paper contributes to the dearth of literature in the country.

Type of jobs people with disabilities are engaged in

Research shows that in many countries, the labour markets for people with disabilities are largely informal, with many self-employed workers (Mitra, 2006). This means people with disabilities are more likely to be employed in unskilled occupations and less likely to hold management positions (Schriner, 2001). In addition, Schur (2005) contends that most employees with disabilities are in a part-time employment arrangement. Although people with

disabilities prefer part-time employment due to its flexibility, it attracts low income. However, this is a general experience for all people with disabilities as literature does not explicitly tell what type of jobs people with disabilities are engaged in.

Inclusiveness of workplaces for people with disabilities

Employment of people with disabilities in the labour market is an important indicator of social participation and inclusion for all (Ministry of Health & Care Services, 2013). Since labour participation is a measure of successful integration (Vedeler, 2014a), employers need to ensure a disability-friendly working environment by identifying and eliminating barriers in their workplaces. Generally, it is reported that employees with disabilities experience barriers to inclusion into employment due to peoples' attitudes towards disability, and lack of knowledge on disability issues among employees and managers without disabilities (Ibid). However, creating a more inclusive workplace is necessary for responding to talent shortages as people with different disabilities have a variety of skills. Some of the ways of promoting workplace inclusion include developing internal disability policies and conducting awareness and training on disability issues (Chan, Strauser, Gervey & Lee, 2010). The social model of disability which guided the study on which this paper is based, advocates for inclusion and a barrier-free environment at all levels so that persons with disabilities can access all the services available for everyone else. The model has also influenced the idea of mainstreaming disability at all levels.

Challenges people with disabilities encounter in workplaces

People with disabilities face many challenges both in their search for employment and when in employment despite having conducive disability policies and legislations at international and at national levels. Some of the challenges include negative attitudes of managers and fellow employees towards employees with disabilities and lack of accommodation (Foster, 2007; Basas, 2008; Schur, 2005). Evidence on employer attitudes shows that employers are suspicious of the capacity of workers with disabilities to function as effectively as those without disabilities since the general view from employers is that people with disabilities cannot be as productive as their peers without disabilities (Basas, 2008).

The attitude of fellow employees towards their peers with disabilities is another concern which limits the performance of those with disabilities. Schur (2005) points out that even in firms that are committed to employing people with disabilities, negative attitudes by co-workers and supervisors can limit the ability of workers with disabilities to be fully accepted. Furthermore, the same challenges have also been identified by the social model of disability. For instance, the model argues that structures within a system are a problem. Oliver (1996) argues that disability is everything that enforces restrictions on people with disabilities. This includes individual bias and institutional discrimination. Although employers have been encouraged to remove physical barriers in the workplace as emphasized by the social model, not much has been done to remove attitudinal barriers which still bar people with disabilities from employment as access to initial and continued employment still depends on employers (Stevens, 2002). On the other hand, having people with disabilities tends to give employers more confidence and result in employing other people with disabilities (Aston, et al, 2005),

whilst increased experience of workers with disabilities can help employers change their views of people with disabilities as productive workers (Copeland et al, 2010).

Ways of coping with the challenges

According to literature, people with disabilities unintentionally develop some strategies for dealing with employment challenges. According to Sellevoll (2016), some of the strategies include the following:

Not disclosing disability

Some employees with disabilities try to hide their impairment, especially when searching for employment due to fear of being discriminated against. A study by Kulkarni and Lengnick-Hall (2011), found that 69% of the participants with disabilities did not reveal their disability when applying for a job and during interviews due to fear of discrimination. This suggests that a person can have a job and never say anything about his or her disability. However, this may seem possible to only those who have invisible disabilities like intellectual disorders, but not those with visible problems, for example, physical impairment. But literature does not show clear patterns of strategies used in disclosing the disability after hiding it. Non-disclosure of one's disability might lead to a loss of trust by one's managers. This agrees with Vedeler (2014b) who tells the story of an angry interviewer with negative behaviour towards a person with a disability because he did not share his disability beforehand. Although revealing a disability is a complex personal decision (Jans, Kaye & Jones, 2012), the revelation is important in the determination of one's competence and not the impairment which is the whole essence of hiding the impairment in the first place.

In a study on the transition to the workforce, Gillies (2012), found that eight of the ten participants were unsure whether or not they should disclose their disability, while two participants disclosed their disability to their employers once they were hired and found their workplaces to be accepting and accommodating. This suggests that people with disabilities who need adaptive technologies should discuss with potential employers or managers how such devices would assist them in their job performance as it would indicate problem-solving ability and display self-confidence. Therefore, it is important to show one's honesty by revealing the disability since one can also be measured especially during interviews, or during the first contact. However, the literature does not say what strategies those hiding their disability use to access their disability-related needs once employed.

Dialogue with Employers

People with disabilities believe that having a dialogue with employers or managers is important in dealing with employment challenges. Sellevoll (2016) contends that people with disabilities need to engage in a dialogue with their employers to be regarded as positive and willing employees. This means that sometimes employees with disabilities appeal too quickly to employers to demand accommodations before attempting dialogue. However, Vedeler (2014b) states that the reaction from employers to accommodation issues is not with uncertainty, instead they react with open minds about disability upon seeing how such disability might influence work tasks, then being able to understand how best to adapt. However, Rusnes (2010) contends

that openness about a person's disability can lead to a dilemma since there is no opportunity to talk over what it means to have a disability and the challenges it brings in terms of experiences it has given each individual. This means that as managers attempt to treat all employees equally giving the impression that they are all the same within the working environment, it can lead to other challenges such as being denied special assistive devices. But it is also argued that attempting to normalise not discussing disability, becomes a problem because it prevents dialogue about how to share experiences between employees and managers (Rusnes, 2010). Therefore, having an open dialogue with employers is a positive move because it allows facilitation where needs are met and, in the process, provides employers an opportunity to learn more about disability issues.

Perseverance

Perseverance is one of the strategies used by people with disabilities in dealing with challenges experienced both in their search for employment and in their workplaces. A study on barriers to employment by Sellevoll (2016), found that employees with physical disabilities endured the hardships and did not give up when met with adversity to be part of the workforce and contribute to their society. This means despite facing challenges in their workplaces, employees with disabilities have to persevere to overcome their challenges so that they are not considered as belonging to a special group that needs special attention**.**

Theoretical Framework: The Social Model of Disability

The Social Model of Disability proposes that what makes someone disabled is not their medical condition, but the attitudes and structures of society (Barnes & Mercer, 2004). This means that people are disabled by barriers in society, not by their impairment or difference. The model looks at the barriers created by society regarding the participation of people with disabilities in day-to-day activities of social life. An example of barriers in society includes buildings with steps (without ramps). This model was developed by persons with disabilities themselves in the 1970s (Oliver, 2004). They stated that: "*In our view, it is a society which disables physically impaired people. Disability is something imposed on top of our impairments by the way we are unnecessarily isolated and excluded from full participation in society*" (UPIAS, 1976:14). This means that disability is not an individual problem but a problem created by society.

The Social Model of Disability came as a reaction to the medical model of disability which states that people are disabled by their impairment. It emphasises the impairment rather than the deeper needs and abilities of the person (UN, 2006). The medical model of disability regards disability as a medical problem that resides in the individual (Olkin, 1999). According to the medical model, disability is a defect in or failure of a bodily system such that it is inherently abnormal and pathological. As such, the goals of intervention are cure, amelioration of the physical condition to the greatest extent possible, and rehabilitation such as the adjustment of the person with the disability to the condition and the environment. Persons with disabilities are expected to avail themselves of the services offered to them and to spend time in the role of patient or learner being helped by trained professionals (Thomas and Woods, 2003). This means that the medical model looks at what is wrong with a person, not what a person needs.

On the other hand, the Social Model of Disability views disability as a socially constructed problem preventing the full integration of people with disabilities. Therefore, a society concerned with maintaining a happy, healthy, and effective workforce should work towards eliminating barriers that prevent the achievements of those with disabilities. This means that the social model seeks to recast people with disabilities not as tragic victims defined by their impairments (French and Swain, 2008), but rather as victims of an oppressive society that has failed to take into account their needs as people with impairments (French and Swain, 2012). Because of this, policymakers in Malawi introduced an education system which is fully inclusive such that there is a positive outcome for learners with disabilities. As a result, there is not much difference between learners with disabilities and those without disabilities in terms of academic achievement.

The Social Model of Disability acted as a guide for this study because of the following reasons: Psychologically, a social model is effective in improving the self-esteem of people with disabilities and building a positive sense of collective identity (Shakespeare and Watson, 2002), unlike in a traditional perspective where people with disabilities feel they are at fault. This results in a lack of self-confidence, choice and control of their lives. As such, the Social Model has the power to change this perception because it believes that a person is not to be blamed, but the society. The Social Model, therefore, leads to the empowerment of people with disabilities thereby, allowing them to have a sense of belonging and positively contribute to their communities.

In addition, the model identifies social barriers that need to be removed. This means that the Social Model is effective in liberating people with disabilities, and has a transformative action which acts as a practical tool (Oliver, 2004) which helps policy developers and decision-makers change their approaches as well as employers to modify their workplaces to accommodate employees with different needs. For example, providing ramps and lifts in all buildings for those who are unable to climb steps or providing better-designed automatic doors for those with painful hands.

The social model of disability helps in recognizing barriers that make life harder for people with disabilities. As such removing these barriers will create equality and offers people with disabilities more independence, choice and control (Dunn, 2015). Hence the social model of disability qualifies because it underlines the principles of non-discrimination, participation and valuing diversity.

Research methodology

As a qualitative study, a transformative paradigm was used which holds that research inquiry needs to be intertwined with political change agenda to confront social oppression at whatever levels it occurs (Mertens, 2010). This means that the research has to contain an action agenda for reform that may change the lives of participants in the institutions in which they live or work. This paradigm has been chosen because it emphasizes the lives and experiences of persons with disabilities who traditionally have been marginalized in society. It also analyses how inequities based on gender and disability are reflected in power relationships and believes in the promotion of human rights as well as social justice. Due to the nature of sources of

information, techniques and sampling methodology, phenomenology design has been used and its goal is to explore the meaning of social and cultural phenomena as experienced by the participants in their natural context (Zikmund, Babin, Carr, & Griffin, 2013). Although phenomenological research has been sometimes viewed as soft (Brink, 2010), this research method is rigorous, critical and systematic (Malterud, 2011).

Sampling and sampling strategy

Graduates with disabilities who agreed to participate in the study formed part of the population for this study. Purposive sampling was used to select the participants and these were easily accessible. The participants consisted of males and females who held: Bachelor's degrees. The participants were contacted by phone and the researcher was simply filling the responses from interviewees. The study targeted a population of seventeen (17) participants who graduated from one of the constituent colleges of the University of Malawi since 2009. However, seven (7) formed the accessible population because they were employed at the time the research was being carried out. All the participants were males simply because the only female graduate employee during the period refused to sign a consent form and hence could not be forced to participate as participation was voluntary. The researchers worked closely with key informants as such, convenience sampling was employed based on the accessibility of participants.

Methods of data collection

Interviews were used to collect data although data gathered through interviews is indirect and filtered by the interviewees (Creswell, 2007). However, the researcher still used this approach because the use of interviews was valid despite recognizing its limitations. The semi-structured interview schedule was used to collect data. This addressed the challenge of being overwhelmed with data. To ensure flexibility, the approach taken sought to avoid being threatening and judgmental by assuring participants that there were no particular viewpoints sought and that there were no right or wrong answers such that the interest was in their ideas (Sarantakos, 2005).

Data analysis

This study employed thematic analysis as guided by Braun, & Clarke's, 2006-seven phases. Phase one involved familiarization with the data which meant reading through the data several times before coding began, as ideas and identification of possible themes was being shaped. Phase two involved generating initial codes. Thus, the ideas that were marked for coding in the previous phase were used to produce initial codes from the data. Phase 3 involved sorting the different codes into potential themes, and bringing together all the relevant coded data extracts within the identified themes (Braun & Clarke, 2006). Essentially, different codes were being combined to form an overarching theme. In Phase 4, themes were refined. All the collated extracts for each theme were re-read until a coherent pattern was formed. This was to check whether the themes were working in relation to the data set.

Phase 5 involved identifying the essence of what each theme is about and determining what aspect of the data each theme captures. It further involved organising themes into a coherent and internally consistent account with an accompanying narrative. Phase 6 and Phase 7

involved the final analysis and write-up of the report to show how themes are grounded in the data (Rossman & Rallis, 2003) and presentation of the finding.

Findings and Discussion

The findings of the study are presented according to the main themes from the research questions and the emergent themes from the analysed data.

Type of employment the graduates with disabilities engaged in

The study revealed that one participant worked as a volunteer programme presenter. He studied Philosophy at college as such, two participants were engaged in advocacy work; one advocating on disability issues at National Initiative for Civic Education (NICE). He studied Public Administration Studies so civic education was much related to the course done at the college. The other one dealt with advocating work related to the prosecution of criminal matters (Senior State Advocate). He majored in Traditional Religious Studies which also tackles some of the issues concerning natural laws.

On the other hand, four participants were in a teaching job and were given subjects to teach that were related to the courses taken at College. Out of the four participants, the first one teaches Bible Knowledge, History and Life Skills and he also majored in Theology Religious Studies (TRS) which is related to Bible Knowledge and minored in Classics since it deals with Greek and Roman History. On the other hand, the knowledge he acquired in Psychology is related to life skills. The second one is a tutor at Teachers Training College (TTC) teaching Education Foundation, one of the courses he did at college. The third one teaches English and History, he also majored in History with English as a minor subject at college. The fourth one teaches English and Social and Development Studies and he majored in English and minored in Language and Linguistics. Social and Development Studies is related a little bit because, in Education Foundations, some social and developmental aspects are touched such as Sociology and Developmental Psychology.

The findings above suggest that all the seven participants were engaged in jobs that matched their areas of study at college. Unlike the findings by Fichten, Shirley, Havel, Barile, Ferraro and Landry (2012) who examined the experiences of graduates with visual impairments from three large community colleges in Canada, found that graduates with disabilities were employed less often in a job related to their field of study and they held positions below their educational qualifications.

Inclusiveness of their workplaces

According to the findings of the study, almost all participants complained that their working environment was not inclusive as their different needs were not met. For example, they were not provided with assistive devices such as braille materials, special transport, a personal assistant who could assist them in different activities and additional time to complete their tasks. This was evident in the following excepts:

"*I think if I may be considered in terms of a personal assistant. Yes, I think if the government would have considered employing a personal assistant that each time I want to do my work,*

then I have that one available then I think that one will be a good alternative. Yes, not somebody as a volunteer, but a full-time personal assistant you see, yes because the time I want to work and maybe my students are busy, then it means I may not be able to work. Again, my fellow teachers may also be busy with other things, so they may not be available at all times. So, I would suggest that perhaps if the government would employ somebody for full-time, that could be much better, yes ya" (Interview with P2).

"I would like to be provided with Braille materials. Since it is a school which has never had a teacher with visual impairment, there are no Braille materials like Braille papers and Braille machines. But I require these materials to make my job easier" (Interview with P5).

"I only need special transport since I operate from far and there are not enough houses within the college premises. So, the best alternative is just to have a house within the campus or to arrange transport for me" (Interview with P3).

The findings agree with the findings of Edwards and Boxall (2010). In their study of employees with cystic fibrosis, it was found that employees required extra time to finish tasks as they were expected to undertake the same work as their co-workers without disabilities. However, most managers were not willing to provide needs for employees with disabilities due to negative attitudes and costs associated with the special device, which is against the social model of disability which emphasizes the identification of social barriers that need to be removed, for example, giving people living with reduced eyesight a simple piece of equipment such as a pair of glasses.

With regards to the provision of disability awareness training within the workplace, the study found that only one institution provided this awareness, while two participants said they took responsibility themselves to sensitise fellow employees about disability issues, but the rest reported that their institutions did not provide any awareness training regardless of some saying it was necessary. However, having a well-established section for special needs showed that awareness might be provided for, no wonder managers and fellow employees without disabilities in such an institution showed positive attitudes towards people with disabilities. The study also found that employees with disabilities expect a change of mindset, understanding and supportive qualities from employers and workmates without disabilities to create a disability-friendly working environment. As argued by the social model of disability, it is important to provide necessary arrangements for workers with disabilities, for example, assistive devices, to help them carry out their duties effectively.

Challenges graduates with disabilities face in workplaces.

The findings of the study revealed that graduates with disabilities faced many challenges in their workplaces. For example, lack of support in form of a personal assistant who could help them in other tasks such as writing on the chalkboard; assistive devices such as braille materials and transport to and from work; lack of promotion despite making effort to upgrade oneself; and time to complete their duties as well as discrimination and negative attitude by managers and fellow employees were highlighted as major challenges they faced in their workplaces.

However, only one participant reported enjoying his duties such that he had never faced challenges within his workplace since his institution had a special needs section.

"The school management is not supportive enough since they seem to be reluctant in terms of providing assistive devices for me which makes my work a bit harder. Again, another challenge is the lack of Braille materials for teaching as well as ready assistant personnel who can be helping me like writing on the chalkboard……. Again, some fellow workers, sometimes the language they use is not conducive and surely it's discriminatory so to say" (interview with P2).

"lack of promotion to those with disabilities. I have witnessed my friends without disabilities becoming PEAS (Primary Education Advisors), and others have become head teachers, but not a person with a disability though they started work at the same time with the same qualifications. They just dump you and forget. For example, you will find someone at one school for about twelve years because of discrimination or prejudice that you can't manage instead of asking you to do such… such a thing. But it depends on the attitude of the bosses at the top (Interview with P3).

*"Lack of teaching materials, as well as a negative attitude, is my key concern. In addition, I can say it is not discrimination as such, but a negative attitude that we (teachers with disabilities) have no chance to go for marking or invigilation. Apart from this which is obvious, but imagine very last year, there was an orientation of the new curriculum, all people travelled, but I was not considered and they were saying because you have a problem of vision, this is discrimination" (*Interview with P5).

The responses by participants revealed that employees with disabilities faced many challenges in their workplaces. Some studies have shown that lack of support for employees with disabilities can increase stress levels within work (Kirsh, 2000), very harsh evaluation of performance and allocation of inappropriate tasks (Roessler, Hennessey, Neath, Rumrill, & Nissen, 2011). This is contrary to the Employment Act (2000), as well as the Social Model of Disability and the guiding principles of the Convention of the Rights of Persons with Disabilities that encourage a disability friendly working environment (United Nations, 2006). Therefore, for people with disabilities to perform at the same level as those with disabilities, they have to be given the right environment to show the world what they can offer bearing in mind that 'disability is not inability.

Coping with the challenges at workplaces

The participants were requested to explain how they coped with the challenges they encountered at their workplaces. The findings revealed that the graduates developed the strategies that they use to address the challenges they met. The following were some strategies:

Friendliness

P1 believed that being open and friendly helped a lot in dealing with negative attitudes. He reported: *"I keep myself open. I mean I try to be friendly… if a person discriminates against me, he or she will suffer himself or herself because I am so friendly".* (Interview with P1).

Evidence from one of the participants revealed that people with disabilities need to come closer to other co-workers to reduce stigma. This is also stated under the social view of disability that overt stigmatization and discrimination are barriers that people with disabilities face as such, they are treated as social outcasts because other people do not want to interact with a person with a disability (Chan et al, 2010). Therefore, employees with disabilities must be friendly.

Working hard

Participants also reported that they try hard to do their tasks in a good way so that they are not under-graded by their managers as well as their co-workers. For example, P4 stated that: "…. *when they saw me working more effectively and efficiently, is when the negative attitude started to disappear."* (Interview with P4).

Andreassen (2012) contends that focusing on your strengths rather than your impairment is something the literature supports in seeing disability as an asset. Therefore, by doing so, the issues of stigmatization will disappear. Gill (2001) also advises that to make employees without disabilities aware of how much of the burden of disability arises from routine, inoffensive social interactions with people with disabilities can help to convince them that the internal effects of their various impairments are not as bad as imagined. Therefore, if the social system is truly flexible, open and fully accommodates people with disabilities (Vedeler, 2014b). The sentiment above is a call for societal change which is also advocated by the Social Model of Disability that people with disabilities do not want cures, but want societal change. However, the change should begin with people with disabilities themselves by accepting what they are and then being positive as P6 stated: *"…..but for the change to come, we need to start because it is said whatever you want the change, be the change that you want to be"* (Interview with P6).

Perseverance

Perseverance is featured highly as a way of dealing with challenges graduates with disabilities faced at their workplaces. P2 and P3 reported that they were looking forward to a day when they will be considered. *"….the language they use is not conducive. Yes, it's discriminatory so to say, it just depends on my perseverance because I cannot correct every person… With regards to lack of a personal assistant, alternatively, I use my students"."* (Interview with P2, 14th May 2018). In addition, P3 reported: *"I deal with the accommodation challenge through perseverance. I know one day I will be considered. Again, to travel from home to the bus stage, I depend on my neighbour's child to escort me to the bus depot."* (Interview with P3).

The findings from the interview with participants indicated that employees with disabilities encounter many challenges but endure all these. This also agrees with Sellevoll's (2016) study in which he found that one area that the participants frequently reported was the ability to endure hardships and not give up when met with adversity. It can therefore be said that the ability not to focus much on barriers by employees with disabilities is in line with the social model of understanding which does not deny disability, but define it as an outcome of social construction (Oliver and Barnes, 2012). Therefore, the adoption of a social model of disability in workplaces is crucial for the inclusion of people with disabilities.

Use of own resources

On the issue of transport and assistive devices, one participant explained: "*I use my own money, but I will sometime raise it so that management can arrange special transport for me or even giving me money for transport"* (Interview with P1). Another participant stated that: *"I liaise with my friends and colleagues who use Braille materials. I spend my own money sourcing these materials, but I feel this is not fair because the school has money but cannot help me."* (Interview with P4). P5 explained that: "*when the worst gets to the worst, I buy them using my own money. There is a supplier in town who supplies me with some reams of paper"* (Interview with P5).

Evidence from an interview with participants revealed that employees with disabilities spent their financial resources on transport and purchasing teaching, learning and assessment resources. This shows that employees with disabilities lose a lot of their income purchasing assistive devices, for example, one ream of Braille Papers costs MK25, 000 and one stylus costs MK375. 00, so plus transport to and from the said town, the amount will rise. These challenges make their lives harder since it is obvious that the resources were to be provided by their institutions. The United States Department of Labour (2013) also has similar reports in its research that lack of transport is among the major challenges employees with disabilities face. The report further indicates that this prompted the employees to commute to and from work using their own money. The request for special transport by P1 reveals the challenges an employee with a disability faces in travelling to and from work. This, therefore, indicates that most managers do not have adequate knowledge about the provisions for people with disabilities in workplaces that is why Davis (2005) argues that in designing buildings, transit systems, and other public and private facilities, and in establishing norms of conduct in workplaces, we need to know a lot about how people with atypical functions get around and get along. However, the findings from this study show that top managers were aware of the use of their own money by employees with disabilities but were reluctant to come to their rescue.

Working odd hours

Regarding additional time, P6 reported that he sometimes worked odd hours to get his tasks done. *"Sometimes I work till evening every day including weekends to make sure that I finish my work so that I meet the deadline but this is not considered. I just want to be on the same page with my workmates."* (Interview with P6).

The findings from the interview indicated that employees with disabilities could not complete the given tasks on time as their workmates without disabilities. This forced them to work odd hours to be at par with the rest of the employees. This means that the workplace could not adjust itself to suit and accommodate the employee with a disability on the given tasks. This means that the organisations need to consider the flexibility of work schedules and hours for their workers. This is consistent with Hanley's (2014) argument that the route to inclusion

requires such things as the provision of support, differential treatment within the workplace and accounts being taken of their limitations within the working force.

Developing workplace disability policies

P6 said having a workplace disability policy was ideal in dealing with discrimination challenges. P6 explained: *"I have drafted a disability policy which has been submitted to the management, but it is not yet taken on board. However, I will still keep on pressurising because it is a good policy anyway."* (Interview with P6).

The study found that graduates with disabilities were still hoping for the implementation of the disability act which would assist to deal with so many challenges they encounter in most workplaces which are due to a lack of in-house policies. Once enforced, colleges would have an extended responsibility over their graduates with disabilities even at the workplace. In ideal circumstances, there was no need for graduates' employees to buy resources using their own money which was supposed to be provided for by the institution. Perceptions that policy may support inclusion and the rights of people with disabilities, though often not implemented, indicate the need for increased efforts to engage with employers. The National Policy on Equalisation of Opportunities for Persons with Disabilities explicitly acknowledges that disability policy and practice must be implemented within the broad framework of human rights. It also acknowledges that to achieve this, the provision of services that are expressly targeted at disabled people as well as a concerted effort to include disabled people in mainstream services is adopted (National Policy on Equalisation of Opportunities for Persons with Disabilities, 2006). However, workplaces need to develop and monitor their policies. This suggestion as put forward by P6 agrees with the findings of Goldstone's (2002) study that organisations with disabled employees were more likely to have a formal policy which is also monitored. The Social Model also supports the idea of having well-instituted policies to enhance the enforcement of the rights of people with disabilities in the workplace. However, this disagrees with Stevens (2002) who argues that while policies and legislation on disability help to promote equal access and opportunities, they offer limited assistance in decreasing the negative stereotypes that exist regarding persons with disabilities within the institution. This is a fact since the aspect of negative attitude cannot be ruled out as it is human nature, but some crucial issues such as the provision of assistive working materials can be easily solved with the presence of an internal disability policy.

Providing disability awareness training

One participant said both employers and fellow employees without disabilities required awareness of disability issues for them to be accommodated. P1 had this to say: "*I teach them myself…."* (Interview with P1, 14th May 2018). While P3 reported: ``*I don't blame them, my job is to teach them…"* (Interview with P3).

Asked to comment on the role colleges should play in preparing students with disabilities for work experiences, P3 said: ***"****The College should be organizing a talk to prepare them for*

employment because there are others who seem to be pampered expecting the world will always be there for them." (Interview with P3)

P2 added: "*colleges needed to highlight real-life situations about the industry for students with disabilities to appreciate the challenges."* (Interview with P2). While P4 said the burden lies on career guidance during learning and before going for practicum, especially for those who join teaching. He stated: *"I think it is important to include lessons on what happens in schools when students with disabilities go for teaching practice to prepare them. Unfortunately, when lecturers come for supervision, they just flip on the files and observe the lessons, and never pose questions that would reveal the conditions that are there within the workplace."* (Interview with P4).

Participants' comments during interviews revealed that having a well-instituted committee and well-established department of Inclusive Education (IE) would help to provide awareness. This was evident from one institution which was able to accommodate a graduate with a disability. However, it is not the duty of only the IE section to provide awareness on disability issues, but also the duty of policymakers to enforce the policies. Section 3.5.5 of the National Policy on Equalization of Opportunities for Persons with Disabilities urges organisations to put in place programs that create greater awareness and conscientiousness of the community relating to disability. Therefore, the provision of disability awareness plays an important role as reports from one participant showed that there were positive attitudes at the institution where awareness was often carried out. It can therefore be argued that participation of all employees in the awareness of disability issues might not arise in institutions where such committees are not instituted. Therefore, changing co-worker attitudes through training on disability is seen as important, especially where employers see the stereotypical attitudes of co-workers as a barrier to accommodating people with disabilities.

Conclusion and implications

This study explored the workplace experiences of graduates with disabilities from one of the constituent colleges of the University of Malawi. The study found that all participants were engaged in jobs that matched their field of study as most participants who joined teaching, taught subjects that they majored in at college. However, almost all participants were employed in the public sector. It was also found out that employees with disabilities required various amendments to create a good working environment such as assistive devices, personal assistants, additional time to complete their work, promotion and implementation of a disability policy that would help in the timely and speedy provision of assistive devices such as Braille materials. Although graduates with disabilities expected their managers and co-workers to have understanding, accommodative and supportive qualities, most managers were not willing to provide such support. However, to deal with such challenges, graduates with disabilities forced themselves to be friendly in an attempt to reduce stigma and discrimination. Other ways included perseverance, using own resources, purchasing assistive materials, use of students as assistant personnel, working odd hours to complete daily tasks and providing awareness training on disability issues.

References

Basas, C. (2008). 'Back rooms, board rooms -reasonable accommodation and resistance under the ADA.' *Berkeley Journal of Employment and Labor Law* 29 (1) pp.59-116.

Brink H., (2010), Fundamentals of research methodology for health care professionals, Juta & Co. (Pty)Ltd., Lansdowne: Cape town.

Bryman, A. (2012). *Social research methods*. 4th ed. Oxford University Press. London, United Kingdom: Routledge.

Chan, F., Strauser, D., Gervey, R. & Lee, E. (2010). 'Introduction to demand-side factors related to employment of people with disabilities.' *Journal of Occupational Rehabilitation* 20 (4) pp407-411.

Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education* (6th Ed.).

Creswell, J.W. (2007). *Qualitative inquiry and research design: Choosing among five traditions*. 2nd ed. Thousand Oaks, CA: Sage.

Dunn, D., (2015). *The social psychology of disability*, Oxford University Press, New York.

Edwards, J. & Boxall, K. (2010). 'Adults with cystic fibrosis and barriers to employment.' *Disability and Society* 25 (4) pp. 441-453.

Fichten, C., Shirley, J., Havel, A., Barile, M., Ferraro, V., Landry, M. (2012). What happens after graduation? Outcomes, employment, and recommendations of recent junior/community college graduates with and without disabilities. *Disability & Rehabilitation, 34*(11): 917-924.

Foster, D. (2007). 'Legal obligation or personal lottery? Employee experiences of disability and the negotiation of adjustments in the public sector workplace.' *Work Employment and Society* 21 (1) pp. 67-84.

Government of Malawi. (1999). The Constitution of Malawi. Zomba: Government Press.

Government of Malawi. (2013). The Education Act. Lilongwe: Government Press.

Halvorsen, R., & Hvinden, B. (2011). Andre lands modeller for å fremme sysselsetting blunt personer med nedsatt funksjonsevne. *NOVA Rapport*, 14, 2011.

Kirsh, B. (2005). 'Work, workers, and workplaces: a qualitative analysis of narratives of mental health consumers.' *Journal of Rehabilitation* 66 (4) pp. 24-30.

Malterud, K. (2011). *Kvalitative metoder i medisinsk forskning: en innføring* (3. utg.ed.). Oslo: Universitetsforl.

Mertens, D. M. (2010). *Research and evaluation in education and psychology Integrating diversity with quantitative, qualitative, and mixed methods* (3rd ed.). Thousand Oaks, CA Sage.

Ministry Responsible for Persons with Disability and the Elderly. (2006). National Policy on Equalisation of Opportunities for Persons with Disabilities. Lilongwe.

Ministry of Education. (2009). National special needs education policy guidelines. Lilongwe: MoE.

Ministry of Health and Care Services. (2013). Folkehelsemeldingen God helse –felles ansvar St.meld. 34. Retrieved from http://www.regjeringen.no/nb/dep/hod/dok/regpubl/stmeld/ 2012-2013/meld-st-34-20122013.html?id=723818.

Mitra, S. (2006). Temporary and partial disability programs in nine countries: what can the United States learn from other countries? *Journal of Disability Policy Studies.* 1 (20) pp.14-27.

Munthali, A. C. (2011). *A Situation Analysis of Persons with Disabilities in Malawi University of Malawi*: Zomba.

National Statistical Office. (2010). 2008 Population and housing census: Preliminary Report. Retrieved from www.nso.malawi.net.

National Statistical Office, Centre for Social Research, UNICEF and University of Zurich . (2019). *Survey report on traditional practices in Malawi.* Zomba; Lilongwe: Zurich National Statistical Office.

Oliver, M. (1996). *Understanding disability: from theory to practice*, Basingstoke: Macmillan. Oliver, M. (2004). "The Social Model in action: If I had a hammer*." In implementing the Social Model of Disability: Theory and Research*, edited by C. Barnes and G. Merce. Leeds: The Disability Press.

Olkin, R. (1999). *What psychotherapists should know about disability*, Guilford Press, New York.

Roessler, R., Hennessey, M., Neath, J., Rumrill, P. & Nissen, S. (2011). 'The employment discrimination experiences of adults with multiple sclerosis.' *Journal of Rehabilitation* 77 (1) pp. 20-30.

Sarantakos, S. (2005). *Social research* (3rd Ed.). New York: Palgrave Macmillan.

Saunders, S. L., & Nedelec, B. (2012). What work means to people with work disability: A scoping review. *Journal of Occupational Rehabilitation*, 24(1), pp. 100-110.

Shakespear, T. & Watson, N. (Eds). (2002). The Social Model of Disability: An outdated ideology? *Journal of Research in Social Science and Disability*. Volume 2, pp. 9-28

Schriner, K. (2001). *Disability benefit programs: Can we improve the return to work record? Handbook of disability studies*. P633-692. Thousand Oaks, CA. Sage.

Schur, L. (2005). Barriers or opportunities? The causes of contingent and part-time work among people with disabilities. *Industrial Relations*, 42:589- 622.

Sellovoll, K.S. (2016). Disability and work: Barriers to employment. *Scandinavian Journal of Disability* Research, 1(4),257-271.

Thomas, D., & Woods, H. (2003). *Working with people with learning disabilities*, Jessica Kingsley Publishers, London.

United Nations. (1993). *Rules on Equalisation of opportunities for persons with disabilities*. New York.

United Nations. (1994). *The Salamanca Statement and Framework for Action on SNE*. Salamanca: New York.

United Nations. (2006). *Convention on the rights of persons with disabilities*. New York.

UPIAS. (1976) *Fundamental principles of disability*. London: Union of the Physically Impaired Against Segregation

Vedeler, J. S. (2014a). *Funksjonshemming og arbeid- om like muligheter fordeltakelse.* (Ph.d), UIO. Retrieved from https://www.duo.uio.no/handle/10852/39843?show=full.

Zikmund, W. G., Babin, B., J., Carr, J.C., & Griffin, M. (2013). *Business research methods*. 9th ed. Canada: South Western.

An Examination of the Malawian Standard 2 Mathematics Teachers' Guide and Learners' Textbook content on introducing number concept

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Abstract

This paper presents findings from a textbook analysis study which aimed at analysing examples used in a grade 2 mathematics teachers' guide and the learners' textbook content on Introducing numbers 10 to 20. One element (examples) of the Mathematics Discourse in Instructional analytic framework for Textbook Analysis (MDITx) was used to guide analysis of unit 1 of the teachers' guide and learners' textbook for standard 2. The findings show that most of the example sets that have been presented in both books are of high level, hence, capable of increasing learners' number sense if they were many. The findings also show that the learners' textbook has used real-life artifacts which can enhance learners' transferring of knowledge and critical thinking. However, the example sets are few in both books and might have negative implications on the learning of numbers from 10 to 20 for early grade learners and this affects their learning of higher-grade mathematics. The lack of exercise and practice examples in the learners' textbook might hinder the achievement of some learning outcomes as learners would not have opportunities to explore and practice learning the numbers independently. This implies that the problem of learners' challenges in mathematics might persist in Malawi if the textbook content is not strengthened.

Keywords: Example, sets counting, number writing, mathematics.

Background

Malawian learners have been performing poorly in mathematics and are ranked as the lowest achievers in the international results of the Southern African Consortium for Monitoring Education Quality (SACMEQ). Number, Operation and Relationships is the main area of mathematics where the learners' achievements are extremely low. Although the Malawi National Examinations Board results show that learners' pass rates at primary school leaving certificate examination (PSLCE) have been improving over the years (from 68.8% in 2011 to 79.39% in 2018), the performance of the learners in mathematics is still very low. For example, the results of the Monitoring Learning Achievement (MLA) national survey which was conducted in 2012 showed that less than 10% of the learners who passed PSLCE in 2012 demonstrated proficiency in primary mathematics (Ravishankar, El-Kogali, Sankar, Tanaka & Rakoto-Tiana, 2016). The results of another study by MoEST in the Primary Achievement Sample Survey (PASS) to assess achievement levels of learners in English and Mathematics in standards 3, 5 and 7, showed that only 8% of standard 3 learners attained the expected level of numeracy and no learner scored more than 50% in Mathematics in standards 5 (Ravishankar

et al., 2016). Similarly, the SACMEQ assessments which are conducted among fifteen African countries on grade 6 mathematics show that the Malawian learners have been the lowest in the numeracy levels for the three assessments conducted in 2003, 2007 and 2011. The SACMEQ (2011) results showed that the learners' achievements were extremely low in some concepts and operations (SACMEQ, 2011). Since concepts and operations define numeracy, then the Malawi SACMEQ results are worrisome as they imply that numeracy levels are very low among Malawians (Kasoka, Jacobsen & Kazima (2017).

This is happening while the government of Malawi has made several reforms in the education sector to improve education quality (Government of Malawi, 2008). Malawi shifted from an objective-based education model to an outcomes-based education model (OBE) in 2006 to improve the quality of primary education. The main reason for the shift was that the objective-based education model was teacher centred, as a result, teachers played a more active role than the learners, as the focus was to achieve the set objectives and not to support learners' understanding (MoEST, 2006). OBE was therefore adopted because it was assumed to be a major solution to improving and promoting learners' active participation and performance during teaching and learning in every subject (MoEST, 2006). The goals of OBE emphasise the attainment of learning outcomes by learners in an active participation manner and promotion of critical thinking through exploration, knowledge transfer from classroom to outside the classroom and independent learning (MoEST, 2015).

The Malawi primary education reform process involved reviewing the primary education curriculum for all subjects and developing accompanying curriculum materials such as textbooks in light of the OBE goals. Ronda and Adler (2016) argue that the influence of textbooks on the learning of mathematics might be great, especially in developing countries where textbooks remain the most readily used teaching and learning resource. This implies that the value of a textbook is determined by the extent of its contribution to students' achievement of the learning outcomes and the OBE goals. This means that learners' understanding of mathematics in Malawi is to a greater extent determined by the quality of the mathematics teachers' guide and the learners' textbooks.

Despite the critical role of textbooks in under-resourced countries like Malawi, no research has focused on the analysis of the content of the mathematics textbooks. Furthermore, although over ten years have passed since Malawi started implementing the OBE curriculum, no study has analysed the contents of the textbooks in relation to the OBE goals. Thus, this study aimed at answering the two research questions;

1. What is the nature of examples available for Malawian grade 2 learners to learn number concept from the learners' primary mathematics textbooks?
2. What opportunities are available in the teachers' guide lessons for Malawian grade 2 learners to understand the number concept?

Significance of the study

The background information in the teachers' guide highlights that learners often experience challenges in understanding numbers between 10 and 20. According to Kachisa et al. (2012).

"Learners often experience more difficulties in writing and pronouncing numbers between 10 and 20 than any two-digit number. This is because numbers eleven and twelve are different from other numbers in the range such as thirteen, fourteen…" (p. 1)

Kachisa et al. (2012) explain that the other challenge with numbers from 10 to 20 arises because the names of the numbers in the range of 10 to 20 do not follow a natural pattern. For example, 13, 14, 15, 19 read from right to left while the other two digit numbers read from left to write for example 45, 46 and 47. The teachers' guide authors, therefore, suggest that teachers should ensure that these issues are addressed in their lessons. As already argued, the teachers largely depend on textbooks when teaching these numbers. Therefore, the ability of teachers to address the issues that have been pointed out in the textbook and to assist the learners to understand these numbers also largely depends on the content that is in both the teachers' guide and the learners' textbook.

I also decided to focus on number counting and writing to build on the earlier study where I examined mathematical opportunities available in Malawian grade 1 textbook and their ability to enhance learners' understanding of the number concept and to achieve the goals of OBE in Malawi (Author, 2019). The earlier study was on unit 1 of the grade 1 learners' mathematics textbook whose object of learning is counting and writing numbers up to 10. What I found was that the grade 1 learners' textbook contains a variety of examples which can increase the learners' number sense. However, these examples were few in quantity, as a result, they limit learners' ability in increasing their number sense through independent practice, hence not achieving some of the goals of OBE. Therefore, it was necessary to examine what is available for learners on the same subject of learning in the other infant grade level class.

Literature Review

Number sense

Number sense is "a person's general understanding of number, operation and relationships along with the ability and inclination to use this understanding in flexible ways to make mathematical judgments and to develop useful strategies for handling numbers and operations" (McIntosh, Reys, & Reys, 1993, p.3). Number sense includes several aspects; number knowledge, counting and arithmetic operations (Yilmaz, 2017). Number sense includes knowing the relative values of numbers and being able to use them flexibly when adding, subtracting, multiplying or dividing (Sood & Jitendra, 2007). Number sense also includes the ability to develop useful strategies when counting, measuring or estimating (Yang & Huang, 2002). Number sense develops gradually over time when children explore numbers, visualise numbers in a variety of contexts, and relate numbers in ways that are not limited by traditional algorithms (Van de Walle, 2007). Children continue to deepen their number sense as they work with numbers, represent and count numbers in different ways, and use operations and different solution strategies for operations (Yilmaz, 2017). Number sense is a prerequisite for developing

and understanding higher-level mathematical content, hence, it is one of the most important determiners of learners' future mathematics success (Newbury, Wooldridge, Peet, & Bertelsen, 2015). It is argued that the improvement of learners' access to higher grade mathematics largely depends on assisting and promoting learners' understanding of early grade mathematics (Sood & Jitendra, 2007). Research shows that children face difficulties in learning mathematics in later grades due to an underdeveloped number sense in early grades and kindergarten (Singh, 2009; Sood & Jitendra, 2007; Yilmaz, 2017). This might imply that Malawian learners fail to understand senior primary mathematics (Standard 6, 7 and 8) due to their inability to understand early grade mathematics which is a foundation of higher-grade mathematics. I, therefore, argue in this study that the solution for improving Malawian learners' capabilities in higher grade mathematics relies highly on improving the learners' understanding of lower grade mathematics. Therefore, understanding basic numeracy skills such as number recognition, number counting, number writing, quantity discrimination (magnitude) and basic number combinations can help learners to understand higher-level mathematics.

Counting

Counting is an essential component for numerical competency in early grades and the learning of mathematics because it supports the development of a deep understanding of numbers and provides a basis for understanding several mathematical concepts such as place value, number composition and decomposition (Franke, Kazemi &Turrou, 2018). There are several principles of counting, some of them are; the one-to-one principle, ordered-sequence of counting principle and cardinal principle (Gelman & Gallistel, 1978; Frankel, 2018). The one-to-one principle involves saying or assigning one number for each object when counting to determine 'how many' (Franke et al., 2018). The ordered-sequence of counting (also known as the stable-order principle) includes consistent use of number words in the same order when counting for example one, two, three, etc (Gelman & Gallistel, 1978; Frankel, 2018). The order might be in ascending and descending order using different groups of similar objects. Cardinality is about the quantity or a total number of items in a set, the last number spoken when counting a set of items represents the number of items in the set (Franke et al., 2018). The last number counted shows how many items have been counted in that set. Understanding of cardinality includes the ability to recognise that one number can represent the quantity of an entire set.

It is recommended that children's counting must use benchmarks, starting by exploring the small numeral ranges or benchmarks (to 5), before they move on to work within a higher range (to 10). Children's number sense increases when counting involves some benchmarks. The setting of benchmarks in counting helps children to develop and understand number relationships and to develop mental computations for larger numbers (Van de Walle, 2007). For example, the benchmark number 10, plays an important role in the numeration system because two 5s make up 10. This shows that both 5 and 10 are useful benchmarks to consider when developing relationships between numbers less than 10 (Van de Walle, 2007). Children's learning of the number concept should begin with counting, putting together (add), taking apart (subtract), and comparing sets to 5 then move on to larger sets (to 10 then to 20). There are several ways that children can count, these include skip-counting (counting off by more than

one, e.g., 2s, 5s, or 10s), counting backwards and counting on (starting from a number other than one and continuing the counting sequence) (Van de Walle, 2007).

Mathematics textbook analysis

The value of a given textbook is determined by the degree of its contribution to students' education (Chang & Salalahi, 2017). Analysis of textbooks can help in understanding and informing both researchers and educators of requirements in terms of teaching, learning and curriculum development. In mathematics education, "mathematics textbooks play a particularly prominent role in guiding teachers on specific materials to teach (Chang & Salalahi, 2017, p. 236). Ronda and Adler (2016) argue that, "textbooks have some similarity to classroom lessons", (p.1). This means that the contents of a textbook might influence the nature of mathematics available for learners during classroom lessons. Textbooks are a resource that many mathematics teachers use to decide the type of tasks to implement in their classrooms and how to engage their students in particular mathematical tasks (Stylianides, 2014). Teachers' use and reliance on textbooks are not only common in developing countries only due to a lack of other teaching and learning resources, but also in most developed countries. For example, in countries such as the United States, Japan, Cyprus, and Greece, teachers tend to rely on specific textbooks that are approved by either their districts or their states (Stylianides, 2014). This means that to some extent, learners' opportunities to understand mathematics rely on the mathematics textbooks available for use. As Stylianides (2014) argues, apart from teacher professional development and teacher education, the other important but less explored and insufficiently exploited solution for improving mathematical classroom practices are textbooks. However, it might not be possible for researchers to draw inferences about the textbook authors' intentions for the textbook content as it would be impractical for the researcher to ask textbook authors to describe their intentions about each task in a textbook. Therefore, it would be necessary to consult and analyse the information in the teachers' guides to address this challenge (Stylianides, 2014). Stylianides (2014) justify the importance of analysing teachers' guides as follows:

"Teachers' guides, that is, the teachers' editions of school mathematics textbooks, typically provide information about the goals for the tasks in the students' textbooks, possible solutions to these tasks, and ways in which teachers can implement the tasks in their classrooms".

This implies that analysis of teachers' guides can enable researchers to understand the authors' intentions for certain tasks and examples in a learners' textbook.

Design and use of mathematics textbooks in Malawi

The Malawian Primary textbooks are a vehicle for achieving the national primary education curriculum goals. As such, textbooks for different subjects are expected to mirror their related subject curriculum. This also implies that the textbooks are expected to mirror not only the planned curriculum but also the implemented curriculum. It is for these reasons that the national curriculum determines the content of textbooks of primary education in Malawi. Textbooks are the main content resource for both primary and secondary education in resource-constrained countries which are characterised by a lack of digital teaching and learning

resources like Malawi (Ronda & Adler, 2016). This means that the textbook content for a particular subject like mathematics is a larger determinant of the teaching and learning of that subject.

The development and publishing of Malawian public primary education textbooks is commissioned by the Ministry of Education, Science and Technology (MoEST) through the Malawi Institute of Education (MIE). The purchasing and supplying of textbooks to public primary schools are also regulated by MoEST. The MoEST produces one Teachers' Guide and its corresponding Learner's textbook to be used per academic year. These two books are drawn from the syllabus. There is 1 teacher's guide and 1 learner's textbook for each subject in each grade. The learners' textbook is used by both teachers and learners, while the teachers' guide is used by teachers. In most cases, the 2 textbooks are the only curriculum resources that Malawian primary education teachers use for planning, organising and conducting teaching. The teachers' guides for all primary education are written in English. The learners' primary education textbooks for standard 1(grade 1) up to standard 4 are written in the local language (Chichewa) while those from standard 5 up to standard 8 are written in English. This is because the language of teaching and learning of all subjects in lower primary education is Chichewa (local language) while the English language is the medium of communication in the upper primary education grades.

Methodology

The study used descriptive thematic analysis where the content in the textbook was coded (Yin, 2009). I analysed two textbooks published by MIE, these are the standard 2 mathematics teachers' guide (Kachisa, Mphando, Mwale, Soko, & Toto, 2012a) and the standard 2 mathematics learners' textbook (Kachisa, Mphando, Mwale, Soko, & Toto, 2012b). These are the textbooks that MoE authorise teachers to use when teaching standard 2 mathematics in Malawian public primary schools. This implies that these books are the only textbook resources that are available to the primary mathematics teacher. It is also therefore expected that these textbooks should mirror and enhance the achievement of OBE goals. The standard 2 textbooks were chosen and analysed because early grade mathematics offers a strong foundation for higher grades school mathematics (Sood & Jitendra, 2007).

The data source comprised unit 1 of the grade 2 mathematics teachers' guide and learners' textbook which covers the topic of number, operation and relationships. The main learning outcome under unit 1 for both books counting and writing numbers from 10 to 20. I focused on this unit because it is assumed to be the most difficult for Malawian learners.

The set of examples in each lesson was analysed by comparing them with the category's patterns of example variations in the MDITx analytical tool.

Each set of examples for every lesson was analysed to examine the patterns of variation in terms of similarity, contrast and fusion. The progressive indicators of variation for the example sets suggested in the MDITx framework were used to analyse the levels of the example sets. Table 1 presents a summary of the levels that examples were coded as adapted from Ronda and Adler (2016).

Table 1 MDITx levels used to code the examples

Level	description
Level 1	At least one of the patterns of variation is used (C-Contrast, G-Generalisation, F-Fusion).
Level 2	Any two variations are used.
Level 3	All the three patterns of variations are used.

Using the key of coding suggested in table 1, I coded an example set as belonging to level 1, which is the least level, if only one pattern of variation was used throughout the example set. I coded an example set under level 2 which is a higher level if it contained examples which included at least two of the pattern variations (either contrast and generalisation, or contrast and fusion, or generalisation and fusion). I coded a lesson or example set under level 3 which is the highest level if all the patterns of variations were used (if the example space contained examples that provided learners opportunities for generalisation, contrasting and fusion).

Results

Results from analysis of the teachers' guidebook

There are four main expected learning outcomes for topic 1 (which are called success criteria in the book), there are; 1) count up to 20, 2) count up to 20 in intervals of 2, 3) recognise values of digits up to 20, and 4) recognise place values of digits of numbers up to 20. The teachers' guide shows that the first two lessons to be done in unit 1 are on revising counting and writing numbers from 0 to 9. This is probably because these are the numbers that are used for writing the other numbers in the other lessons that follow. The findings show that each number from 10 to 20 is allocated three lessons and the learning outcome for the three lessons is counting and writing/tracing a number. For each lesson, there is one example set that the teacher is expected to do with learners. It was from these activities that I identified examples. Therefore, I regarded each activity as an example set for the lesson. After engaging the learners in an activity in the teacher's guide the teacher is expected to ask the learners to write an exercise from their textbook.

The suggested activities on counting and writing numbers between 10 and 20 were similar, hence the way of counting and writing the numbers was also similar in all the example sets that were identified from the activities. Analysis of the teachers' guide shows that all patterns of variation are used in each example set for each number. The findings also show that the instructions for doing these activities (example sets) are similar for all numbers between 10 and 20. For example, the instructions for the activities of counting and writing/tracing the number 10 are as follows:

1. Ensure that learners are in groups and that each group has at least 10 objects,
2. Ask the learners to count 9 objects,

3. Let them add 1 more object to the 9 objects,
4. Let them say 'ten' several times,
5. Ask the learners to count the 10 objects,
6. Give each group a number card for 10, and let the learners place the card next to the group of 10 objects,
7. Repeat the above procedure using different objects,
8. Let them count up to 10 in intervals of 2 using different objects
9. Ask the learners to practice counting up to 10 using a different arrangement of objects
10. Demonstrate how to write 10 on the chalkboard
11. Ask the learners to write 10 in the air and on the floor, or ground if you are outside
12. Let them practice writing 10 in their books and do mutu 1 (Unit 1) ntchito 3 (activity 3) individually (Kachisa et al., 2012, pp. 3-4).

I analysed every step in the activity to identify the examples from it. Note that the teachers' guide does not number the steps but I decide to number them for ease of referencing when reporting the results. In step 1, the teacher is expected to start by either giving learners 10 objects or asking them to collect 10 counters from their counter collections. Firstly, the learners are expected to count up to 9 (step 2), add 1 more object to the 9 objects (step 3) and then count again the objects after adding 1 object to the 9 objects (step 5). This shows that the learners will connect the counting to the total number of objects. As such, the counting principles that the learners are expected to use are ordered-counting in a forward manner and cardinality. Since there is a variation between the numbers of the counters that learners count in step 3 and step 5, these two examples will help the learners to notice the difference between 9 objects and 10 objects. When they begin to compare and contrast 9 objects and 10 objects, they may realise that 10 is 9 plus 1 more, and 9 is 10 minus 1 more. Therefore, I coded these two examples under contrast as they help the learners to understand the difference between 9 and 10 (C).

From step 6 up to step 12, the examples require learners to do several tasks; place a number card of 10 against the 10 objects (step 6), continue counting different sets of 10 objects each (step 6), count in intervals of 2 up to 10 (Step 8), practice counting up to 10 using different arrangements, and practice writing the number 10 (steps 10 to 12). Here the area in focus is the number 10, the aim of the different tasks that the learners are to do is to enable them to understand the quantity that 10 represents and the number symbol, hence there is similarity within the examples from step 6 to step 12. I coded these examples under generalisation as they aim at helping learners to reach a generality regarding the quantity that the number 10 represents and to coordinate the number word ten with the written symbol 10 as well. This shows that these steps are aimed at achieving more than one learning outcome, which is counting the number 10 and also writing the number 10, hence the fusion pattern has also been used. Therefore, I also coded this set of examples under Fusion (F).

Steps 8 and 9, is another set of examples where the learners would use skip-counting using different number arrangements of objects. In step 8, the learners are to count in intervals of 2, while in step 9, the learners are to count up to 10 using different arrangements of the objects. In this case, the learners might choose to count in intervals of either 1 or 2 or 5 or 10. As the learners skip counting, they will not only learn the quantity but also gain new knowledge concerning number relationships. For example, the learners might begin to realise that two 5s make 10, five 2s also make 10 and one 10 makes 10. This implies that despite learning about counting, the learners might also learn number relationships, as such, the fusion pattern has also been used in this example.

These findings show that the examples which are in the teachers' guides fall in the level 3 category because they use all three patterns of variation (generalisation, contract and fusion). These patterns of variation were also noticed in the example sets for the other numbers. This implies that all example sets in the teachers' guide are of high level and they are capable of engaging the learners in all three patterns of variation. From these examples, learners can generalise the quantity of the number 10 and its symbolic representation, they can differentiate the quantity of 10 from other quantities, and they can count and make different combinations of the number 10, and also write the number 10.

Results from Grade 2 learners' textbook analysis

Results from the analysis of unit 1 of the learners' textbook show that there is 1 set of examples for learners to do during the learning of each number between 10 and 20. Each example set contains four examples of different numbers of objects. In these example sets; the learners are to count the number of objects in a box and write the number against each box. This shows that all the example sets in unit 1 of the learners' textbook help the learners to achieve two learning outcomes which are counting and writing the numbers, as such, I coded them under a fusion pattern of variation. This also shows that the cardinality counting principle will be applied as the learners will have to count the total number of objects in each example. The results from the analysis of all the 11 example sets show that there is the use of different patterns of variation in terms of the number of objects to be counted. Table 2 presents a summary of the results for each number.

Table 2: Summary of Results

Number	Number of objects in example 1	Number of objects in example 2	Number of objects in example 3	Number of objects in example 4	Code
10	6	10	10	8	F,G,C
11	10	10	9	11	F,C
12	12	11	12	10	F,G,C
13	10	13	11	12	F,C
14	14	12	9	14	F,S,C
15	8	15	15	9	F, G, C
16	16	14	15	16	F,G,C
17	17	17	12	14	F,G,C
18	18	11	18	9	F,S,C
19	19	17	14	19	F,G,C
20	20	16	19	20	F,G,C

The figures presented in Table 2 show the number of objects that the learners were expected to count in each box and a corresponding number symbol against the box. For example, an example set for the number 17 shows that in examples 1 and 2, there are 17 objects for the learners to count, this corresponds to the number 17 that the learners have been introduced to and are expected to count and write in this particular lesson. This means that the two examples enable learners to notice the similarity in terms of the number of objects that correspond to the number 17. This shows that the example set has used a generalisation (G) pattern of variance. As such, all the example sets which contained at least two examples whose number of objects was similar to the number in focus were coded G.

In addition to this, there are two other examples which have objects less than 17. Example 3 has 12 objects which are 5 less than 17, and example 4 has 14 objects which are 3 less than 17. As such this type of example was coded under contrast (C) as it can enable the learners to notice the difference between the number of objects in the examples and why they cannot write the number symbol 17 against the boxes for example 3 and example 4. This led me to code (C) all example sets which had at least one example which contained the number of objects which were different from the number in focus. Figure 1 shows how one of the examples set for the number 20 is presented in the learners' textbook.

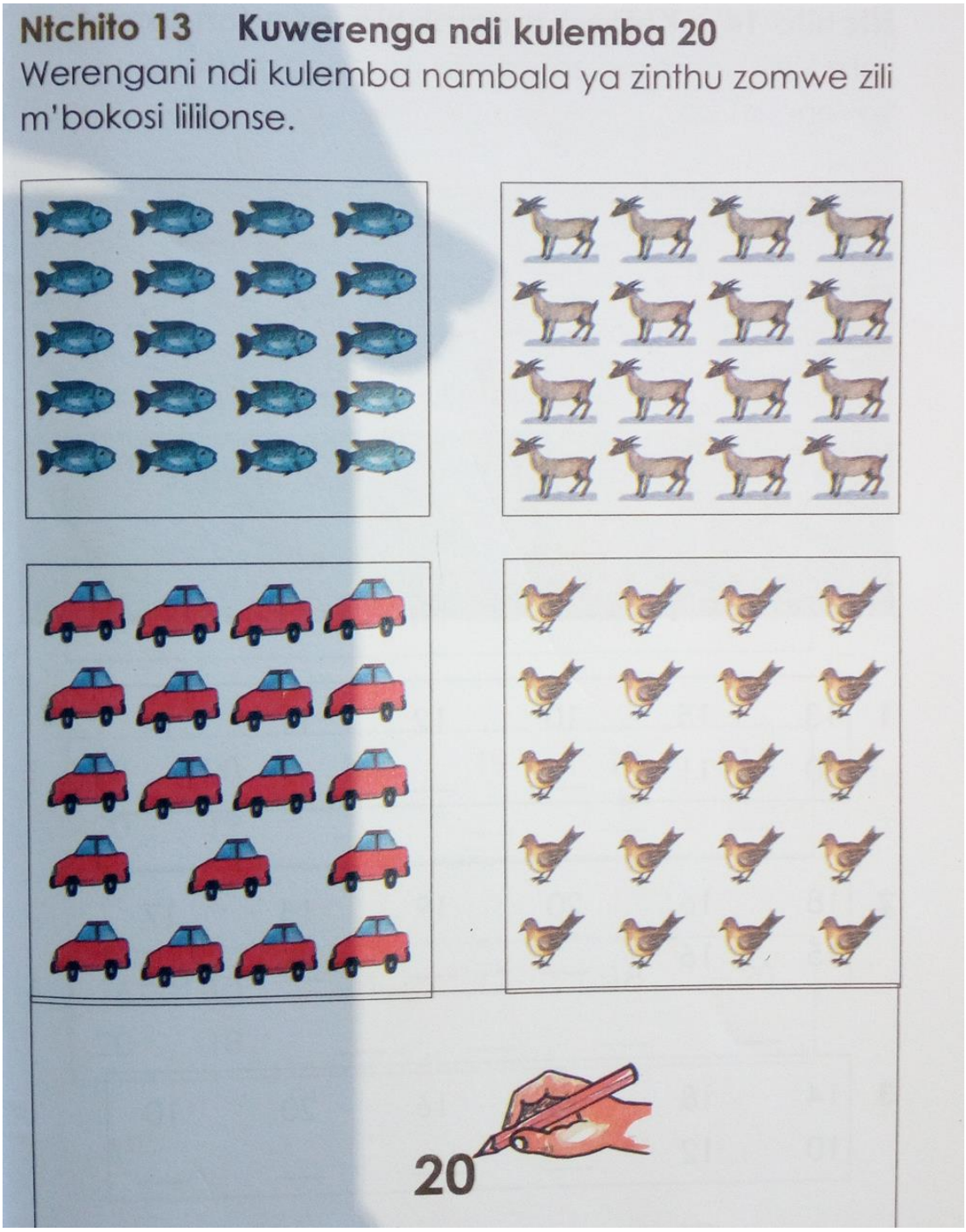

Figure 1: Example set for counting and writing the number 20

(Kachisa et al., 2007, p.13)

The example set in figure 1 requires the learners to count and write the number 20, hence it uses a fusion pattern of variation. Example 1 (the top right box) contains 20 objects, example 2 (top right) contains 16 objects, example 3 (bottom left) contains 19 objects, and example 4 (bottom right) contains 20 objects. Since there are two examples with a similar result of the

object of learning in focus (examples 1 and 4), then this means that the example has used a generalisation (G) pattern of variation. In figure 1, we also notice that the total number of objects in some examples is not equal to the number in focus. These types of examples (examples 1 and 3) might help learners to gain more knowledge apart from just counting and writing the numbers. For example, by comparing example 3 and example 4 through the visual representations that they see, the learners might see that in the visual representation of the numbers of chicks (that are 20), the cars have a similar disposition to the chicks, but with one less in the middle. This might enable the learners to begin to notice the following mathematical operations; 20 – 1 = 19, 19 + 1 = 20. As such, this type of example was coded under contrast (C) as it might enable the learners to understand the difference in the quantity of the number of objects in the boxes.

The example set in figure 1 can also help learners to compare and contrast numbers represented by objects in each example through visual representations (fish and chicks). The visual representations that have been used in these examples might help the learners to understand that the number 20 can be used to represent the number of different types of objects. However, I noticed that there were some example sets which were not more effective for helping learners to reach generality on the number that was in focus. There were two example sets which had only one example whose number of objects was similar to the number in focus. Figure 2 presents this type of example set.

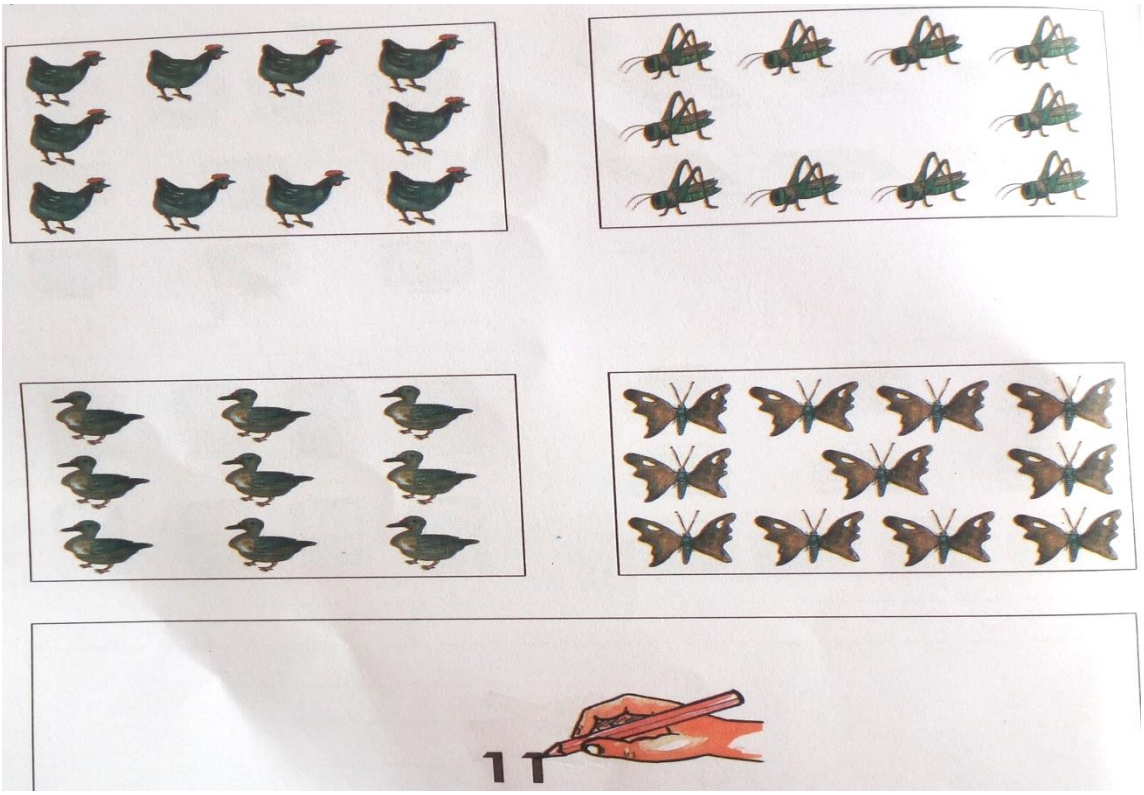

Figure 2: Example set for counting and writing the number 11

(Kachisa et al., 2007, p.4).

Figure 2 shows that despite it being an example set for writing and counting the number 11, only 1 box (example) contains 11 objects. However, 2 examples contain 10 objects, a number which was counted and written in the previous example set. This shows that there is much more emphasis on the number 10 than the number 11. As a result, the learners might pay more attention to continuing generalising on the number 10 than the number 11 which is supposed to be in focus in this lesson. Therefore, although the example set presents two examples which have the same number of objects which might imply that there is the use of a generalisation pattern of variation, I did not code this example set with generalisation (G) because it is not allowing the learners to generalise on the number in focus. However, the example set in figure 2 might help the learners to notice the differences between the quantities of different numbers. For example, the visual representation of the numbers of grasshopper (that are 10), and the butterfly (that are 11) have similar dispositions. But the representation of the butterfly has 1 more in the middle than the representation of the grasshopper, so there is 10+1=11. This shows that the example set used a contrast (C) pattern of variation.

Discussion of the results

The results from both the teachers' guide and the learners' textbooks show that most of the example sets used in the books are of high level (level 3) because they have used all patterns of variation. All example sets in the teachers' guides belonged to level 3. 9 out of the 11 example sets in the learners' textbook belong to level 3, while 2 examples belong to level 2 because they have used two patterns of variation (fusion and contrast). There was no example set which is of low level (level 1) as no example set used only one pattern of variation. These results show that both books provide opportunities which can enhance learners' abilities in the development of the number concepts. The availability of high-level examples in the teachers' guides might help the teachers to illustrate and communicate number concepts to the students in an effective manner (Olteanu, 2018). Furthermore, the results from both textbooks also show that there is a promotion of learners' active participation and exploration in counting and writing numbers. This shows the textbooks might enhance the achievement of some of the desired learning outcomes.

Although both textbooks contain high-level example sets, the amount of example sets in both textbooks is very low. Adler and Ronda (2015) explain that the teaching and learning of mathematics is done through the use of examples. This implies that the availability of a few example sets in the teachers' guides might influence how teachers might teach such numbers. Adler and Ronda (2015) suggest that teachers must select various and many types of worked and non-worked examples to be used in classrooms both for explaining the mathematical concepts, procedures and assessment. As already explained, teachers are expected to conduct three lessons on each number. But there is only one example set that has been provided in the teachers' guide. This might mean that either the teachers have to come up with different examples on their own or repeat the same example in the three lessons which might eventually become boring for the learners. While teachers must be creative in coming up with different

examples to be used in the lesson, this might work very well in countries which have got different types of teaching and learning resources. For example, it would be possible for teachers to source examples from other textbooks in countries where there are at least two different mathematics textbooks available for each grade (Otten, Gilbertson, Males & Clark, 2011). But since MoE provides one textbook for each subject per grade, then it would be very difficult for the teachers to source other examples. In addition to this, most Malawian schools do not have access to online digital resources due to the economic constraints of the country, as such, it may also not be possible for the teachers to access other teaching and learning materials and information online. This means that the majority of the teachers do not use various types of examples when they are teaching numbers. But Ronda and Adler (2016) argue that "working with various examples related to the object of learning can increase the opportunity to learn through different experiences of the content", (p. 4). This implies that if there are very few examples in the textbooks that the teachers mostly rely on, then the learners might not experience different opportunities of working with the numbers. The lack of opportunities for practising counting and writing numbers in the textbook might limit learners' understanding of the number concept due to lack of practice, creativity and application, hence affecting their future learning of mathematics. Learners without a sound understanding of number concept skills struggle to excel in learning mathematics hence early years are crucial times for children to acquire several aspects of number sense (Aunio & Niemivirta, 2010). Learners' ability to learn mathematics in the later grades might be affected by the opportunities available for them to learn number concepts in the early grades.

The results from the analysis of the teachers' guide also show that apart from counting by one, the learners are also expected to practice skip-counting. Several authors support the use of skip-counting in addition to counting by one because it enables learners to increase their number sense through the making of different relationships between or among numbers and the developing of number structure (Franke et al., 2018; Tsao & Lin, 2012; Van de Walle, 2007). Every time the learners count in different arrangements, they develop new knowledge of number concept, hence they increase their number sense (Frankel, et al., 2018). However, teachers might face some challenges to involve learners in skip counting when teaching numbers from 10 to 20 in the Malawian context as the teachers' guide does not illustrate how counting using different arrangements should be done. As such, the teachers will have to decide on their own the different arrangements to be used for counting different numbers. While this might give teachers the flexibility to choose and involve learners' different types of arrangements, it might limit them. In using number arrangements that they know or they can remember, the teachers may not use arrangements that they are not familiar with. Tsao and Lin (2012) argue that the ability to represent numbers in different arrangements depends on individual teachers' numbers sense. This implies that learners from different schools might be involved in different learning experiences according to their teachers' number sense. As such some learners might not have opportunities of increasing their numbers sense by counting through different number arrangements.

Furthermore, the teachers' guide has only illustrated forward counting and not backward counting, the number arrangements suggested by the teachers' guide might only be practised

on forward counting but not backward counting. This implies that the learners might only increase their number sense in addition through forward counting but not in subtraction which develops through backward counting (Franke, et al., 2018). As Ronda and Adler (2016) argue, "textbooks have some similarity to classroom lessons", (p.1). This means that there is a relationship between textbook content and classroom lessons, as such what is available in the teachers' guide might be what will be made available for the learners in the classroom.

In terms of learners' textbook analysis, the findings show that unit 1 has presented only 1 example set with four examples for each number. The teachers' guides show that these examples have to be done by the learners in the classroom after going through examples in the teachers' guide. So the example sets in the learners' textbooks are in the form of exercises to be done in the classroom. Despite presenting very few example sets for each number, the pictures/artefacts that have been used in the learners' textbook are meaningful because they capture real-life examples like poultry and other daily use materials (radios, television, etc). These pictures/artefacts can enable learners to make connections between numbers and real-life quantities, hence they enable learners to understand and develop number sense. The ability to understand the relationship of numbers to real-world quantities helps learners to develop flexible and intuitive ideas about numbers and to attach meaning to numbers and make sense of the world in a mathematical manner (Sood & Jitendra, 2007; Venkat & Askew, 2017).

Again, since the four tasks on each example set are for three lessons that are to be done on that number, this implies that either the learners might have to repeat the same tasks for three days, or they might not have tasks some of the days if the teacher does not think of other tasks for the learners. This means that depending on their number sense, the teachers will decide whether to provide other tasks to the learners or not. This might be a very worrisome situation in the case of a unit which is considered to be very difficult for learners to understand. As highlighted in the teachers' guides, the numbers 10 to 20 are considered to be difficult for the learners due to their uniqueness of pronunciation from right to left (Kachisa et al. 2012). This implies that learners need more opportunities for practicing pronouncing and writing these numbers not only in the classroom but also at home. But this would only be possible if the textbooks contain many tasks for counting and writing numbers. The lack of examples in the learners' textbook might therefore continue to make this unit of counting numbers between 10 and 20 difficult for the learners. Therefore, it can be argued that the two textbooks have few opportunities for helping the learners to increase their number sense through independent learning.

Furthermore, the findings also show that the learners' textbook shows that some example sets paid little concentration on the number in focus in a particular lesson. For example, sets for in the example sets for numbers 11 and 13, there is only one example which has 11 and 13 objects respectively. This implies that it might be difficult for the learners to recognise the number in focus. In the example set for number 11, it is the number 10 which has two examples, but the number 11 has only one example. This might confuse learners to think that it is the number 10 which is in focus and not the number 11. Although these two types of example sets have provided opportunities for learners to contrast the numbers, it might be difficult for learners to contrast before they can generalise. Adler and Ronda (2015) argue that the learners have to first be allowed to know what it is (an example of the number in focus) and then letter on be

assisted to know what it is not (counter-examples). This implies that the example sets in the learners' textbooks are supposed to include example sets that can lead to generality as well.

The findings from the analysis of the learners' textbook also show that there was no order or pattern the examples in each example set followed. For example, the results presented in Table 3 show that some example sets started with counter-examples while others examples of the number in focus. The results also show that the examples are not grouped according to their patterns of variation. For example, the examples that have used similarity are not put together, likewise those which use contrast. But Ronda and Adler (2016) suggest that textbook examples have to be presented orderly to enable teachers and learners to realise the mathematical content being focused in a particular sub-set of an example set. They suggest that an example set should begin by presenting similar examples (to show what it is), secondly, they should present contrasting examples (to show what it is not), and then lastly use examples which have used fusion. The idea is to help the learners to move from simple concepts (generalisation) to difficult concepts (contrast and fusion). These results are similar to Author (2019) who found that the Malawian standard 1 learners' mathematics textbook has different levels of example sets ranging from low to a high level, but these examples are very few. Therefore, this may contribute to the problem of learners' challenges in mathematics persist in Malawi.

Conclusion

This paper has presented findings from the analysis of introducing numbers 10 to 20 content in unit 1 of the Malawian Standard 2 mathematics teachers' guide and learners' textbook. The findings reveal that both textbooks provide learners with high-level examples which might enable the learners to increase their number sense especially if such examples were many for each number. However, the study has found that both textbooks contain few examples (about 4) for each number, hence, limiting learners' ability to increase their number sense. The findings also show that there are some example sets which do not provide much attention to the number in the focus, as such, it would be very difficult for the learners to master several number concepts like counting, writing, tracing and identifying numbers through such type of example sets. The findings also show that the teachers' guide lacks illustrations which would act as a guide for teachers in counting using different number arrangements. This might limit learners' opportunities in making a different number of relationships as teachers might only concentrate on the type of arrangements that are provided in the teachers' guides. The availability of few example sets in both textbooks might have negative implications on the learning of numbers from 10 to 20 which are already assumed to be difficult, as well as on the Malawian learners' understanding of higher grades mathematics. Furthermore, the fewer example sets in both books might hinder the achievement of learning outcomes as learners will not have opportunities to explore and practice learning the numbers independently. However, the use of real-life examples in the learners' textbook can help to achieve learners' critical thinking and knowledge transfer from the classroom to the community. Therefore, it would be better especially if such examples were many in both textbooks to increase learners' number sense. Further research is required to examine how textbook content influences the teaching and learning of mathematics in Malawian public primary schools.

References

Adler, J., & Ronda, E. (2015). A Framework for Describing Mathematics Discourse in Instruction and Interpreting Differences in Teaching. African Journal of Research in Mathematics, Science and Technology Education, 19(3), 237-254. doi:10.1080/10288457.2015.1089677.

Aunio, P. & Niemivirta, M. (2010). Predicting children's mathematical performance in grade one by early numeracy. Learning and Individual Differences, 20, 427-435.

Author (2019). Examination of mathematical opportunities afforded to learners in grade 1 Malawian primary mathematics textbooks. In: U. T. Jankvist, M. van den Heuvel-Panhuizen, & M. Veldhuis (Eds.), Proceedings of the Eleventh Congress of the European Society for Research in Mathematics Education, (pp. xxxx-yyyy). Utrecht, the Netherlands: Freudenthal Group & Freudenthal Institute, Utrecht University and ERME.

Chang, C. C. & Silalahi, S. M. (2017). A review and content analysis of mathematics textbooks in educational research. Problems of education in the 21stcentury 75(3), 235-251.

Gelman, R., & Gallistel, C. (1978). The child's understanding of number. Cambridge, MA. Harvard University Press.

Government of Malawi (2008). National Education Sector Plan. Lilongwe: Ministry of Education, Science and Technology.

Franke, M. L., Kazemi, E. & Turrou, A. C. (2018). Choral counting & counting collections: Transforming the PreK–5 Math Classroom. Portsmouth, New Hampshire: Steinhouse Publishers.

Kachisa, E., Mphando, B., Mwale, L., Soko, C., & Toto, M. (2012a). Numeracy and mathematics: Teachers' guide for standard 2. Zomba: Malawi Institute of Education.

Kachisa, E., Mphando, B., Mwale, L., Soko, C., & Toto, M. (2007). Numeracy and mathematics: Learners' textbook for standard 2. Zomba: Malawi Institute of Education.

Kasoka, D., Jacobsen, A. & Kazima, M. (2017). Pre-service primary school teachers' mathematical knowledge for teaching; Does secondary mathematics ability count? In Mhlolo, M. K., Matoti, S. N. & Fredricks, B. (Eds.), Proceedings of the 25th Southern African Association for Research in Mathematics, Science and Technology Education (pp. 77-87). Free State, South Africa: Central University of Technology.

Marton, F. & Pang, M. F. (2006). On some necessary conditions of learning. The Journal of the Learning Sciences, 15(2), 193–220.

Ministry of Education Science and Technology. (2006). Malawi Primary Education Curriculum and Assessment Framework. Lilongwe: Ministry of Education.

Ministry of Education Science and Technology. (2015). National education standards. Lilongwe: Ministry of Education.

McIntosh, A. J., Reys, B. J., & Reys, R. E. (1993). A proposed framework for examining number sense. For The Learning of Mathematics, 12(3), 2-8.

Newbury, K., Wooldridge, D., Peet, S., & Bertelsen, C. (2015). From policy to practice: Laying the foundation for future math success. Delta Kappa Gamma Bulletin, 81(4), 8-17.

Olteanu, C. (2018). Designing examples to create variation patterns in teaching. International Journal of Mathematical Education in Science and Technology. 1-16. DOI: 10.1080/0020739X.2018.1447151.

Ravishankar V, El-Kogali S, Sankar D, Tanaka N, & Rakoto-Tiana, N. (2016). Primary Education in Malawi: Expenditures, Service Delivery, and Outcomes. World Bank Studies. Washington, DC: World Bank. doi: 10.1596/978-1-4648-0794-7.

Ronda, E., & Adler, J. (2016). Mining Mathematics in Textbook Lessons. International Journal of Science and Mathematics Education, 1-18. DOI: 10.1007/s10763-016-9738-6.

SACMEQ .(2011). Trends in achievement levels of grade 6 learners in Malawi. Policy Brief Report. Retrieved August 3, 2014, from www.sacmeq.org.

Singh, P. (2009). An Assessment of Number Sense among Secondary School Students. International Journal for Mathematics Teaching and Learning, 1-27.

Sood, S. & Jitendra, A. K. (2007). A Comparative Analysis of Number Sense Instruction in Reform-Based and Traditional Mathematics Textbooks. The Journal of Special Education, 41 (3), 145–157.

Stylianides, G.J. (2014). Textbook analyses on reasoning-and-proving: Significance and methodological challenges. International Journal of Education Research, 64, 63–70. https://doi.org/10.1016/j.ijer.2014.01.002.

Tsao, Y. & Lin Y. (2012). Elementary school teachers' Understanding towards the related knowledge of number Sense. US-China Education Review 1, 17-30.

Van de Walle, J. A. (2007). Elementary and middle school mathematics (6th ed.). Longman: New York.

Venkat, H. & Askew, M. (2017). Mediating primary mathematics: theory, concepts, and a framework for studying practice. Education Studies in Mathematics, 97, 71–92. DOI 10.1007/s10649-017-9776-1.

Yang, D. C., & Huang, F. Y. (2004). Relationships among computational performance, pictorial representation, symbolic representation and number sense of sixth-grade students in Taiwan. Educational Studies, 30, 373–389.

Yilmaz, Z. (2017). Young children's number sense development: Age-related complexity across cases of three children. International Electronic Journal of Elementary Education, 9(4), 891-902.

Yin, R. K. (2009). Case study research design methods (4th ed.). Los Angeles: Sage.

'Backs against the wall but fighting on': Malawi primary school teachers' efforts in teaching reading in challenging contexts

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Abstract

Reading is reported to be a major problem among primary school learners in most developing countries. Governments in most developing countries, with the aid of international development partners, have been implementing projects and programs meant to address learners' poor reading outcomes. A key feature of such projects is the promotion of learner-centred interactive activities which, unintentionally, becomes a challenge to teachers teaching large classes. A review of selected literature on the teaching of reading in developing countries suggests that most studies on the teaching of reading in developing countries focus on the successes or failures related to literacy programs/projects, nature of the curriculum, and learner attainment than highlighting the efforts made by teachers in improving the reading abilities of their learners in such challenging contexts. This paper adopts the qualitative research approach and an exploratory case study research design to highlight Malawi primary school teachers' efforts to improve learners' reading abilities in a challenging context characterised by under-resourced large classrooms. Data was generated through in-depth interviews and classroom observations. Content and thematic analysis were used to categorise and codify data. The findings revealed that despite facing numerous challenges teachers made concerted efforts to use interactive activities and utilised locally developed/available reading resources to ensure that learners are engaged in reading activities. However, the quality of learners' access to the reading resources and teachers' competence in implementing interactive activities in large classrooms compromised the effectiveness of the teachers' efforts. Thus, we argue that teachers' efforts to assist learners to acquire reading skills in these challenging contexts will not bear the intended fruits if teachers' conceptual and pedagogical competence in handling such classes is not prioritised.

Introduction

There is consensus among scholars and government officials that reading is one of the central skills in schooling as is also the case with Malawi's scholars and Ministry of Education officials. Although the Ministry of Education (MoE) acknowledges the role of reading in schooling, recent studies and surveys such as those carried out by ABT Associates, the Southern and Eastern Africa Consortium for Monitoring Educational Quality (SACMEQ) and Early Grade Reading Assessment (EGRA), have revealed a worrying reality of poor performance in Malawian primary schools, especially in literacy (National Reading Program-YESA, 2018; SACMEQ, 2015; MoEST- Malawi National Reading Strategy, 2014; Pouezevara, Costello, and Banda, 2013). Moses and Juba (2008: 20) observe that "in Malawi,

the teaching of reading has been problematic as evidenced through its outcomes in that children are still not able to comprehend the texts even at the higher levels of primary school". The National Reading Assessment (NRA) reports (USAID, 2018, 2019) concurs with Moses and Juba's (2008) findings as they reveal that learner outcomes are below expectations. Among the factors that have been cited as contributing to this 'worrying' lowering of standards are large classes, inadequate instructional resources and the use of a teacher-centred approach that leads to failure to employ interactive pedagogical practices.

Interaction is defined as “reciprocal events that require at least two objects and two actions” (Wagner, 1994, p.8 cited in Khadidja, 2010). Interaction occurs every day in the reading classroom through the engagement of different activities and games between the teacher and the learners to provide them with a chance to practise reading comprehension skills. Interactive reading encourages the reader to do more than simply read the printed text. For instance, in Malawi, the adaptation of the communicative language teaching approach in the school curriculum entails the ability of teachers to create a conducive environment for classroom reading interaction. As Maja (2015) points out, interaction is an important word for language teachers since in the era of communicative language teaching, interaction is, in fact, the heart of communication. Classroom interaction is one of the leading concepts believed to enhance second language learners' linguistic resources as well as equip them with appropriate skills for communication (Wang & Castro, 2010).

Khadidja (2010) defines interaction as learners' engagement with the course content, other learners, the instructor, and the technological medium used in the course. Thus, classroom interaction is not only limited to learner-learner or teacher-learner interaction but rather also includes interaction with the content and teaching resources. Furthermore, Thapa and Lin (2013) define classroom interaction as a conversation between teachers and students, as well as among the students, in which active participation and learning of the students become vital. Khadidja (2010) observes that such type of interaction is important because it creates an opportunity for learners to meaningfully interact with others, the instructor and technology which in turn creates a reciprocal exchange of information intended to enhance knowledge development in the learning environment in which the learner is viewed as an active participant. In this case, an interactive classroom activity is an activity that goes beyond treating learners as mere recipients of information but rather as actively and meaningfully engaged individuals.

Classrooms are by their very nature social places replete with the potential for interaction. However, an interaction that supports learning is not a natural quality of the classroom; it has to be arranged. Ryan (2013) notes that the way teachers organise their class, or how they control it, will yield positive or negative consequences for their students. In a language classroom, planning and organisation of effective interaction is key to language learning. Richards, et al. (1992) define classroom interaction as the patterns of verbal and non-verbal communication and the types of social relationships which occur within classrooms. In a second language classroom situation, interaction is essential for learners to survive in the new language and culture since this is the only way learners can use the language they possess, and vary its

meaning (Rivers, 1987). Such being the case, every language teacher must create interactive opportunities in their classrooms so that language learning takes place.

There are several forms of interaction that teachers can create in the process of teaching and learning. Tickoo (2009, p.402) observes that:

> "in a productive class the teacher interacts with the whole class; the teacher interacts with a group; a pair or an individual pupil; pupils interact with each other: in groups, in pairs, as individuals or as a class; and pupils work with materials or aids and attempt the task once again individually, in groups and so on".

Statement of the problem

Reading is reported to be a major problem among primary school learners in most developing countries. Governments in most developing countries, with the aid of international development partners, have been implementing projects and programs meant to address learners' poor reading outcomes. A key feature of such projects is the promotion of learner-centred interactive activities which, unintentionally, becomes a challenge to teachers teaching large classes. Furthermore, these projects and programs' successes are hindered by contextual factors such as large classes, lack of teaching and learning resources, and low teacher motivation due to poor working conditions. A review of selected literature on the teaching of reading in developing countries suggests that most studies on the teaching of reading in developing countries focus on the successes or failures related to literacy programs/projects, nature of the curriculum, and learner attainment than highlighting the efforts made by teachers in improving the reading abilities of their learners in such challenging contexts. This paper addresses two research questions namely, what interactive activities do teachers use to teach reading in large classes? and what efforts do teachers make to attempt to make the interactive activities a success?

Interactive activities in large classes

The use of interactive activities to teach reading in primary schools is among the major features touted as a catalyst for the successful acquisition of reading skills for struggling learners in most developing countries (Kewaza, S., & Welch, M. I., 2006). Despite the reported successes of teachers implementing such activities in western contexts which are characterised by small-sized and well-resourced classes, literature suggests that the use of interactive activities in most developing countries, like Malawi, encounters numerous challenges (Moses and Juba, 2008). Among the stated challenges to employing interactive activities are large classes and a lack of resources in the teaching and learning of reading. About these challenges, Moses and Juba (2008: 21) state that "although it can be appreciated that learners literacy background contributes to their failure to pick-up reading, it is also justifiable to express that generally teachers are challenged with the contents, large classes and inadequate resources, such that most of them adhere to the prescriptions of the books they use as if they were bibles".

Although the challenges associated with the use of interactive activities in large classes are acknowledged, the activities are usually promoted by education authorities, hence most teachers in developing countries are still compelled to use them. This is the case since teachers

are generally expected to use such approaches as they are prescribed in the curriculum and, in some cases, are a major component of the reading programs/projects being implemented in the education system (Biddulph, 2002). A review of selected literature on the teaching of reading suggests that most studies on the use of interactive activities in the teaching of reading in developing countries focus more on the successes or failures related to literacy programs/projects, curriculum, and learner attainment than highlighting the efforts made by teachers in improving the reading abilities of their learners (Goswami, 2009). This paper, therefore, highlights Malawi primary school teachers' efforts to improve learners' reading abilities through the use of interactive activities in a challenging context characterised by under-resourced large classrooms (UNESCO, 2004).

Interactive teaching and learning activities are informed by the constructivist view that puts interaction as a core process in any form of learning (Vygotsky, 1978). Interaction is defined as "reciprocal events that require at least two objects and two actions" (Wagner, 1994: 8 cited in Khadidja, 2010). Interaction occurs every day in the classroom during different activities between the teacher and the learners. Rivers (1987) states that interaction, when coupled with the use of 'authentic linguistic material', can help students effectively acquire both oral and print-based language skills. Similarly, Ivic (2000), and Hall and Walsh (2002) observe that the theory emphasises that social interaction is the key to second or foreign language learning. To the study, the classroom setting represents a social setting for learners to interact and through the process develop reading skills.

It follows that interaction in language classrooms is an important social activity for students through which they not only construct knowledge but also build confidence and can be identified as competent language users (Luke & Lin, 2007). In this regard, conversations or other forms of teacher-learner or learner-learner interaction in the process of teaching and learning are part of the socio-cultural activities through which students engage with and construct knowledge collaboratively among themselves and with teachers.

This study was also guided by the principle that learning is mediated. This principle emanates from the socio-cultural theory of human learning by Vygotsky (1978) who describes learning as a social process and that social interaction plays a fundamental role in the development of cognition. This means that in a classroom setting, interactive opportunities are essential for the development of learners' reading skills since they provide an environment of social interaction for the learners. Ivic (2000), and Hall and Walsh (2002) observe that the theory emphasises that social interaction is the key to second or foreign language learning. In relation to the study, the classroom setting represents a social setting for learners to interact and through the process develop reading skills.

Lantolf (2000) observes that one of the fundamental concepts of the socio-cultural theory claims that the human mind is mediated. This means that cognitive development is not a direct result of activity, but is indirect in the sense that other people must interact with the learner, use mediatory tools to facilitate the learning process, and then cognitive development may occur (Hall, 2007). Similarly, Ellis (2000) states that socio-cultural theory assumes that learning arises not through interaction but in interaction.

Reading instruction, interactive activities and large classes.

Acquisition of print-based language skills, especially reading, is regarded as very crucial in schooling. Pouezevara, Costello, and Banda (2003) note that the inability to acquire reading competence makes it impossible for a child to access the school curriculum. Consequently, the ability to read is increasingly recognized as one of the most reliable indicators of whether a child will attain the competence needed to achieve academic success in school and to contribute actively to society (Carter, 2000 cited in Moses & Juba, 2008). As to the situation in Malawi, Kholowa (2007: 23) notes that "research evidence has generally shown that there are challenges in pedagogical literacy development practices at primary school level in Malawi". Among the recommended pedagogical literacy practices for effectively teaching reading in primary schools is the use of interactive activities. However, implementing such pedagogical practice in the context of under-resourced and large classes is a challenging task for teachers (Damhuis & Blauw, 2008).

In relation to the teaching of English as a second language, Le and Tran (2013) observe that large classes are one of the major challenges teachers face since apart from the task of teaching, they also have to deal with other tasks like keeping good discipline in the classroom, finding ways in which they can easily give each student the individual attention they need and the insufficiency of teaching and learning resources. Such a situation is a reality in Malawi's primary school sector as the classes are generally large. The Ministry of Education, Science and Technology's Education Management Information System's (EMIS) Annual School Census report of 2017/18 presents the challenging situation as it indicates that the pupil-to-qualified teacher ratio was at 70:1 and that the pupil-to-permanent classroom ratio was at 120:1 (MoE, 2019). The ratios presented are above the Government of Malawi's recommendation of 60:1; a pupil-to-teacher ratio which would be considered very high in the 'developed' world puts the maximum pupil-to-teacher ratio for a second language class at 30:1 (Hayes, 1997).

Ives (2000) points out that the difficulty with teaching language in large classes is that it is almost impossible for teachers to meaningfully involve all learners in interactive activities and that where attempts to do so are made, they are generally superficial. Such a scenario was observed by Shaba and Nyasulu (2008) in their study on literacy and language teaching that focused on the use of phonics and whole-word approaches to teaching reading at the primary school level in Zomba, Malawi. They observed that large class sizes made it difficult for teachers to provide learners with individualised assistance which they concluded had a negative impact on the improvement of reading for the learners who needed regular help from the teacher.

Furthermore, Wiener (2010) observes that in nearly every country pursuing Free Primary Education (FPE), Malawi is one of them, the pupil-to-teacher ratio has increased and created problems in the teaching and learning process. This has negatively affected the quality of education in these countries in general and the acquisition of literacy skills in particular. However, Mbano (2004) suggests that what seems more realistic for the time being is to work within the situation of large classes, and explore what can be done to support learners who have a primary burden of learning and passing exams despite the size of the class and other

compounding problems. Thus, in the meantime, there is a need to focus on factors and approaches that may lead to success in the context of large classes while efforts to lower the teacher-to-pupil ratio are going on.

Such a stance is supported by research done over the years that aimed at establishing why smaller classes may lead to improved student outcomes than large classes. The studies established that smaller classes are more effective not simply because they are smaller, but because they often offer an educational setting in which it is easier and more feasible for active learning to take place. Thus, simply reducing the number of students in a class does not alone improve the quality of instruction, nor does increasing class size automatically lead to poor education (Maged, 1997; Nakabugo, 2003). Reasons such as easier and regular discussions with students, timely and frequent feedback to students, and active problem solving have been pointed out as major factors that determine the quality of learning (Bennett, 1996; Billington, 1997; Gibbs, Lucas and Spouse, 1997).

This situation, therefore, calls for researchers to investigate suitable practices for handling large classes, the kind of methods that maximise the use of class time and facilitate learner strategies to promote learning both inside and outside the formal classroom setting (Mbano, 2004). Hence, although teaching a large class is a challenging task, teachers still need to find the means of overcoming the challenges in language learning since class sizes are most unlikely to be reduced in the foreseeable future (Thapa & Lin, 2013).

Nakabugo, Opolot-Ukurut, Ssebbunga and Ngobi (2001) concur with such a view and point out that there is a body of knowledge arguing that it is not the class size that has the greatest influence on teaching and learning. Blatchford (2003) and O'Sullivan (2006) have suggested that there is a need for a shift in focus from concerns on class size to investigating what kind of teaching in small and large classes makes a difference. The assumption is that what matters is the quality of the teacher and his or her approach to teaching, specifically the capacity to create a culture for organising large classes in such a manner that learning can be successfully mediated (Nakabugo et al., (2001). For instance, Lipenga (2010) observes that one key factor that causes low literacy levels is poor classroom practices. In the same vein, Mhango (2004) cited in Mponda and Loga (2016) proposes that in Malawi, there is a need for teachers to use learner-centred approaches that can promote interaction in English lessons so that learners can understand fully and practice what is being facilitated. This paper, which is part of a broader study that aimed at exploring how teachers used interactive activities to promote the teaching of reading in Malawi's primary schools, presents findings on Malawi primary school teachers' efforts to improve learners' reading abilities through the use of interactive activities in a challenging context characterised by under-resourced large classrooms. It presents the interactive activities that teachers utilised and discusses the efforts made by the teachers to implement the interactive reading activities.

Research approach and design

The study employed a qualitative research approach to describe and explore the efforts made by Malawi's primary school teachers of English in creating interactive opportunities in large under-resourced classes as a means of enhancing learners' reading skills. A qualitative

approach was adopted to have a deeper understanding of the phenomenon in a natural context and to appreciate the participants' experiences (Creswell, 2012). This is in line with Ary et al. (2006, p. 453) who state that 'qualitative research design studies real-world behaviour as it occurs naturally in a classroom, an entire school, playground, or in an organisation'. The qualitative approach was relevant for this study because it sought to generate data through the opinions, experiences and feelings of individuals (participants) producing subjective data (Hancock, 2002).

The study employed an exploratory case study research design (Dornyei, 2007). A case study provides an 'intensive description and analysis of a phenomenon or social unit such as an individual, group, institution or community (Merrium, 2002: 8 cited in Tyson, 2014). Yin (2003) further notes that a case study allows the researcher to explore individuals or organizations, through complex interventions, relationships, communities, or programs. In a case study, the intention is to obtain a deep and detailed understanding of the teacher's beliefs and views. The researcher collects detailed information using a variety of data generation methods and the aim is to understand the case or cases in their context (Flick, 2018; Creswell, 2007). This research design was also suitable for this study because it aimed at exploring a phenomenon in a natural setting and in detail.

Study site and participants

A school from the Central West Education Division district in Lilongwe, Malawi's capital city, was conveniently selected based on its proximity to the data collector and it has large classes.

The school is located about 16 kilometres Northwest of Lilongwe City. The location of the school does not provide a good learning environment because it is very close to a busy market and residential area. There are therefore instances of noise that affect the teaching and learning in the classrooms.

Standard five was chosen because it is a transitional class to the senior primary school section which uses English as a medium of instruction[2]Thus, learners' competence in English at this level, and specifically reading, is important since it is deemed vital for the understanding of other subjects in the curriculum.

Due to a large number of standard 5 learners at this school, standard five was divided into four classes. The participants were four female teachers who were teaching standard 5. Each of the four classes had its teacher of English who also taught the other subjects. All four teachers were included in the study to appreciate the differences that might be there despite the context being the same.

[2] Standard 1-4 make up the infant (1&2) and junior (3&4) sections which use Chichewa as a medium of instruction. Standard 5-8 is the senior section of primary school which has English as a medium of instruction.

Teacher 1 (T1) had a Malawi School Certificate of Education (MSCE)[3] as her highest academic qualification. She, like the other 3 participants, has a certificate in teaching[4] as a professional qualification obtained from a Government Teacher Training College (TTC). She has 17 years of experience as a primary school teacher and has 188 learners in her class. T2 has MSCE as her academic qualification. She has a certificate in teaching and 20 years of teaching experience and has 220 learners in her class. T3 has a Junior Certificate of Education (JCE)[5] as her highest academic qualification. She has 27 years of teaching experience and has 138 learners in her class. T4 has MSCE and 18 years of teaching experience. Her class has 210 learners.

Data generation methods and instruments

The study was conducted over a period of six weeks. The researcher generated data by using two data generation methods namely; classroom observation and in-depth interviews (IDI). In total, 12 classroom observations and 4 in-depth interviews were conducted. The classroom observations were non-participant, and the focus of the observation was the interactive opportunities the teachers used in their classes to enhance reading skills. A checklist was used to note interactive opportunities employed by the teachers to enhance learners' reading skills. In-depth interviews using semi-structured questions were conducted and a tape recorder was used to record the interviews. The interviews acted as follow-ups from classroom observations.

Data analysis

Content analysis was used to transcribe, categorise and codify data (Cohen, et al. 2007). The generated data from interviews and the checklists, with the combination of field notes, were transcribed, typed and duly edited. The researchers meticulously read the available data and came up with categories based on the research objectives. The interpretation of the findings of the study was made with the support of related literature and informed by the theoretical framework (Patton, 2002). Clearance to conduct the study was sought and gotten from the Division Education Manager (DEM) of the Central West Education Division and the District Education Manager (DEM) for Lilongwe Urban. We also got informed consent from the teachers.

Interactive activities teachers employed to enhance reading skills

The findings from classroom observation and interviews revealed that teachers created five interactive activities in their classrooms to enhance the reading skill and these are; identifying/reading words, making sentences, guessing the meaning of words, role-playing/reading dialogues and reading aloud. Table 1 presents the activities each of the teachers used.

[3] Certificate offered upon passing the end of four-year secondary school education. A requirement for entry into tertiary institutions.

[4] The main professional certification offered by Teacher Training Colleges (TTCs) for primary school teachers in Malawi.

[5] A certification is given after 2 years of secondary school and requirement for progression to senior secondary school.

Table 1: Interactive activities matched against teachers who used it

Interactive Activity	T1	T2	T3	T4
Role-playing/reading dialogues		✔		✔
Identifying/reading words	✔		✔	
Guessing the meaning of words			✔	
Reading aloud	✔	✔	✔	✔
Making sentences		✔		

The findings also revealed that interactive activities that involved reading aloud were the commonest approaches as it was used by all teachers while making sentences was the least common as only 1 teacher utilised it. These findings, where reading aloud is the most common, reflect those reported by other scholars who studied activities teachers use to teach reading in primary school. This is mainly because reading aloud is traditionally common and usually used as a classroom or resource management technique in largely under-resourced contexts (Kewaza & Welsh, 2013; Mckenna, 2002; UNESCO, 2004).

Efforts to teach reading through interactive activities

In this section, we present the efforts the teachers made through a description of how each of the activities listed above was handled and discuss the extent to which the efforts made by the teachers provided opportunities for learners to acquire reading skills.

Dialogues

Literature indicates that this activity can take the form of read-aloud, shared reading and repeated reading depending on how the teacher has decided to use the dialogue. All the approaches to the use of dialogue are viewed to have the capacity to enhance the reading skill, if there are adequate reading resources for every learner to view the contents and that the learners meaningfully engage with the texts. (Kailani, 1998; Holdaway, 2001 in Leou, Chen Huang, Chen, 2009). The activity was used by two of the four teachers (T2 and T4). As an interactive activity, teachers used it to create a role-play between a teacher and learners and between groups of learners.

In this activity, it was observed that before reading the dialogue with learners, the teachers first read aloud the whole dialogue to the class. After which they nominated individual learners to read the dialogue in front of the class. Then the teacher read the dialogue to the whole class, then to groups that were formed in the class. Then the teachers divided the class into two groups and asked them to read the dialogue with each assuming the role of one character. Then they asked smaller groups of the class (about 10-12 learners) to read the dialogue. This was done simultaneously by all the paired groups. The common practice of the reading lesson was presented by one teacher who stated that;

> *I read the story before the learners read, then I involve the learners so that all of them should read one after another, then make them read in groups* **(Interview with T1).**

Though the teacher states that she made the learners read 'one after another such an individual reading practice was not observed in her class, nor did the two teachers use learner-to-learner dialogue in their lessons. Due to a shortage of textbooks (generally 2 books per group of 10-12), T4 wrote the dialogue on the chalkboard to accommodate those learners who could not have proper access to the text while T2 used the textbooks only which resulted in some learners failing to see the actual text.

The teachers also varied in the way they handled learners' reading errors during teacher-individual learner interaction. When learners made an error, T2 would stop the learners and ask them to re-read the particular item. In this way, the learners focused on the text to decode it correctly, which improved their decoding skills. In other instances, the teacher would ask the learners to mimic the way she read a particular word or phrase. In some cases, the teacher would make the learners re-read the sentence structure or word by observing a punctuation mark used. Observation of punctuation marks in context, instead of teaching them out of context, is said to promote the effective acquisition of reading comprehension skills (Hall, 2012). The practices stated above are supported by Mackey (2007: 12) who asserts that "through processes of repetition, segmentation and rewording, interaction can serve to draw learners' attention to form-meaning relationships and provide them with additional time to focus on encoding meaning."

The interactive patterns presented above gave room for the learners to practise reading because they provided students with the opportunity to consolidate their reading skills and strategies (Michelle and Clarissa, 2012). The interactive patterns that were used by T2 enabled her to observe errors which were made by the learners and provide necessary corrections. Such a practice is believed to provide individualised assistance which is crucial for the enhancement of reading skills (Biddulph, 2002; Wall 2014). On the contrary, when T4 was reading with her learners, much as she would pause if the learners had mispronounced a word, it was observed that she did not ask the learners to re-read but rather read the word correctly and asked the learners to continue with reading. Even though the teacher provided feedback to the learners, failure to make the learners try out by re-focusing on items they found challenging robbed them of the opportunity to consciously engage with the texts.

As for group-group interaction, it was observed that there were unattended errors made when reading and that mumbling associated with lip syncing when they encounter difficult words was more common than actual reading. In the case of T2, the activity would simply result in noise/chaos as it was almost impossible to hear the content of what was being read through the mumbling or low voices in which they read. The researcher observed that though the mumbling was to some extent a result of the learners' inability to decode texts, it was exacerbated by the fact that most of the learners did not actually or properly see the printed text since there were generally 2 textbooks for a group of 10-12 learners. In addition, the teacher did not seem concerned with the noise but allowed the learners to continue 'reading' for the allocated time. Thus, as stated by Mponda and Loga (2016), the teachers used unsupervised group work which

in the course did not promote interaction but chaos in the lessons. It is unlikely that this type of interaction would promote the acquisition of reading skills.

Identifying/reading words

T1 and T3 used this activity. The teachers, apart from letting learners use the available textbooks, also utilised various resources for this activity. It was established that they

> *use of word cards, sentence boards, identifying learners so that they read and help each other in groups so that they find various words with the group leaders* **(Interview with T1).**

Thus, the teachers developed their materials for learners to engage with to deal with a shortage of textbooks so that learners could engage with the content. Furthermore, the teachers suggested that they used groups to facilitate learner-learner support.

In the identifying/reading words activity, the teachers asked the learners to identify particular words (usually new vocabulary) both individually and in groups. T4 wrote words on a chart paper and asked her learners to read a passage silently (read in the textbook and the passage was also written on the chalkboard). After reading, the learners discussed the passage and were given words in groups to come up with words with opposite meanings to the ones provided on the chart papers. Learners were observed actively discussing and their meaningful participation was evident when they managed to provide the words as the teacher randomly selected one learner from the group to give the correct answer. When one learner failed another learner from the group was nominated until the right words were given. As an approach to reading, it gave room for retention since learners were actively involved and thus, they were likely to improve their reading skills since they were participating in an activity which interested them (Saul & Dieckman, 2005).

On the other hand, T1 and T3 created teacher-individual learner and individual learner-individual learner. T3 drew a table on a chart which had, on one hand, incomplete constructions and on the other, words which could help complete the sentence. The teacher then chose learners at random to select a correct word to fill the gap and then read the whole construction to her colleagues. When one learner failed, another learner was selected until the right construction was formed, without the teacher pronouncing/providing the word. T1 also randomly asked her learners to identify nouns from the text she wrote on the chalkboard. This activity made the learners engage with the text as they had to scan through it and identify nouns. However, unlike T3, T1 would, in some instances, guide the learners to come up with the correct pronunciation of the words they identified as nouns. Thus, her focus was not just confined to vocabulary or grammar but also on the phonetic aspect of reading. Such an integrated approach to teaching reading is propagated by current researchers as a key factor for the effective acquisition of literacy (Adam, 2002; Goodman, 1984).

From the discussion above, it can be said that the use of locally made/available resources such as charts, word cards and chalkboards provided the learners with media that enabled engagement with text and that the game-like nature of identifying and reading words facilitated learners' meaningful interaction (Heath, 2013; Nicolopoulou, et al, 2015; Harrop-Allin, 2014).

Reading aloud

This was a popular approach used by all four teachers through the means of textbooks, chalkboards, charts and name cards by either reading a whole story, a word, a phrase, a paragraph, a line from a poem or a stanza. The activity was mainly in the form of teacher-to-class, learner-to-class and group-to-class read-aloud. Thus, the teacher read a text to the class while the class listened and read along silently using the textbooks or other media (chalkboard, chart), or a learner read a text to the class, a group chorus-reading to the class and the whole class reading after the teacher. Researchers have observed that chorus reading and reading after the teacher does not promote reading (Hall, 1998)**.** However, the teachers indicated that they try to ensure that the learners are reading by checking their ability to read individual words before they read as a chorus. It was stated that they "

> *"write a story, extracting some words, to prove whether they are capable of reading, when you have found out that they can manage to read, that is when you tell them to read in unison".* **(Interview with T2**).

Observation, however, revealed that during reading-aloud activity, such caution was not observed. In a teacher-individual learner activity, T1 nominated learners in varying intervals to read after her as a model in reading an assigned phrase, word, sentence or paragraph from a text. The teacher would repeat the same word, phrase or sentence several times and ask the learner to mimic her. If the learner seemed to be struggling to pronounce a particular word, the teacher would at times pronounce the word in chunks and ask the learner to do likewise. Similarly, T2 and T4 would engage their learners in repeated drills by making them repeat after them as they read the story. However, unlike T1, they did not extract phrases, words, or a paragraph but sentences for individual learners to read after them. In addition, they did not make the learners pronounce a word, phrase, or sentence in chunks when they had pronunciation difficulties.

T2 and T4 employed teacher-to-group interaction which took the form of a teacher reading aloud with a selected number of learners. T2A would assign one side of the class to read aloud a sentence after her. She would read sentence after sentence, up to the end of the story. She would then select another group of learners and do the same.

As for teacher-whole class interaction, T2 and T4 lessons took the form of teachers reading aloud to the whole class. The teachers engaged all the learners in their classes to read after them as they read the story sentence by sentence up to the very end. T2 would make the learners repeat after her using a variation of pace. Though it would seem that there was interaction, the nature of interaction- in this case reading after the teacher- is well documented as ineffective in helping learners acquire reading skills, more so in contexts like these where most of the learners do not actually engage with the text but just imitate the teacher consequently making it an oral and not reading activity (Maja, 2015). Thus, taking into consideration the constructivist notion that learning is mediated through tools such as texts, the text's mediating role was, in this case, taken out making the interaction superficial and consequently limiting the activity's capacity to promote the development of reading skills (Hall, 2007; Luke & Lin, 2007)**.**

Guessing the meanings of words

This activity was used by T3 only despite research indicating that it is a common activity used by most teachers in primary school (UNESCO, 2004). In this activity, the teacher displayed different words written on the word cards and then selected learners at random to read and guess the meaning of the words. When an individual learner failed to read, the learner would not be given room to provide the meaning of the word, however, he or she would remain standing, and another learner would be picked to read. The learner standing would then be given another chance to read and give the meaning of another word. At times, the teacher would ask the learner standing to read by following the model given by the learner who correctly pronounced the assigned word. This exercise carried on until all the words on the word cards were displayed. The teacher intended for the learners to familiarise themselves with the words by understanding what they meant before they encountered them in the reading passage in their groups. The researcher observed that this was ideal since it provided an opportunity for learners to know new words. However, the activity would have engaged more learners and enhanced the development of reading skills if learners were made to work together in pairs or groups where they could negotiate meaning before being engaged to give meaning to the class (Biddulph, 2002).

Furthermore, it was established that the teacher lacked the necessary expertise in executing the approach effectively. This is because the approach demanded a follow-up in which the meanings the learners gave in the pre-reading stage were to be evaluated by fellow learners in the process of negotiating for meaning. However, it was mainly the teacher and individual learner who interacted making most of the class passive. Thus, facilitating learner involvement in the evaluation of the meanings given by their fellow students could have provided quality engagement and interaction for more learners and consequently lead to the acquisition of reading skills. (Johnson, 1995 cited in Khadidja, 2010; Freeman and Freeman, 2002 cited in Cohen, 2011; Paule, 2002 cited in Pourhossein, 2014).

Making sentences

This was implemented by T2 only. The teacher brought word cards and selected learners at random to read the word and then construct a suitable sentence to bring out the meaning of the word. When the learner failed to read, the learner would remain standing and another learner finally read the word, the teacher would ask the learner standing to re-read by following the learner who gave the correct pronunciation as a model. In turn, only the learners who correctly read the assigned word were allowed to construct a sentence. However, when a learner failed to make a grammatically correct sentence, another learner would be chosen for the task. At times the teacher corrected the learners if they faced challenges, especially when making sentences. It was noted that although it was employed by only one teacher, the activity is less demanding on issues of resources. Hence, it could easily facilitate active learners' interaction with each other and at the same time enhance their reading skills by familiarising them with varying sentence structures.

This approach is believed to help learners to develop functional vocabulary in meaningful contexts which is likely to help them comprehend texts and it helps learners become

independent readers by creating opportunities for individualised help and feedback from both teachers and learners (El-Koumy, 2006). This was evident during the lesson as the teacher in most cases would spend time with a learner who had made an error in pronunciation so that he/she would learn the correct pronunciations.

Furthermore, the random nomination helped to engage learners and keep them active as each knew that they could be nominated. Likewise, the making sentence activity promoted reading in that it went beyond decoding vocabulary to understanding the meaning and use of the words through the support of the teacher and other learners who provided feedback. Much as the other learners who failed to decode were made to repeat the correct pronunciation, meaning or construction, the teacher's model acted as a mediator to learning. However, the drawback was that the teacher did not go beyond giving the right answer. She was supposed to understand the learners' challenges (in this case decoding, vocabulary, and sentence construction) and address them at an individual level. However, as was observed by Kewaza & Welch, (2013), the large class size meant that the number of learners who constructed sentences, and thus likely to get individualised feedback, was a very small percentage of the class as only a few learners were involved in making sentences. Thus, most of the learners were spectators.

Conclusion

The paper aimed at exploring Malawi primary school teachers' efforts to improve learners' reading abilities through the use of interactive activities in a challenging context characterised by under-resourced large classrooms. The study established that teachers used five types of interactive activities which are; dialogues, identifying/reading words, guessing word meanings, reading aloud, and making sentences. The findings show that the way these activities were implemented generally compromised their effectiveness. This ineffectiveness was coupled with the fact that despite the lessons being focused on reading, most learners did not meaningfully engage with the texts. This was the case because where the textbook was the sole resource, reading was superficial as most of the learners could not see the print considering that there were mostly 2 to 3 books for 10-12 learners. Where other resources like chalkboards, word cards and charts were used, engagement with the text was maximised. However, in most cases, the nature or pattern of interaction during the activity compromised the effectiveness of the use of such resources in that learner engagement with the text rarely focused on comprehension tasks. Thus, where efforts to provide needed resources were made, pedagogical practices like reading after the teacher, and the mumbling that was associated with group and class reading/read-aloud sessions compromised the effectiveness of the teachers' efforts.

It was further established that the nature of interaction in these activities was; teacher to the individual learner, teacher to a class, teacher to a group, learner to class, group to group and group to the class. Conspicuously missing was learner-to-learner interaction as there were no pair work activities observed during the lessons. It was observed that despite the activities being interactive in nature, there was minimal interaction with the text to facilitate the acquisition of reading skills. Furthermore, due to the large class, there was minimal meaningful teacher scaffolding in helping learners develop skills as the common assistance was the

teacher's provision of the right answer (like pronunciation) without addressing the cause of the learner's failure.

The findings also established that other resources like the chalkboard, charts, and name cards, if used appropriately are valuable resources for the enhancement of the reading skill. From the findings, the implications are that there is a need to train teachers on effective practices for creating interactive activities that engage learners in meaningful reading tasks and practices which consider large classes as a rich resource for varied learner experiences and engagement. The other implication is that there is a need to orient teachers on effective practices for creating learner-learner interactions to ensure that all learners meaningfully engage with the texts. In addition, the findings also imply that teachers should not solely depend on textbooks as the only resource capable of enhancing the reading skill but also depend on other readily available resources for learners to engage with print

References

Adam, M. (2002). Alphabetic anxiety and explicit, systematic phonics instruction: a cognitive science perspective. In S.B. Neumann and D.K. Dickinson (eds.) *Handbook of Early Literacy Research*. New York and London: The Guildford Press.

Ary, D., Jacobs, L. C., Razavieh, A., & Sorensen, C. (2006). *Introduction to research in education*. (7th ed.). California: Belmont/Wadsmorth.

Bennett, N. (1996). Class size in primary schools: perceptions of head teachers, chairs of governors, teachers and parents. *British Educational Research Journal*, 22, 33-35.

Biddulph, J. (2002). *The guided reading approach: Grounded in theoretical understanding*. Wellington: Learning Media Limited.

Billington, H. L. (1997). Poster presentations and peer assessment: Novel forms of evaluation and assessment. *Journal of Biological Education*, 31(3), 218-220.

Blatchford, P. (2003). A systematic observational study of teachers' and pupils' behaviour in large and small classes. *Learning and Instruction*, 13, 569-595.

Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education.* (6th ed.). London: Routledge.

Cohen, I. (2011). Teacher-students interaction in classrooms of students with specific learning difficulties learning English as a foreign language. *International Journal of research in communication disorders*: Equinox publishing.

Creswell, J. W. (2008). *Educational research: planning, conducting and evaluating qualitative and quantitative research*. (3rd ed.). Upper Saddle River: Pearson.

Creswell, J. W. (2012). *Educational research, planning: Conducting, and evaluating quantitative and qualitative research*. (4th ed.). Boston: Pearson.

Damhuis, R., & Blauw, A. (2008). *High-quality interaction in the classroom: A focus for professions learning*. Marnix Academie, Utrecht: University of Amsterdam.

Dornyei, Z. (2007). *Research methods in applied linguistics: Quantitative, Qualitative and Mixed Methodologies.* 1st ed. Oxford: Oxford University Press.

Ellis, R. (2000). Task-based research and language pedagogy. *Language teaching research,* 49,193-220.

Ellis, R. (2003). *Task-based language learning and teaching*. Oxford: Oxford University Press

Gibbs, G., Lucas, L., & Spouse, J. (1997). The effects of class size and form of assessment on nursing students' performance, approaches to study and course perceptions. *Nurse Education Today*, 17(4), 311-318.

Goodman, K. (1984). Unity in reading. In A.C. Purves and O. Niles. (Eds). *Becoming readers in a complex society*. Eighty-third yearbook of the national society for the study of education. Chicago: University of Chicago Press.

Goswami, U. (2009). The basic processes in reading, insights from neuroscience. In D. Olson and N. Torrance (Eds.) *The Cambridge handbook of literacy*, Cambridge: Cambridge University Press.

Hall, J. K., & Walsh, M. (2002). *Teacher-student interaction and language learning*.Cambridge: Cambridge University Press.

Hall, A. (2007). Learning and socio-cultural theory: Exploring modern Vygotskian

perspectives. *International workshop,* (1)1.

Harrop, A. (2014) Bana etlong retlobapala: examining children's musical games on a Soweto playground. *Journal of the Musical Arts in Africa*, 11:1, 1-20, DOI:10.2989/18121004.2014.995438

Hancock, B. (2002). *An introduction to qualitative research*. (2nd ed.). Nottingham: Trent.

Hayes, U. (1997). Helping teachers to cope with large classes. *ELT Journal*, 1, 31-38.

Heath, S. (2013). The hand of play in literacy learning. In K. Hall, T. Cremin, B. Comber & L Moll (eds) *International handbook of research on children's literacy, learning and culture.* Chichester: John Wiley and sons. 184-198.

Ives, S. M. (2000). *A survival handbook for teaching large classes*. Charlotte: UNC Charlotte.

Kailani, T. Z. (1998). Reading aloud in EFL revisited. *Reading in a Foreign Language*, 12(1), 281-294.

Kewaza, S., & Welch, M. I. (2006). Big class size challenges: Teaching reading in primary classes in Kampala, Uganda's central municipality. *Family and Consumer Sciences Education Journal*, 24 (2).

Khadidja, K. (2010). *The effect of classroom interaction on developing the learner's speaking skill: The case of the third year LMD students of English at Constantine University*. Unpublished Master's dissertation, Mentouri University, Constantine.

Lantolf, J.P. (2000). *Socio-cultural theory and second language learning*. Oxford: Oxford University Press.

Leou, Y., Chen, M.Z., Huang, Y.G., Chen, C. T. (2009). The influences of shared-book reading on students' reading comprehension and reading motivation in a rural elementary school in Taiwan. Retrieved 4 January 2017. From:

https://www.ied.edu.hk/primaryed/eproceedings/fullpaper/RN156.pdf.

Le, P. H. H., & Tran, T. T. T. (2013). Interactions in classes of foreign languages in the light of Socio-cultural theory. *TạpchícủaHộingônngữhọcViệt Nam*, 6 (224).

Luke, J. C. M., & Lin, A. M. Y. (2007). *Classroom interaction as cross-cultural encounters: Native speakers in EFF classrooms*. New Jersey: Lawrence Erlbaum Associates, Publishers.

Mackey, A. (2007). *The conversational interaction in second language acquisition.* Oxford: Oxford University Press.

Maged, S. (1997). *The pedagogy of large classes: Challenging the "large class equals gutter education" myth*. University of Cape Town, South Africa.

Maja, M. M. (2015). *Classroom interaction in teaching English first to additional language learners in the intermediate phase*. Unpublished doctoral dissertation, University of South Africa, Curriculum studies.

Mbano, Z. B. (2004). *The teaching of writing in large classes*: *A study of how writing in English is taught in community day secondary schools*. Unpublished Masters dissertation, University of Malawi, Chancellor College, Zomba.

Merriam, S. B. A. (2002). *Qualitative research in practice: Examples for discussion and analysis* (1st ed.). San Francisco, CA: Jossey-Bass.

Michelle & Clarissa .(2012). *Independent reading literacy professional development. Retrieved 20, April, 2017, From:* https//www.schools.nyc.gov/NR/rdonlyres/05819154D454.../ReadingwithPower and Passion.

Ministry of Education Science and Technology- Education Management Information System. (2019). *Education Statistics, Education Management Information Systems Department of Education Planning*. Lilongwe.

Moses, C., & Juba, A. T. *Using shared reading to promote reading abilities in learners: A case study of Matiya Primary School in Zomba.* Unpublished bachelor's dissertation, Chancellor College, University of Malawi, Zomba.

Mponda, L. B., & Loga, A. B. (2016). *How learner–centred approaches promote interaction in English lessons*. Unpublished Bachelors dissertation. Zomba, University of Malawi.

Nakabugo, M. G., Opolot-Ukurut, C., Ssebbunga, C. M., & Ngobi, D. H. (2001). *Instructional strategies for large classes: Baseline literature and empirical study of primary school teachers in Uganda, Kampala*. Unpublished Masters dissertation, University of Kampala, Faculty of Language and Linguistics.

Nakabugo, M. G. (2003). *Closing the gap? Continuous assessment in primary education in Uganda*. Unpublished Doctoral thesis, University of Cape Town, South

Africa, Faculty of Education

Nicolopoulou, A. et al (2015). Using narrative- and play-based activity to promote low-income preschoolers' oral language, emergent literacy and social competence. In *Early Childhood Research Quarterly*.

O'Sullivan, M.C. (2006). Teaching large classes: The international evidence and a discussion of some good practices in Ugandan primary schools. *International Journal of Educational Development*, 26, (24-37).

Patton, M. Q. (2002). Qualitative Research & Evaluation Methods. 3rd edition. Sage

Publications, Inc.

Pouezevara, S., Costello, M., & Banda, O. (2013). *Malawi reading intervention early grade*

reading assessment (EGRA): Final assessment – 2012. United States Agency for International Development (USAID) Under Creative Associates International, RTI International and Seward Inc.

Pourhossein, A. (2014). *Classroom interaction.* Department of English language, science

and research branches: Tabriz, Iran. Retrieved 16 January 2017, From:

https://www.academia.edu/7140820/Classroom_Interaction_and_Developing_Speaking_.

Richards, J. C. S., Platt, J., & Platt, H. (1992). *Longman dictionary of language teaching and applied linguistics*. Harlow: Essex.

Rivers, W. M. (1987). *Interaction as the key to teaching language for communication: In interactive language teaching*. Cambridge: Cambridge University Press.

Ryan, H. (2013). *The effect of the classroom environment on student learning*. Honours Theses Paper.

Saul, E. W., & Dieckman, D. (2005). Theory and research into practice: Choosing and using information trade books. *Reading Research Quarterly*, 40 (4), 502-513.

Shaba, D. B. V., & Nyasulu, G. B. M. (2008). *Literacy and language: Phonic and whole-word approaches to reading*. Unpublished Bachelors dissertation. Zomba, University of Malawi.

Thapa, C. B., & Lin, A. M. Y. (2013). *Interaction in English language classrooms to enhancestudent's language learning.* Retrieved on 16 November 2015, from: https://www.neltachoutari.wordpress.com/2013/08/01/interaction–in-English-language-

Tickoo, M. L. (2009). *Teaching and learning English*. Hyderabad: Orient Black Swan.

UNESCO. (2004). *Teaching reading in primary schools*. Retrieved, 4 February, 2017,

from:https://www.google.com/search?q=teaching+reading+in+primary+schools+unesco&oq=Teaching+Reading+in+Primary+Schools&aqs=chrome.1.69i57j0l5.3194j0j1&sourceid=chrome&espv=2&es_sm=93&ie=UTF-8.

USAID. (2019). *National Reading Program – Yesa: 2018 National Reading Assessment*. Abt Associates.

USAID. (2018). *Malawi National Reading Program Baseline Assessment*. Social Impact, Inc.,

Vygotsky, L. S. (1978). *Interaction between learning and development*. Cambridge, MA: Harvard University Press.

Vygotsky, L. S. (1986). *Thought and language.* Cambridge, MA: MIT Press.

Wall, H. (2014). When guided reading isn't working: Strategies for effective instruction. *Journal of Language and Literacy Education Journal, 10(2) 134-141.*

Wang, Q., & Castro, C. D. (2010). Classroom interaction and language output. *English Language Teaching Journal*, 3(2), 175-186.

Wiener, K. (2010). *School fee abolition: Teachers' voices.* United States Agency for International Development (USAID) under Cooperative Agreement No.GDG-A-00-03-00008-00.

Students' Perceptions of Educational Quality in Double-Shift Schooling System: A Case of Likangala Secondary School in Zomba city

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Abstract

This study investigated students' perceptions of education quality in the secondary school double-shift schooling system (DSSS). The aim was to unveil participants' views on the system's educational, economic and social aspects on an education that enhances students' holistic development. The study utilised a qualitative methodology. It adopted a case study design and was guided by the Structural Functionalism Theory. Focus Group Discussions (FGDs) were used to collect data from a purposively and conveniently selected sample of 32 participants from Likangala secondary school in Zomba City. Some data was also collected from Document Analysis. The collected data were thematically analysed. The findings revealed both positive and negative learners' perceptions of quality education in secondary school DSSS. Most participants were against the idea of the system's abolition as they believed it enhances access to secondary education and creates free time in between shifts which, if well utilised, can help learners develop holistically. The study recommended stakeholder cooperation in providing DSSS schools with the required educational support since such an intervention would help improve the system and enhance learners' holistic development to enable them to get easily integrated into society.

Keywords: Double-shift schooling system; perceptions; quality education

Introduction

Various nations needed to achieve Education for All (EFA) goals as a human right and a key factor for socio-economic development and poverty reduction hence the execution of such policies as Universal Primary Education (UPE). The implementation of such policies led to rises in pupil enrolment and completion rates in primary schools and increased the demand for the already scarce secondary school places. For instance, the enrolments in Kenya rose from 5.9 million in 2003 to 8.2 million in 2008 representing a 39% national increase. The completion rate also rose from 62.8% in 2002 to 81.0% in 2007 (Chuck, 2009). Most developing nations faced serious budget constraints that hindered their extensive efforts to invest in extra secondary school infrastructure to contain the rising demands.

Therefore, policymakers opted for economic reforms like secondary school DSSS to accommodate more primary school graduates at reduced budgets (Bray, 2008). The initiation of DSSS led to rises in learner enrolments in most nations such as Burundi where enrolments increased by 256% after its execution in 1982 (Ministry of National Education as cited in Sheryn, 2011: 23). Similar trends were also experienced in such countries as Ghana and

Indonesia (Sheryn, 2011). Thus, DSSS helped such nations increase access to education. However, other studies revealed that DSSS generated several problems such as reduction in learning time, deterioration of resources, learner truancy and inadequate time for mural and extra-mural activities (Ashong-Katai, 2013; Sheryn, 2011; Singadi, Goronga, Gatahwi and Mutangirwa, 2014). Such problems may hinder the all-around learning experience of a child and enhance the belief that DSSS contributes to lower quality education (Bray, 2008). It is certain, therefore, that various educational stakeholders have different perceptions of DSSS on education quality some of which are unveiled in this paper.

Background to secondary school DSSS

The Double-Shift Schooling System policy accommodates two different sets of learners, one learning in the morning and the other in the afternoon, but using the same educational facilities (Kurebwa & Lumbe, 2015). While the Single Shift Schooling System (SSSS) caters for the same group of learners from morning to afternoon, DSSS accommodates two different cohorts of learners. For instance, while SSSS can enrol 150 learners, DSSS can accommodate 300. The double intakes into DSSS notably helped many nations such as Indonesia and Zambia increase access to secondary education at reduced costs (Ashong-Katai, 2013). Upon enacting DSSS, the earlier fears of scarce school spaces have been swapped by worries of the uncertainty that DSSS may create in various educational stakeholders. Such concerns erupt after noting that some nations like Ghana and Singapore (Ashong-Katai, 2013) whose schools have been on DSSS for many years opted for SSSS to help improve education quality and solve other socio-economic issues.

Secondary school DSSS in Malawi

Malawi faces several challenges including limited resources in trying to improve access to quality education. During the 2016/2017 Budget Review Meeting, the then Minister of Education Science and Technology (MOEST) asserted that the government was trying all it could to enhance access to quality education. However, he also admitted that "…the government is not able to reach out to every citizen with quality education largely due to rapid population growth" (Government of Malawi, 2017:1). After implementing the FPE policy in 1994 to increase access to education, the Malawi primary school sector experienced increases in both enrolment and completion rates. For instance, enrolments rose from 3,600,771 in 2008 to 5,187,634 in 2017/18 and completion rate rose from 67 percent in 2015 to 79 percent in 2017 (MOEST: 2018). This trend led to a rise in learners who sought access to secondary school places. For instance, in 2018, out of the 190,350 learners who passed the Primary School Leaving Certificate Examinations (PSLCE), 62,330 had access to the 1411 public secondary schools leaving 128,020 learners (MOEST, 2018). Thus, the 46% access rate to form one was far beyond the 1.8 % absorption rate that the secondary sector could offer as of 2016 (MOEST: 2016). This suppressed the sector's goal of increasing access to secondary education and the realisation of the country's "Priority Area 2: Accessible and Quality Secondary Education" and the Sustainable Development Goal 4: Ensure inclusive and equitable education and promote lifelong learning for all (MOEST: 2018)

Eventually, the government sought effective and efficient ways of creating extra spaces mostly in urban areas where land is limited and construction is costly. Through the Malawi Education Sector: Policy & Investment Framework for 2000-2015, the Ministry of Education Sports & Culture proposed to "… promote a double-shift system for those secondary schools that are adequately equipped for such an innovation as a way of expanding access" (MoESC:2001:3). A DSSS pilot phase commenced in 1991/92 in four secondary schools comprising Zingwangwa in Blantyre, Bwaila and Chipasula in Lilongwe and Katoto in Mzuzu. A review of the pilot phase (Kadzamira, Chonzi, Hiddleston & Chibwana, 1996) revealed that DSSS doubled student enrolment. It also unveiled such challenges as reduced teacher-learner contact time, wear and tear of resources and inadequate time for extra-mural activities, but still recommended the government to roll it out while providing the necessary support. DSSS creates both positive and negative views in various stakeholders which if ignored, may hinder the attainment of education quality.

In this paper, education quality entails creating an apt schooling environment that would help mould liable and self-reliant individuals to fit in the social world (Ingale, 2014). Thus, the school setting and curriculum must help develop a 'perfect' individual who grows intellectually, physically, socially and morally. In DSSS, one group of learners attend classes in the morning while another in the afternoon. An '*end-on'* DSSS model requires a reduction in the length of lessons and hours that learners stay in school (Bray, 2008). Thus, the first group leaves immediately after knocking off to create room for the second group, hence difficult to incorporate some co- and extra-mural activities into the school program. Activities like vocational, moral and sporting might suffer under DSSS at the expense of core subjects like mathematics (Ingale, 2014). Such can hinder learners' holistic growth and acquisition of soft skills that would enable them to get easily integrated into society. In 2012, MoEST gradually introduced the *'end-on'* DSSS model in some urban public day secondary schools including those in Zomba City. As of 2016, 34 out of 1411 public secondary schools operated on DSSS representing 4% of the targeted 30% (MoEST, 2016). The shortage of teachers in the sector contributed to the low attainment of the targets.

Statement of the Problem

The double intake into Malawi DSSS secondary schools helped increase access to secondary education (Field data, 2018). Thus, the school understudy enrolls 300 learners for the two shifts as compared to 150 learners that it was enrolling when it was on SSSS. It is evident that regardless of the doubled enrolments, DSSS creates negative perceptions in some stakeholders which, if ignored, could compromise education quality (Ashong-Katai, 2013). Such views may sometimes be unveiled through an analysis of the overall success of DSSS policy based on various stakeholders' opinions (Dye, 2013). Most of the reviewed sources of Malawian literature on education rarely discuss issues related to secondary school DSSS (the Malawi Education Statistics 2016 and 2018; Malawi Education Management Information System (EMIS) 2017; National Education Sector Plan (NESP); 2014 Education Sector Performance (ESP) Working Paper Series). Thus, apart from the review of the four pilot schools by Kadzamira et al. (1996), the 2015/16 ESP Report also acknowledges "…expand double-shifting to all possible schools" (MoEST, 2016:2) as a secondary school sector priority policy

reform program. Yet, not much is said except reporting that 34 secondary schools operated on DSSS as of 2016 representing 4% of the targeted 30%. However, the review by Kadzamira et al. (1996) revealed that DSSS generates such problems as a reduction in learning time and inadequate time for mural and extra-mural activities. Such problems may deter learners from acquiring some educational and social-economic skills that would aid their holistic growth, thereby enhancing the belief that DSSS enhances quantity over quality education. Therefore, this study is based on such problems to unveil learners' views of DSSS on quality education. Apart from the review by Kadzamira et al. (1996), there are hardly any other studies that were conducted to assess the progress of secondary school DSSS. There is also a specific gap in studies on the assessment of learners' perceptions of education quality in Malawi secondary school DSSS.

However, Singadi et al. (2014) conducted a related study that sought to establish teachers' and learners' perceptions of DSSS on Ordinary level students' performance in Geography at Kuwadzana 1 High School in Zimbabwe. The study revealed limited resources as among the many perceived challenges, hence proposing the abolition of DSSS by building more secondary schools. While the study was conducted in Zimbabwe, the results would equally leave one wondering how learners perceive education quality in Malawi secondary school DSSS. The reviewed empirical literature elucidates that most DSSS studies focused much on primary other than secondary schools (Bray, 2008; Linden, 2001; Orkodashvili 2009). Thus, this study sought to unravel learners' perceptions of education quality in DSSS to help fill the knowledge gap in Malawi secondary school DSSS.

Main Research Question

- How do learners perceive educational quality in secondary school DSSS?

Sub Research Questions

a) What are the learners' positive perceptions of educational quality in secondary school DSSS?

b) What are the learners' negative perceptions of educational quality in secondary school DSSS?

c) What are the learners' opinions on what should be done to ensure the efficient and effective operation of DSSS without compromising educational quality?

LITERATURE REVIEW

Definition

DSSS refers to schools that utilise the same educational resources to accommodate two different cohorts of students in the mornings and afternoons (Sheryn, 2011). In Malawi, DSSS secondary schools cater for two separate groups of learners; the first learning from early morning until mid-day and the second from mid-day to late afternoon. These groups use the

same educational resources and same or different teachers for each session. DSSS is managed by one head teacher. There is also a deputy head teacher and three section heads for each shift (Field Data: 2018). Thus, in contrast to SSSS, which accommodates the same students on the same premises for almost the whole day, DSSS uses the same educational facilities to operate 'two separate schools' at two different times of the school day. As such, DSSS is known by different terminologies like 'double-session', 'double-timetable' and 'half-day'. It is also known by different strange expressions in various countries such as 'platooning' and 'hot-seating' depending on the particular meaning that specific countries attach to DSSS. For instance, Zimbabweans call it 'hot-seating' entailing that the chairs hardly cool down (Singadi et al., 2014).

Models of the double-shift schooling system

The common models of DSSS are the overlapping and '*end-on*' (Bray, 2008). In the overlapping model, the afternoon learners arrive before the first group finishes their school day (Bray, 2008). Learners arrive and leave at different times of the day, but at some point, they are on the school campus together. Sabelas Maret Secondary School in Indonesia had shift A starting at 08:15 and ending at 15:10 and B commencing at 09:35 up to 16:30. The school's enrolments increased by 25 % through efficient use of amenities like workshops. Lessons per school day increased from 9 to 11. With lunch hour for both shifts being 12:10 to13:10 learners and staff could meet, interact and feel like members of the same institution (Bray, 2008). This model also provides room for co- and extra-mural activities. However, the system may require proper planning and organisation and extra buildings to contain all learners when they meet on campus.

In the '*end-on*' shift, one group finishes their learning and leaves the campus before the other group arrives (Bray, 2008). Shifts A in some Democratic Republic of Congo schools started at 07:15 up to 12:15 while shifts B commenced at 12:30 up to 17:30. There may be a reduction in the length of lessons and schooling hours (Bray, 2008). Again, students and teachers from both shifts may not meet and interact as they seem to belong to two separate schools within the same campus. Co- and extra-mural events may hardly be incorporated as one group instantly vacates after knocking off to create room for the other group. However, the model can help learners indulge in other profitable activities during the out of school hours (Orkodashvili, 2009). The school under study operated on an '*end-on*' model (Field Data, 2018).

Allocation of teachers to each shift

Teachers can attend to either shifts or one only depending on their numbers (Bray, 2008). Where teachers are many as was the Singaporean case (Ashong-Katai, 2013) each shift may have different teachers to avoid involving exhausted teachers who may impact negatively on education quality. Qualified teachers may also attend to both shifts at an extra income. Mozambican teachers earned 60% of their basic pay for working in both shifts (Mulkeen & Chen, 2008). Teachers may also be around to supervise co- and extra-mural activities that enhance learner holistic development. In the school understudy, different teachers were allocated to each shift, but there were still some shortages. Some teachers offered to work in

both shifts to cover up for the shortages, but they were not given any incentives for the extra work (Field Data, 2018).

Provision of co-and extra-curricular activities

Apart from enhancing learners' intellectual growth through classroom subjects, education systems also aim at enhancing other learners' abilities to help them grow holistically (Bray, 2008). A study on the abolition of DSSS in Ghana revealed that DSSS hardly enhanced skills development in learners (Ashong-Katai, 2013). The limited instructional time saw teachers focusing much on theoretical aspects of practical subjects. Learners hardly participated in co- and extra-mural activities thereby deterring their holistic development; another key aspect of quality education. Singaporean stakeholders opted for SSSS to help widen the school time and allow learners to participate in the various mural, co- and extra-mural activities (MOE Singapore, 2010 as cited in Sheryn, 2011:44). In the school understudy, such activities appeared on the timetable, but were placed after knocking off hours thereby reducing learner participation and teacher supervision (Field Data, 2018). Thus, in DSSS, co- and extra-mural activities are minimised to pave way for the core subjects and reduce other inconveniences. However, some Jamaican DSSS schools still offered such activities (Leo-Rhynie, 1981 as cited in Bray, 2008:61). The school administrators may have found possible ways around such constraints.

Student academic performance in double-shift schools

Student academic success is debatable as it covers various educational and socio-economic aspects. Limited resources in DSSS may lower academic performance. Teachers may have limited time to efficiently cover the syllabi. Learners may hardly access some classroom activities and/or remedial lessons. Such aspects may enhance the belief that DSSS compromises education quality for quantity (Ashong-Katai, 2013). However, a study by Kurebwa & Lumbe (2015) in Gweru Urban DSSS Primary schools revealed that students performed equally well as in Single Shift Schooling System (SSSS). Again, from 2016 to 2018 MSCE results for the school under study also showed a steady student pass rate rise for three successive years as shown in Figure 1:

SOUTH-EAST EDUCATION DIVISION							
MSCE RESULTS							
NAME OF SCHOOL	**YEAR**	**NUMBER SAT**		**NUMBER PASSED**		**PASS RATE (%)**	
		BOYS	GIRLS	BOYS	GIRLS	BOYS	GIRLS
Likangala	2016	156	148	110	85	70.51282	57.4324
Likangala	2017	135	110	113	87	83.7037	79.0909
Likangala	2018	121	106	104	98	85.95041	92.4528

Figure 1: 2016-2018 MSCE Student academic performance. Source: Field data (2019).

The results in Figure 1 for the school understudy show that the pass rate continued to rise although the school operated on DSSS. Thus, in line with the study by Kurebwa and Lumbe (2015), DSSS did not essentially cause a decline in student academic success. Thus, DSSS complemented other aspects such as teacher/learner competencies in enhancing student academic performance.

Positive perceptions of quality education in secondary school DSSS

Creation of free time to indulge in other profitable activities

In addition to increasing access to secondary education, DSSS also creates free time in between shifts for students and teachers to indulge in various profitable activities that can enhance the achievement of quality education through the holistic growth of learners (Ashong-Katai, 2013). Optimal use of free time can help learners and teachers accomplish various educational and socio-economic tasks. In the Gambia, DSSS helped girls attend to both school and societal tasks (Orkodashvili, 2009). Ethiopian students engaged in various income-generating activities after classes (Fairbank, 2005). Thus, the free time that DSSS creates in between shifts, may help learners indulge in various educational and socio-economic activities that enhance their holistic development.

In most developing countries teacher salaries are perceived as lower following the 2008 economic crisis, and austerity policies and fiscal controls impact (Van Damme, 2017), forcing teachers to engage in other activities to boost their earnings. In DSSS teachers may attend to both shifts at an extra payment, for instance, Mozambican teachers earned 60 % of their basic pay for working in both shifts (Mulkeen & Chen, 2008). This can reduce utilising under-qualified teachers. Teachers attending one shift only can also indulge in other socio-economic activities during their free time. Thus, DSSS may help reduce the political tensions arising from demands for better teacher salaries (Ashong-Katai, 2013), motivate the teachers and enhance the achievement of education quality. Thus, financially stable teachers are less frustrated to offer timely support to learners in both mural and extra-mural activities that help learners develop holistically.

Negative perceptions of quality education in secondary school DSSS

Reduction in instructional time and narrowing of the curriculum

Typical education systems require an increase in learning hours from lower level to higher level. The reduction in DSSS learning time may have some educational 'carry-over' effects at the next level. The individual, society and economic educational goals as set in New Zealand (The Treasury, 1987 as cited in Sheryn, 2011: 29) must be combined for learners' holistic development. The school's environment and curriculum must enhance learners' intellectual, physical, socio-economic and moral growth (Ingale, 2014). The reduced time in DSSS may opt for core subjects to co- and extra-mural activities hence deterring learners' holistic development.

The reduction in both formal and informal learning hours may render DSSS a less preferred schooling system to SSSS. Choosing a better DSSS model coupled with careful planning as in the Imao State, Nigeria case (Ashong-Katai, 2013), can help solve the problem of reducing schooling hours. Besides, competent teachers with adequate curriculum resources may achieve more even in a short time than unskilled teachers with minimal resources can achieve in double the instructional time (Orkodashvili, 2009). DSSS requires technically competent teachers who can effectively utilise the allocated instructional time.

Reduction in the quality of teaching

Teaching under DSSS is perceived as compromising education quality for the quantity due to factors like limited time and teacher burnout. DSSS may not offer enough time for teachers to efficiently cover the syllabi and learners' access to some classroom activities. However, lessons per school day at Indonesia's Sabelas Maret Secondary School increased from 9 to 11 (Bray, 2008). An increase in workload may also increase teachers' stress to prepare for the next shift hence hindering the attainment of quality education (Singadi et al., 2014). However, studies conducted in Uganda and Singapore (Ashong-Katai, 2013) revealed that different sets of teachers can be allocated to each shift. Thus, choosing a better DSSS model and efficient use of teachers can enhance quality teaching.

Increasing wear and tear and demand for extra educational resources

Economically, overuse of material resources in DSSS calls for high maintenance costs and/or earlier replacement of the facilities (Kadzamira et al. 1996). DSSS may also require extra rooms to accommodate learners at convenient times and extra payment to educational personnel who work overtime (Bray, 2008). While saving on construction costs, DSSS may double the expenses on other educational resources. However, if properly planned, such unit costs may still outweigh those for the construction and operation of an entirely separate school. As DSSS operates 'two schools in one using the existing facilities (Orkodashvili, 2009), it may also timely increase educational access, particularly in urban areas.

Enhancing truancy and delinquent behaviours in learners

If learners stay idle during their free hours, they can indulge in various misconducts like drug and substance abuse and sexual immoralities leading to the contraction of STIs and HIV/AIDS.

DSSS in Maldivian schools increased the number of under 20-year-old youths being arrested for such delinquencies as street fights (Maldives Police, 2010 as cited in Sheryn, 2011: 82-83). Social costs like loitering in town were among the reasons why nations like Ghana (Ashong-Katai, 2013) opted for de-shifting. However, elementary and high school students in Lalibela and Axum, Ethiopia, revealed that they used their free time in highly prolific ways (Fairbank, 2005). Through guidance, students can do various educational and socio-economic activities that would enhance their holistic development.

What should be done to ensure the efficient and effective operation of DSSS without compromising educational quality

Upon realising that DSSS can be both costly and drawn out, Bray (2008) highlighted some alternative and complementary measures which could enhance quality education in DSSS schools. These include the need for:

- early replacement of facilities and provision of reconstruction costs to successfully cater for the two groups of learners, administrators and teachers,
- extra study rooms for the learners who come earlier before or stay late after their shift to reduce learner idling,
- optimal use of the allocated instructional time and the learners' free time by indulging in various profitable educational and socio-economic activities and co- and extra-curricular activities,
- teacher orientation on how to instruct other than teach to match with the limited time and finish the syllabi, and facilitate parental guidance programs for the learners,
- a consideration on the selection of learners at the PSLCE. The super genius should be selected to DSSS schools to ably cope with the pressure of limited classroom time,
- an intensification of such innovations as study circles that promote reading and discussions culture to help learners fully utilise their free time,
- sensitisation of all educational stakeholders on the importance of learners' holistic development. Empowering senior learners to supervise co- and extra-mural activities and lobbying for everyone's support,
- a consideration in terms of incentives to teachers who attend both shifts to help boost their income and motivate them to pursue progress opportunities,
- Government to allocate enough funding to the MoEST to effectively assist DSSS schools during the planning and implementation process,
- overtime systematic monitoring of DSSS at institutional, local and national levels to evaluate its success.

DSSS may create various educational and socio-economic challenges during and/or after its execution, however, there are various possible solutions towards the same. For the successful

organisation of the system, prior considerations have to be made on the challenges and their probable solutions. Decisions made on the applicable solutions would generally depend on the preferences of the concerned stakeholders. Thus, by involving them in the system's execution process, its strengths, weaknesses and appropriate solutions can be unveiled, thereby enhancing its operation and success. It is based on such a belief that this study sought such perceptions from the participants.

Theoretical framework

The study was guided by the Structural Functionalist Perspective of Society which was advocated by a French sociologist, A.R. Radcliff-Brown around the 1890s. It is a macro theory that sees society as a complex system whose parts work together to promote progress and stability. (Mooney, Knox & Schacht, 2007). The belief is that a society is a system of interconnected structures such as economic, political, educational, social and values that work together in harmony to maintain societal progress and stability. This implies that anytime one makes a decision and implements it in any of the structures, it will in turn affect the other structures. The structures need to adjust and accommodate the changes to ensure the continuance of societal stability and progress. Schools educate and train learners to occupy various positions in society. The introduction of secondary school DSSS mainly aimed at increasing access at lower costs, but it also helped solve or create other problems within or in the other societal systems which could enhance or hinder learner holistic development. Many countries such as Jamaica and Kenya implemented DSSS because of its educational and socio-economic advantages. However, other countries like Ghana and Singapore based on the educational and socio-economic disadvantages abolished it (Ashong-Katai, 2013). Thus, educational stakeholders can have positive or negative perceptions of DSSS on education quality which generally relate to the educational and socio-economic aspects of the social world. **Figure 2** elucidates the contention made in relation to the theoretical framework.

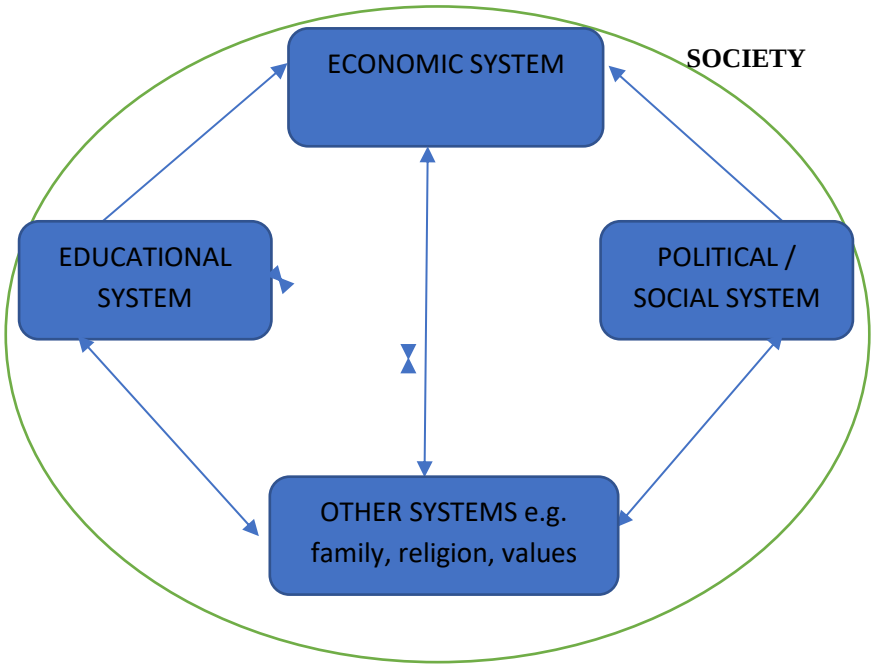

Figure 2: *An illustration of the societal systems and their interrelation with each other to enhance equilibrium and stability. Arrows show either positive or negative perceptions of a change in a given structure on the other structures (Adapted from Ashong-Katai, 2013:11).*

Research methodology

The study was primarily qualitative that emphasized how individuals experience and interpret their social world and words rather than numbers in the data collection and analysis process (Creswell, 2014). A case study design was used to achieve an in-depth analysis of secondary school DSSS. Data was collected using 4 Focus Group Discussions of 8 participants each from a purposively and conveniently selected sample of 32 Form 1 to Form 4 learners from Likangala secondary school in Zomba City. The 32-learner sample was opted for because it included a fair number of participants from each form and each shift in line with the available time for the study. Document analysis which involved reviewing some printed documents also helped in discovering the performance of learners in national examinations while operating on DSSS.

The collected data was thematically analysed in relation to the FGD items, literature review and theoretical framework. Maguire and Delahunt (2017) define thematic analysis as a process of identifying patterns and themes within qualitative data. The process involved getting familiar with the data by playing all recordings, writing participants' responses and reading the transcripts several times. Then initial code generation was done by reducing data into small chunks of meaning and assigning names to the segments. Themes were then searched by combining and splitting data extracts to sort them according to overarching themes. Later, themes were reviewed by reading data that was associated with each theme and ensuring that they supported the related theme. A thematic map helped in the next step of defining and naming the overarching themes and their potential sub-themes and related narratives. Finally, the data was transformed into an interpretable piece of writing as a final report. The thematic analysis process helped in obtaining a rich and inclusive, yet complex description of the data.

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Findings and Discussions

Learners' positive perceptions of educational quality in secondary school DSSS

Creation of free time to indulge in other profitable activities

The school understudy operated on an '*end on'* DSSS model hence providing free time in between shifts for learners to use in various prolific ways. Most participants echoed this, one of whom said, '*Munthu umatha kukhala ndi nthawi ngati mmene abwerera anzathu kudzawerenga.'*

(One can have time as observed by our friends who have come to study)

Participants also highlighted other advantages such as:

▪Creates time to work on our assignments or indulge in extra-curricular activities like sports,

- Provides time to our help parents with household chores and other social responsibilities like farming,
- Offers time to indulge in income-generating activities such as selling various commodities.
- Creates time for teachers to indulge in social and income-generating activities and/or assist in other mural and extra-mural activities.

The participants unveiled the various activities that they and their teachers indulge in during their free time. This echoed the views by Orkodashvili (2009) that secondary school DSSS provides free time in between shifts for learners and teachers to embark on various educational and socio-economic activities that can enhance quality education. DSSS was initiated in the education sector to enhance access to secondary school education. However, it also created time for the learners and teachers to indulge in various educational and socio-economic activities in and outside the education sector. For instance, instead of indulging in various forms of delinquencies during their free time, they would indulge in various profitable activities. This would not only help enhance quality education through their holistic growth but also help maintain the society's progress and stability.

Students' negative perceptions of educational quality in secondary school DSSS

Inadequate educational resources

Most students complained of limited school resources as among the hurdles to effective instructional activities. One participant said: *'Our laboratories have inadequate practical subject materials such that learners only practice when they are about to write examinations.* Another one complained of lack of enough space in the library and inadequate books when she said: '*Sometimes when we come during our free time to use the library we find that it is full and that most of the books have already been taken.'* They explained that such situations deprive them of hands-on learning experiences hence affecting performance during national examinations.

Inadequate teaching staff

The participants also complained of inadequate teachers when one said: *'Not all teachers teach in one shift only. Those who teach in both shifts become exhausted especially when teaching in the afternoon shift*. The study revealed that most teachers were not interested in teaching both shifts as there were no incentives attached to their extra work

Enhancing truancy and delinquent behaviours in learners

Participants revealed that most learners indulged in various delinquencies during their free time as one elucidated: *'When we come in the morning shift and others come in the afternoon you never know what some students will be doing. Instead of coming to school to study, some loiter around and do other things; smoking, especially boys; even some girls. When they come on campus, they also do what they were doing outside before coming into the campus.'*

As data was being collected, some learners were seen loitering around while waiting for their shift. It was also reported that some boys were found heavily drunk in a nearby locality. Such incidents could have been due to a lack of control measures and/or inadequate infrastructures to help hold learners who come early for their shift or who opt to leave later after their shift.

Failure to accommodate co- and extra-curricular activities

Although the school's timetable had co- and extra-curricular activities like physical education, these were placed after the normal knocking-off time, thereby reducing learner participation and teacher supervision as expressed by one participant, *Recently a poetry club was introduced, but now we don't meet because of limited time and lack of teacher supervision. Like here at this school we don't have a music club.'*

The participants expressed various concerns about DSSS. Such concerns echoed those of Ingale (2014) who elucidated that the reduced learners' classroom and school time deprives learners of other curricular, co- and extra-mural activities and enhances truancy and delinquency. The study revealed that the challenges that learners experienced in their learning process could be a result of such factors as a lack of thorough consultations with various stakeholders on how to operate the system. The school was just changed from SSSS to DSSS without extra provisional support from the government to cater for the additional learners. Thus, the school operated DSSS on a campus that was originally meant for SSSS. As a result, some of the equally important aspects of learning such as co- and extra-curricular activities that enhance learner holistic development were not prioritized due to the reduced learning time. The execution of secondary school DSSS created various educational and socio-economic challenges in and outside the societal institutions towards the achievement of quality education. Such a realisation helps institutional members devise possible ways around the challenges. This would not only help enhance the learner's holistic development but would also help ensure societal equilibrium and stability.

Students' opinions on what should be done to ensure the efficient and effective operation of DSSS without compromising educational quality

Regardless of the highlighted challenges of DSSS on education quality, participants were against the idea of its abolition. One participant said: '*Abolishing DSSS will mean that most students will not be attending school. For instance, there are many children here in Zomba against a few schools entailing that DSSS is helping to accommodate those who could have been idling.'*

Through the study, it was revealed that learner intake increased from 150 when it was on SSSS to 300 after implementing DSSS representing a 100 % increase. Thus, abolishing it would mean a setback in access to secondary education.

The participants then proposed some ways of improving its operation to enhance education quality such as:

- *The Ministry of Education should consider lengthening the school calendar.*

- *Teachers should be encouraging us to participate in clubs and societies. Clubs help improve our characters … they should be pasting on the notice boards that this time is for such an activity. In addition, we should be well informed on the benefits of participating in various activities,*
- *Teachers should be committed, not just creating a club today and leaving it to be run by ourselves. It becomes difficult for us to do the activities on our own because we undermine each other. They should spare part of their free time to supervision co- and extra-mural activities,*
- *There is a need to supply additional instructional books and other learning resources to cater for the two shifts,*
- *A teacher should attend one shift only as they become stressed if they attend to both shifts hindering our understanding.*

Participants had both positive and negative perceptions of education quality in DSSS; however, they did not opt for its abolition as they concurred with views by Sheryn (2011) that it could limit learner access to secondary education and increase delinquency cases. The study discovered that improving quality in DSSS would be possible as learners proposed some ways on how the policy should operate and the various roles that stakeholders should play.

According to structural functionalism, DSSS sought to address educational issues, but it also directly or indirectly addressed or created other issues in education and other socio-economic institutions. The research findings revealed that DSSS had indeed helped increase secondary school enrolments in line with Kadzamira et al., (1996) pilot study findings. Even so, learners revealed other positive and negative perceptions of the system regarding the achievement of education quality as also unveiled in the study by Singadi, et al., (2015). To help maintain societal stability within and outside the education structure, the societal structures have to adjust accordingly by playing their various educational and socio-economic roles towards improving the operation of DSSS without compromising education quality.

Conclusions and Implications

The main positive perception of DSSS towards the achievement of quality education is the provision of free time in between shifts for learners to do other prolific educational and socio-economic activities. This calls for various stakeholders to realise such potentials and fully utilise them in the course of achieving quality education.

Students' negative perceptions of DSSS mainly relate to the limited supply of various educational resources and inadequate time for co- and extra-mural activities that would enhance the achievement of education quality. Such a situation may put off learners from working hard believing that they were selected to inferior schools and hinder their holistic development. This implies that merely implementing DSSS without considering and finding possible solutions to its perceptible challenges can barely enhance quality education.

Most students believe that DSSS has increased access to secondary education and that achieving quality education is possible, hence there is no need to abolish it. Various stakeholders just need to play their diverse roles in improving the system to enhance learner holistic development. This means that if properly planned and where various stakeholders provide the necessary support towards the implementation and operation of DSSS, education quality can be achieved.

The Zomba City case has revealed that DSSS can help increase access to secondary education while creating both positive and negative stakeholder perceptions towards the achievement of education quality. Based on such revelations, various stakeholders need to acknowledge such views and provide the schools with the necessary support for creating an environment that would enhance learners' holistic development. If wisely implemented and managed, DSSS can be the best option for both developed and developing nations for increasing access to secondary education at lower costs through its double intakes while enhancing education quality.

Recommendations

In light of the study's findings, the following recommendations were made:

- The Ministry of Education Science and Technology should consider providing extra support towards the operation of DSSS to cater for the double learner intakes,
- The Ministry should also conduct regular monitoring and evaluation of the DSSS policy to ensure its efficiency and effectiveness,
- The Teaching Service Commission should employ more teachers to cater for enormous teacher shortages,
- Teachers should be incentivised so that they spare part of their free time to help learners in other curricular, co-and extra-mural activities,
- Learners should be encouraged by both teachers and parents to effectively and efficiently utilise their free time by indulging in various educational and socio-economic activities.

References

Ashong-Katai, L. N. D. (2013). *Abolition of the double-shift system of schooling in Ghana: Policy and its implementation in Ghana*. Trykk: Reprosentralen en UniversitetetOslo.

Bray, M. (2008). *Double-Shift Schooling: Design and operation for cost-effectiveness (3rd ed.).* Paris: UNESCO.

Chuck, A. (2009). Disparities in the system. The effects of Free Primary Education (FPE) on the quality of education in Nairobi public schools. SIT Kenya.

Creswell, J.W. (2014). *Research design: Qualitative, quantitative and mixed methods approaches (4th ed.).* Los Angeles: Sage.

Dye, T.R. (2013). *Understanding public policy (14thed.).* The United States of America. Pearson Education Inc.

Fairbank, A. (2005). *Conversation with elementary and high school students' in Lalibela and Axum, Ethiopia.* Retrieved from: www.acfairbankconsultingcaNov05.htm on 16/04/2018.

Government of Malawi (2017). *2016/2017 Budget Review Meeting Speech*. Minister

Emmanuel Fabiano. February 7. Retrieved from: https/zodiakmalawi.com/top-stories/Fabiano-expl on 07/08/2018.

Ingale, A. R. (2014). Role of co-curricular activities in students' life. *Scholarly Research Journal for Humanity Science and English Language, 1*/1V, 592-594.

Kadzamira, E.C., Chonzi, R., Hiddleston P. & Chibwana, M. (1996). Secondary school double-shift pilot programme: An evaluation. *Draft Report*. UNIMA:CERT.

Kurebwa, M. & Lumbe, A. (2015). Teachers voices: Challenges of double-shift sessioning in Gweru Urban Primary Schools. *International Journal of Innovative Research and Development, 4*(3), 38-41.

Linden, T. (2001). Double-shift secondary schools: Possibilities and issues. Washington, DC: *Human Development Network Secondary Education Series*.

Maguire, M. & Delahunt, M.I. (2017). Doing a thematic analysis: A practical step-by-step guide for learning and teaching scholars. *All Ireland Journal of Teaching and Learning in Higher Education (AISHE J) Volume 8, Number 3.* Dundalk Institute of Technology. Retrieved from: http//ojs.aishe.org/index/php/aishe-j/article/view/335 on 31/10/2018.

MoES&C (2001). *Malawi Education Sector: Policy and Investment Framework (PIF*). Lilongwe.

MoEST (2016). *Strengthening governance and management for improved access and quality.* The 2015/16 Education Sector Performance Report. Lilongwe, Malawi.

MoEST (2018). *Malawi Education Statistics*. Lilongwe, Malawi.

Mooney, L. A., Knox, D. & Schacht, C. (2007). *Understanding social problems (5th ed.).* Belmont, CA: Wadsworth Publishing.

Mulkeen, A. & Chen, D. (Eds.) (2008). Teachers for rural schools: Experiences in Lesotho, Malawi, Mozambique, Tanzania and Uganda. *Africa Human Development Series, 1*(1). Washington, DC: World Bank.

Orkodashvili, M. (2009). *Double-shift schooling and EFA Goals. Assessing economic, educational and social impacts*. Tennessee: Vanderbilt University.

Singadi, G, Goronga, P, Gatahwi, L. and Mutangirwa, L. (2014). Teachers and students perceptions on double-session schooling on ordinary level students' performance in geography. *The International Asian Research Journal, 2* (1), 18-27.

Sheryn, A. (2011). *Improving efficiency of schooling in the Maldives: Is de-shifting a desirable policy direction?* A Master of Arts in Economics Thesis, Massey University: Palmerstone North, New Zealand.

Van Damme, D. (2017). Do countries pay their teachers enough? *Education Indicators in Focus No: 53*. Retrieved from: http//www.oecd/education/education-at-a-glance19991487htm on 23/11/2018.

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Notes for contributors

i. The manuscript should be original, and must not have been published previously anywhere. Do not submit material that is currently being considered by another journal or book.

ii. The Manuscript should not be longer than 25 pages of double spacing, Times New Roman, 12 point font, 3cm margins all round including an abstract, texts, tables, footnotes, appendixes, and references. **All of these must be written in APA style format**.

iii. The title should not exceed 15 words, and an abstract of up to 200 words should precede the main text (accompanied by a maximum of 6 key words or phrases should they be required in the article).

iv. The first page of the article should carry the complete title and names of author(s) and their affiliations. The second page should also carry the complete title, (but no names of the author(s) to ensure anonymity in the review process) the abstract and part of the article's introduction.

v. The manuscripts should be in MS Word format and should be submitted electronically to the Editor-in-Chief, Malawi Journal of Education and Development (MJED), Emal: mjed@cc.ac.mw