



Effect of Educational Equity on the Quality of Education in Selected Schools in Kwimba District, Tanzania

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Authors' contributions

This work was carried out in collaboration among all the authors. All the authors have read and approved the final manuscript.

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ABSTRACT

This study examined the effect of educational equity on the quality of education specifically, how the equitable distribution of resources affects quality education in public secondary schools in Kwimba district. It employed a mixed research approach with an embedded design and comprised 271 participants, including students, teachers, heads of schools, ward education officers (WEOs), and district education officers (DEOs). The study was carried out in kwimba district, Mwanza Tanzania from July,2023 to September, 2023. Both probability and nonprobability sampling techniques were used to select the participants. The data were collected through questionnaires, interviews and document reviews. The findings revealed that despite the number of challenges, the equitable distribution of resources significantly affected the attendance, retention, and performance rate of students. The results show that equity in resources improves education through the provision of nutrition and food, fee-free programs, the equitable distribution of teaching and learning materials,

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the construction and rehabilitation of infrastructure, and the allocation of qualified and adequate teachers. Basing on the findings, it was concluded that to improve the quality of education in secondary schools in Kwimba district, there should be a concerted effort to ensure the equitable allocation of educational resources. There should be a collaborative effort among parents, the community and the government to ensure that the challenges that limit students from accessing school resources are minimized or eliminated.

Keywords: Educational equity; equitable allocation of educational resources; quality education; public secondary schools; quality of learning; Tanzania.

1. INTRODUCTION

Educational equity is not a new policy in the field of education, as it lies at the heart of the sustainable development goal (4), which emphasizes inclusive and equitable quality education and promotes lifelong learning opportunities for all [1]. Equity, as included in this study, refers to the fair allocation of resources and opportunities among diverse children for them to achieve the same outcomes regardless of the starting conditions and barriers. This does not imply that all students achieve the same academic results but rather that academic discrepancies are unconnected to students' backgrounds or to economic or social situations in which students have little influence [1]. The burden of realizing this convention has been placed under governments, with a number of global initiatives and mechanisms being put in place by multilateral agencies to support and enable this process. Consequently, many countries, both developed and developing, have integrated equity in their education systems [2].

For example, in Malaysia, the commitment to educational equity focused on ensuring that all schools and students have the same opportunity and ability for excellence inclusive of national and national type schools so that access, equity and quality can be improved [3]. Similarly, in Ghana, to address the inequalities between rural secondary schools that cater to a large number of disadvantaged students and urban secondary schools, the government implemented the free senior high school policy (FSHS). This policy was designed to ensure equal access to high-quality secondary education by removing financial obstacles [4]. This is also evident in Kenya, where the government is providing financial assistance to day secondary schools and devolving services to the county level, including secondary education [5].

The government of Tanzania committed to equity in education with the same objective of improving

the quality of education for disadvantaged students who were then subjected to exclusion because of their disabilities, gender, socioeconomic background, and geographical location (rural areas) [6]. In fact, the government introduced a fee-free education scheme in 2015 that directed public schools to ensure that secondary education is free for all children. This included the removal of all forms of fees and contributions that were provided by parents or guardians. It also included the construction and rehabilitation of school infrastructures, the supply of teaching and learning materials, and the allocation of adequate teachers to all public secondary schools [6].

Like other districts in Tanzania, the Kwimba district is also implementing equity policies in the provision of secondary education. The Kwimba district Strategic Plan 2016–2021 shows that the district is committed to improving access, quality, and equitable secondary education delivery. Almost every ward in Kwimba district has a secondary school. Thus, there are 31 public secondary schools scattered throughout each ward. This makes secondary education accessible to children from both urban and rural places [7]. Additionally, the district has committed to enrolling and providing a supportive learning environment for all disabled students in secondary schools (7). Furthermore, since 2015, the district has been providing fee-free education for all students admitted to secondary school. These efforts resulted in an increase in the enrolment rate since the removal of financial barriers opened the door for many disadvantaged individuals to obtain access to secondary education. This concurs with the findings of a study in the Ruangwa district in Tanzania, which revealed that the introduction of fee-free education increased the enrolment rate and attendance rate among students because most of the parents were unable to afford the cost [8].

However, it is not well documented whether educational equity raises the quality of education in the context of the Kwimba district. This study, therefore, was inspired by the rising concerns of various stakeholders about the uncertainty of the effects of education equity in resource allocation on educational quality measured by students' attendance rate, students' retention rate, performance rate and students' transition rate in public secondary schools, which present significant challenges to policy-makers. Using quantitative measures of teachers and student-level data, this study explored the effects of equitable resource allocation on improving the quality of education.

2. LITERATURE REVIEW

Equitable resource allocation refers to the distribution and utilization of resources (people, materials, and money) to create students' experiences that enable all students to achieve empowering and improved learning outcomes regardless of their race, disability or income. It includes distributing financial resources while considering schools with high percentages of disadvantaged students, distributing qualified and experienced teachers between rural and urban schools, and considering schools with disabled students. It also includes distributing material resources while considering the needs of the students. Studies indicate that equitable resource distribution increases the quality of education in a given field by maintaining high student enrolment, attendance, completion, and retention rates and improving students' performance and attainment of noncognitive skills (2). However, practically every educational institution faces difficulties with the problem of equitable resource allocation.

2.1 Equitable Distribution of Teachers

The equitable distribution of teachers, which includes not only allocating teachers to school but also motivating and improving their working conditions, determines the level of quality learning that will be provided. The studies show that teachers' motivation is directly linked to students' learning achievements. A study conducted in the United States of America (USA) revealed that an increase in teachers' salaries is associated with a noticeable increase in the proportion of teachers who are experienced, qualified and well educated [9]. Similarly, it was found that a combination of lack of motivation and incentives are among the factors responsible

for the inequitable distribution of teachers in the Ruangwa District Council [10]. This implies that for schools to perform better, they should have competent and motivated teachers. Conclusively, the study calls for government initiatives that could offer stronger encouragement and support for ensuring that all students have equal access to competent and successful teachers.

2.2 Equitable Allocation of Funds

Educational inequities are also created by the uneven distribution of financial resources. The literature reveals that uneven allocation of education funds between high-income and low-income areas creates a student achievement gap. A study conducted in the USA revealed that uneven allocation of education funds between high-income and low-income areas created learning outcome disparities between the types of students from two different social classes [11]. Similarly, in Kenya, it was observed that a lack of enough funds was a major challenge in mobilizing and allocating learning resources in secondary schools. Consequently, uneven funding led to a high rate of school dropout, an increase in the crime rate and unemployment rate and poor academic results [12]. Therefore, money is the clearest indicator of educational equity; however, most educational systems, especially in Africa, lack sufficient funds to support socioeconomically disadvantaged students.

2.3 Equitable Distribution of Teaching and Learning Materials

Teaching and learning materials have equal importance for student achievement. Students with enough learning materials, such as books, computers, internet networks, laboratories, classrooms, libraries and other materials, have more opportunities to learn and use them to succeed in their academic achievement than do students with less learning materials [11]. It was revealed in Pakistan that poorer availability, inefficient allocation, and inadequate utilization of instructional materials result in resource waste, reduced efficacy, and poorer academic performance of students [13]. This means that learning materials can have an enormous effect if they are properly allocated, equalized for each student, and used effectively. This finding corresponds to what was found in the Misungwi district in Tanzania, where sufficient learning and teaching resources are available in rural secondary schools in the Misungwi district, but

these resources are not well managed in teaching and learning processes [14]. Generally, the literature reviewed indicates that equitable resource allocation improves the educational quality of disadvantaged students; however, most of the related studies were conducted outside the context of the Kwimba district, focused on primary and high learning institutions, and others were based on a single research approach. This study therefore examined the effects of education equity in the context of public secondary schools in the Kwimba district based on equitable resource distribution.

3. METHODOLOGY

3.1 Research Approach

This study aimed to investigate whether the equitable distribution of resources affects quality education in public secondary schools in the

Kwimba district. The study employed a mixed research approach by embedding qualitative data within dominant quantitative data. The researcher collected both qualitative and quantitative data at the same time, and the less qualitative data that were collected by using semistructured interviews were embedded within a dominant quantitative dataset that was collected by using a closed-ended questionnaire.

3.2 Targeted Population

The targeted population of the study was 2349 participants from public secondary schools. It comprises 2200 secondary school students, 138 secondary school teachers, 5 ward education officers (WEOs), 5 heads of schools (HOSs), and 1 district secondary educational officer, including students, teachers, heads of schools, ward education officers (WEOs), and district education officers (DEOs).

3.3 Sampling Procedure

Table 1. Summary of participants' sample

Participants' Category	Population	Sample	Percentage (%)	Sampling Technique
Schools	31	5	16	Simple Random Sampling
DSEO	1	1	100	Purposive Sampling
HOS	31	5	16	Purposive Sampling
WEO	30	5	17	purposive Sampling
Teachers	138	40	28	Stratified Sampling
Students	2200	220	10	Stratified Sampling
Total	2400	271	11.2	

Source: Researcher

3.4 Description of the Data Collection Methods and Instruments

This study employed questionnaires and semistructured interviews as methods for data collection. Under these methods, interview questions and questionnaire questions were used as instruments for data collection.

3.5. Validity of the Instruments

The research instruments in this study were validated through a) a pilot study, b) face validation, and c) content validation. The pilot project was performed in a public secondary school in the Kwimba district that was randomly chosen, and it included 10 participants—2 teachers and 8 students. The real study did not involve the study's participants. In this study, the face and content of the research instruments were validated by university research experts at St. Augustine University of Tanzania. The researcher sent questionnaires to the supervisors for validation to determine whether they had a logical link with the objectives and the relevance of the content, grammar and arrangement of the questions.

3.6 Reliability of the Study

To guarantee the reliability of the questionnaires, the study used the split-half technique, where the researcher haphazardly selected 10 teachers for testing the reliability of the questionnaires prepared for teachers and randomly selected 10 students for testing the reliability of the questionnaires prepared for students. Both teachers and students were divided into two groups based on even and odd numbers. Then, the questionnaires prepared for the students were administered to the two groups of students to complete the information needed, while the questionnaires prepared for the teachers were administered to the two groups of teachers to complete the information needed. The results from one part of the teachers were correlated with the results from the second part of the teachers to see the relationship; similarly to the students, the process was performed to correlate the results. The correlation coefficient of the instruments was calculated with SPSS version 20, where a correlation coefficient of 0.81 was obtained from the questionnaires prepared for students and 0.84 was obtained from the questionnaires prepared for teachers. It is recommended that a ratio of 0.8 or higher indicates strong split-half reliability [15]. The reliability of the interview questions was determined using trustworthiness and authenticity, which are determined by four indicators: credibility, transferability, dependability and confirmability.

3.7 Data Collection Procedure

For the quantitative data, the questionnaires were administered personally to the teachers and students of the sampled secondary schools to complete the questionnaires. They were personally administered to ensure a high rate of return. Half an hour was given for respondents to complete the questionnaires. Then, the questionnaires were collected for analysis. For qualitative data, the researcher conducted face-to-face interviews with DEO, WEO and HOS participants using predetermined questions while noting down and audio taping the responses from the participants. The appointment was sought from the DSEO, WEO and HOS at the time of the interview.

3.8 Data Analysis Procedure

This study processed, coded, classified, and analysed quantitative data by using descriptive

analysis with the help of the Statistical Package for Social Science (SPSS) Version 20 program. The qualitative data were chronologically arranged, summarized and classified via thematic analysis to obtain the general themes. That is, after the collection of data, the researcher transcribed the data, grouped the responses into themes, and developed a table to summarize the themes and to write down how these themes reflect or differ from the experiences reported by other researchers.

4. RESULTS AND DISCUSSION

This study aimed to investigate the effects of the equitable distribution of resources (human resources, material resources and financial resources) on improving the quality of education in public secondary schools. The questionnaires for this specific objective consisted of statements describing how the equitable distribution of resources contributes to improving the quality of education. They include school feeding programmes, fee-free secondary education programmes, the provision of adequate learning and teaching materials, the construction of adequate and friendly infrastructure and the distribution of adequate and qualified teachers. The respondents were asked to show the extent to which these statements were applicable in their school context in relation to quality education by ranking the scales using 5=very large extent, 4=large extent, 3=some extent, 2=little extent and 1=no extent. The results are as follows.

4.1 Nutrition and Food Program

In Table 2, the teachers' responses indicate that 19 respondents, similar to 47.5%, revealed that to a high extent (a very large extent and a large extent), the school feeding program improved quality education by increasing the attendance, retention and performance of students. Additionally, the Table 3 student responses indicate that 132 participants (60%) revealed that to a high extent, the school feeding program improved quality education by increasing the attendance, retention and performance of students. Inconsistency of opinion between teachers and students implies that the school feeding program is probably ineffective in secondary schools, either because it was accessible only for students whose parents were capable of contributing or because the accessibility of food for all students was minimal. Nevertheless, the qualitative data revealed that

Table 2. Teachers’ responses to the effects of equitable resource distribution on quality education

Value	1	2	3	4	5
The school feeding program	-	5 (12.5%)	16 (40%)	15 (37.5%)	4 (10%)
Fee free secondary education program	1 (2.5%)	1 (2.5%)	6 (15%)	17 (42.5%)	15 (37.5%)
Fee free program leads to scarcity of resources	5 (12.5%)	1 (2.5%)	13 (32.5%)	9 (22.5%)	12 (30%)
Distribution of learning and teaching materials	1 (2.5%)	12 (30%)	7 (17.5%)	12 (30%)	8 (20%)
School contribution	7 (17.5%)	8 (20%)	11 (27.5%)	5 (12.5%)	9 (22.5%)
Distribution of School Infrastructure	1 (2.5%)	3 (7.5%)	15 (37.5%)	13 (32.5%)	8 (20%)
Distribution of teachers	1 (2.5%)	7 (17.5%)	13 (32.5%)	10 (25%)	9 (22.5%)

Source: Field Data (2023)

Table 3. Students’ responses to the effects of equitable resource distribution on quality education

Value	1	2	3	4	5
The school feeding program	4(1.8%)	19 (8.6%)	65 (29.5%)	83(37.7%)	49 (22.3%)
Fee free secondary education program	4 (1.8%)	12 (5.5%)	36 (16.4%)	60 (27.3%)	108 (49,1%)
Fee free program leads to scarcity of resources	56 (25.5%)	33 (15%)	41 (18.6%)	45 (20.5%)	45 (20.5%)
Distribution of learning and teaching materials	18 (8.2%)	20 (9.1%)	51 (23.2%)	56 (25.5%)	74 (34.1%)
School contribution	100 (45.5%)	44 (20%)	33 (15%)	22 (10%)	21 (9.5%)
Distribution of School Infrastructure	18 (8.2%)	29 (13.2%)	37 (16.8%)	59 (26.8%)	77 (35%)
Distribution of teachers	10 (4.5%)	24 (10.9%)	56 (25.5%)	60 (27.3%)	70 (31.8%)

Source: Field Data (2023)

all secondary schools were obliged to implement meals for students to provide both educational and health benefits to most vulnerable children. Nutrition and food had far reaching importance to the quality of education, as they motivated many students to be enrolled in secondary school. It also increased the attendance and made students pay attention to the classroom and hence the overall performance of the students. DEO was reported saying

“We are now implementing provision of food to students through the program known as mpango wa shule salama (safe school program for secondary schools) initiated by the ministry of education which among other objectives, it aims at strengthening food and nutrition provision services to students and we have disbursed school feeding guidelines to secondary schools. The program requires the school to involve parents and the surrounding community and local

government to ensure that students obtain access to food and nutrition services Yeah! This helps to reduce students’ short-term hunger, improve enrolment and attendance and improve students’ cognitive health and academic performance.”

However, despite efforts to ensure food security for students, the program is facing challenges in some secondary schools in rural areas. One head of school said,

“.....The challenge that we face in the implementation of school feeding programs is that the rate of food contribution from the parents and community surrounding the school is low due to poor harvest people experience because of drought and climatic change, as you know the majority of people here depend on agriculture.”

This statement verifies that although the program contributed to improving quality education by increasing students' enrolment, attendance and performance, the accessibility of nutrition and food in secondary schools was still uncertain because the school feeding program depended greatly on the economic wellbeing of the parents since no government budget was specified for the implementation of the program. This differs from Malaysia, where the government provides supplementary funds (1.0 billion) every year to support students from poor families through meals, school fees, hostel fees, school uniforms and transport costs. As a result, there were improvements in academic performance, retention rate, completion rate and attendance rate among disadvantaged students [3], as Maslow's hierarchy of needs theory insists that when children have access to food, water, and clean restrooms at school, they learn more and achieve success at greater levels [16]. Therefore, the unpredictability of the availability of food in secondary schools ultimately demotivates students' performance and attendance and ultimately leads to school dropout because it is suggested that it is difficult for a student who is hungry and weary to concentrate on their studies [16]. Therefore, schools should take serious measures to implement food programs in secondary schools to address this situation.

4.2 Fee-Free Secondary Education Program

The contribution of fee-free education programs to improving the quality of education in secondary schools in Tanzania cannot be underestimated. The Table 2 teachers' responses indicate that 32 participants (equal to 80%) revealed that, to a large extent, the fee-free secondary education program improved the quality of education by increasing students' enrolment in secondary schools, attendance and student retention. In addition, the responses of the students in Table 3 indicate that 168, similar to 76.4%, of the respondents revealed that fee-free secondary education increased student enrolment, attendance and retention to a high extent. The findings establish that the majority of the participants supported the contribution of fee-free secondary education to opening the door for the majority of students from all backgrounds to obtain access to secondary education. This finding corresponds with previous studies suggesting that the introduction of a fee-free program, which is very popular as "Elimu Bure", ensures the enrollment of a large number of

students in secondary schools since it helps a large number of female students access secondary education [6].

To obtain more details on the effects of fee-free secondary education on quality education, the researcher conducted interviews with DEOs, WEOs and school heads. It was reported that the government introduced fee-free education as a way to remove economic barriers to obtaining access to secondary education for students from low-income families. Providing a response to the interview, one head of school was quoted:

"Since the introduction of fee-free secondary education, the number of students has been increasing rapidly, even those who were dropping out on the basis of inability to pay school fees have no more reasons. For example, before the program, we used to admit eighty, ninety to one hundred students. but now it starts at two hundred students and above."

(Interviewee School B, July 2023)

This indicates that fee-free education programs to a high extent have increased the enrollment of a large number of students, including female students who were previously subjected to early marriage, domestic work and children's careers, due to the inability of the parents to pay school fees. Additionally, this indicates that fee-free education has improved student retention, as many students who were dropping out on the basis of inability to pay school fees are retained. Nevertheless, the increase in enrolment is expected to align with the overcrowded classroom and lack of learning resources in secondary schools. Therefore, this study also wanted to reveal whether fee-free secondary education has resulted in a shortage of resources and overcrowded classrooms. The results from the teachers' responses in Table 2 indicate that 21 teachers (52.5%) revealed that, to a high extent, fee-free secondary education led to overcrowded classrooms and a shortage of learning resources in secondary schools. In contrast, Table 3 shows that 90 students, which is similar to 41%, reported that to a high extent, fees for free secondary education contribute to overcrowded classrooms and a shortage of learning resources. The division of opinion indicates that there was an uneven distribution of school resources among secondary schools, meaning that in some secondary schools, the introduction of fee-free programs did not go hand

in hand with the improvement of infrastructure and increase in the supply of teaching and learning resources. This concurs with the findings of previous studies that found that the budget deficit due to fee-free secondary education hinders efforts to achieve equity since some schools are facing challenges in running daily school activities [6]. Therefore, it is an opinion that schools with a scarcity of resources should find other sources of income through resource mobilization to secure the situation.

4.3 Adequate Supply of Learning and Teaching Resources

Disadvantaged students also need extra support from learning resources because of their socioeconomic background, on which they have no control. Table 3 shows that 20 (50%) of the teachers' responses revealed that to a high extent, the supply of learning and teaching materials was adequate to support students' academic performance. Similarly, the responses of the students in Table 3 indicated that 130 students, equivalent to 59.6%, showed that to a high extent, the learning and teaching materials were adequate and improved students' performance. Almost half of the participants supported the presence of adequate learning materials in their schools. The findings imply that in the study area, there was an uneven distribution of teaching and learning materials. This means that while some secondary schools had an adequate supply of learning and teaching materials to support the performance of students, others had a limited supply. In addition, the information from the interviews revealed that the schools had teaching and learning materials such as text books, reference books, and teaching aids but were not adequate compared to the number of students. One head of school said,

"We receive books of all subjects that are taught here through the Tanzania Institute of Education (TIE), but there are only a few compared to the number of students we have. So we keep them in one room for students to access them any time they want."

Interviewee school A (2023)

Such a situation may be a challenge for the academic achievement of students from poor and uneducated families whose parents are only capable of buying food for them and no other

facilities. This is in line with the findings of a study conducted in the Rombo district, Tanzania, which revealed that schools with inadequate learning and teaching materials, such as models, posters, laptops, books, maps, and past papers, are likely to perform poorly, but those with adequate learning and teaching materials are likely to perform well [17]. Therefore, the government should not be satisfied with only the provision of fee-free secondary education programs without the adequacy of learning and teaching materials.

4.4 School Infrastructure

The school environment is another factor that determines the retention and academic achievement of students who come from different socioeconomic backgrounds. The Table 2 teachers' responses indicate that 21 teachers (52.5%) revealed that to a high extent, school infrastructure, such as classrooms, latrines, laboratories, libraries, electricity and water supply, was adequate to support the retention and academic performance of students. Similarly, Table 3 shows that 136 students, equivalent to 61.5%, reported that to a high extent, the infrastructure was adequate and that the quality of education was improved by retaining students and improving their academic performance. This means that the majority of respondents support that infrastructures were adequate to improve the achievement of students, while few did not support them. This finding implies that the majority of secondary schools had adequate infrastructures that were necessary to support student achievement when compared to a few that had deficits. In addition, interviews revealed that the construction and rehabilitation of infrastructures such as classrooms, laboratories, hostels, libraries, and latrines contributed to improving the quality of education in secondary schools by improving the performance of students, retaining them and increasing their attention. One ward education officer reported,

"In my ward, we have constructed quality classrooms and hostels for female students, as you can see through the project called mradi wa uviko and through mradi wa pochi la mama. We have no more shortage of classrooms, and our students are no longer walking long distances to come to school; the problem we have here is water; we depend on water from the wells in our community surrounding the schools.

This quotation indicates that the government was working hand in hand with development partners to improve the learning environment in secondary schools to give disadvantaged students an opportunity to access quality education. This corresponds to Ghana, where the government, in collaboration with the World Bank (WB), introduced secondary education improvement projects (SEIP) to support deprived schools with infrastructures, training teachers of low-performing schools, providing ICT tools, and constructing new secondary schools, the efforts that paid off by increasing enrolment rates, performance rates, retention rates and completion rates among disadvantaged students [4]. However, in some secondary schools, infrastructure was still a challenge. One head of school said,

“Classrooms are adequate but need rehabilitation, no hostel, so our students spend most of their time walking to and from school, and we have a shortage of toilets for both male and female students, as we have only ten latrines to accommodate 639 students. This situation contributes to increased truancy and school dropout among students, especially female students, because some of them become pregnant along the way to school”.

Interviewee School D (July 2023)

Such a situation negatively affects the academic development of students, especially girls, because the environment was not supportive of sustaining them; as a result, they ended up dropping out. To support this, it was asserted that although learning opportunities were granted to both genders, there were complaints regarding school environmental challenges such as inadequate sanitary facilities, ineffective counselling services, low parental involvement in school gender activities, and minimal protection that posed danger to girls [18].

4.5 Equitable Teacher Distribution

Since teachers are central to what takes place in the classroom, the equitable distribution of teachers is essential for ensuring that all students have equal opportunities to learn. Equitable teacher distribution not only involves the allocation of enough teachers to schools but also involves motivating and allocating teachers according to the needs of students in that particular school. The Table 2 shows that 19

teachers, equivalent to 47.5%, revealed that to a high extent, the equitable distribution of teachers contributed to improving quality education by increasing students' academic performance. Additionally, Table 3 shows that for 130 students, a number similar to 59.1 indicated that to a high extent, equitable teacher distribution contributed to improving education quality. This means that almost half of the respondents supported that there was an equitable allocation of teachers that contributed to improving students' performance, while others did not. This division of opinion indicates that there was uncertainty regarding the equitable distribution of teachers in secondary schools; hence, its impact on improving quality education was minimal. This is probably because there was a shortage of teachers in secondary schools in the study area or because there was a low incentive for teachers in public secondary schools in the study area. In addition, interviews revealed that the schools had an adequate number of teachers, especially social science subject teachers, as the government continued recruiting teachers every year. This situation reduced the workload of teachers; as a result, they had enough time to support students academically. In some secondary schools, however, natural science subject teachers are still a challenge. One head was reported saying

“...The problem is science subject teachers like teachers of chemistry, physics, biology and basic mathematics. We use to hire temporary teachers through parents' contributions to assist us in this area; however, they come and go because of low payment, and others get better employment in town.”

Interviewee School C (July 2023)

The quotation verifies that in some secondary schools, there were inadequate distributions of teachers that forced the schools to find alternatives by hiring temporary teachers through parents' contributions. This is also observed in the UAS, where the study revealed that the distribution of teachers is not equitable within regions, districts, or schools. Schools serving a large number of students from poor families are less likely to be taught by high-quality and experienced teachers [9]. Therefore, the shortage of science subject teachers in some secondary schools might affect the performance of students, as many teachers hired are from six leavers who do not have teaching professionals and are not well paid.

Generally, the results indicate that equitable resource distribution is perceived to have a significant impact on education quality. It was established that equity in resources improves education through the provision of nutrition and food, fee-free programs, the equitable distribution of teaching and learning materials, the construction and rehabilitation of infrastructure, and the allocation of qualified and adequate teachers. Furthermore, the findings indicate that some schools had a shortage of school infrastructure, teaching and learning materials, a shortage of natural science subject teachers, and a shortage of funds for incentives for teachers. This finding corresponds to previous studies that found that although fee-free projects and the abolition of school money contributions ensured equity among the population in Tanzania, the budget for secondary schools is too small to accommodate needs [6]. This ultimately affects the effort to achieve equity since some schools are facing challenges in performing daily school activities. The government should identify and increase the budgets of these schools with deficits for the improvement of students and nations at large.

5. CONCLUSION AND RECOMMENDATIONS

The research findings showed that the equitable distribution of resources improved the quality of education through school feeding programs, fee-free secondary education programs, the provision of adequate learning and teaching materials, the construction of adequate and friendly infrastructure and the distribution of adequate and qualified teachers. The findings also indicated that these initiatives contributed to improving students' enrolment, attendance, retention, and confidence and subsequently improved their academic performance. In addition, the findings also revealed that there were several challenges that faced equitable resource distribution in secondary schools, such as shortages of infrastructure such as toilets, hostels, water supply, and libraries in some secondary schools, shortages of funds to run daily school activities, shortages of natural science subject teachers, low rates of food contribution from parents, and shortages of teaching and learning materials.

Based on the findings, it can be concluded that resource distribution was perceived to have a greater impact on improved-quality education in the context of the Kwimba district. The relatively

consistent responses regarding equitable resource allocation, such as the provision of nutrition and food to students, the supply of adequate learning resources, the construction and rehabilitation of school infrastructures, fee-free secondary education programs and ensuring that qualified teachers are adequate and motivated to support students, underscore its significance in enhancing quality education. Therefore, schools should collaborate with parents, the community and the government to minimize or eliminate the challenges that limit students from accessing school resources.

COMPETING INTERESTS

The authors declare that no competing interests exist.

REFERENCES

1. OECD. Equity in Education: Breaking Down Barriers to Social Mobility. PISA, OECD Publishing; 2018.
2. Omoeva C. Mainstreaming equity in education. Education policy and data center; 2017.
3. Nordin, A. Rexamining implementation of policy on equity in education in Malaysia. International journal for educational studies; 2012
4. Banson M. Achieving quality and equity in Ghana's secondary education: Strategies, opportunities and constraints. OSLO Metropolitan university; 2022.
5. Nyatuka B, Bota K. Equity In access to secondary education in Kenya: a historical perspective. Journal of education and practice; 2014.
6. Kambona SF. Equity outlining and major strategies for its realization in Tanzania lower secondary education. The World Voice Nexus; 2020.
7. United Republic of Tanzania. Kwimba district Strategic Plan 2016 – 2021. URT; 2017.
8. Mbawala M. An assessment of the implementation of fee free education in Tanzania: a case of Ruangwa district, Lindi region Tanzania. Open University of Tanzania; 2017.
9. Adamson F, Darling-Hammond. Funding disparities and inequitable distribution of teachers: Evaluating sources and solutions. Stanford University; 2012.
10. Lusigu J. Factors for unequal distribution of primary school teachers in Ruangwa

- district council, Tanzania. Journal of education and practice ISSN 2222-288X; 2013.
11. Yao Q. Determine the impacts of uneven distribution of resources on major choosing of students from different regions in US. Atlantis Press SARL; 2021.
 12. Wambua A. Mobilization and allocation of the teaching and learning materials in public secondary schools in Makueni County, Kenya. Kenyatta University; 2015.
 13. Dahar M, Faize F. Effects of the availability and the use of instructional materials on academic performance of students in Punjab (Pakistan). Euro journal publishing; 2011.
 14. Pamela B, Mwila P. Assessing the status of educational resources in rural public secondary schools in Misungwi district, Tanzania. Research Gate; 2022.
 15. Mugenda OM, Mugenda AG. Research methods, qualitative and quantitative approaches. ACT; 2003.
 16. MC Leod, S. Maslow's Hierarchy of Needs; 2018. Available: <https://www.simplypsychology.org/maslow.html>
 17. Tety J. The role of instructional materials in academic performance in community secondary schools in Rombo district. Open university of Tanzania; 2016.
 18. Ogawa K, Wokadala J. Analysis on equity issues in lower secondary education in East Uganda. Kobe University, Japan; 2012.

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