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Equality of Opportunity in Learning Outcomes Attainment through Financing Public Day Secondary Schools' Resources in Kenya

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Equality of Opportunity, School Resource Characteristics, Learning Outcomes, School Resource Financing, Difference, Equity, Equality.

Although students' learning outcomes are not expected to be equal, the differences should not be accounted for by the differences in school resources. Equality of opportunity in financing schools' resources is evidenced by the lack of a relationship between the availability of school resources and differences in students' learning outcomes. Tharaka Nithi County, one of the 47 Counties in Kenya, has consistently had a high difference in students' learning outcomes in different public day secondary schools. This study sought to establish if differences in students' learning outcomes in Tharaka Nithi County evidence equality of opportunity. The study employed a convergent parallel mixed-method research design. A stratified random sampling technique was used to select 738 (368 male and 370 female) Form 3 students and 738 (368 male and 370 female) parents of the Form 3 students. Quantitative data were analysed using descriptive and inferential statistics, while qualitative data was thematically analysed. The study findings revealed that there was a strong statistically positive significant relationship, $r = 0.674$ at $p < .01$ between school resource characteristics and differences in student's examination scores. The study also established that differences in public day secondary school resource characteristics accounted for a 6.1% difference in students' learning outcomes after controlling for all the predictor variables which included student's household characteristics, student's parental/guardian characteristics, and student's conduct characteristics. The study thus recommends that financing of public day secondary school resources should focus on equity given the inequality of opportunity in secondary education attainment.

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INTRODUCTION

In the wake of COVID-19, Sahlberg (2021) argues that the efforts to make education more inclusive, fairer, and equitable for all should be continued and enhanced because they are paramount. UNESCO (2016) notes that Sustainable Development Goal Four (SDG4) outcome target 4.1 aims to ensure the attainment of equitable and quality secondary education leading to relevant learning outcomes by the year 2030 for all. Equity is parallel to quality (Kyriakides et al., 2017). Enhancing learning outcomes among all secondary school students strengthens the capacity of societies in responding to economic growth. Investment in equal opportunities for all students is the most profitable education policy (OECD, 2012).

Lazenby (2016) explains that for there to be equality of opportunity in learning outcomes attainment, all students need to have equal chances of attaining learning outcomes. Albeit, Cerdeira et al. (2018) notes that most people universally have limited access to private credit for financing secondary education. Limited access to private credit for financing secondary education obstructs equality of opportunity in learning outcomes attainment. To address this, school funding formula is used in developed countries to ensure equality in distributive pattern and an equalisation of the obstacles so as to guarantee equality of opportunity in attainment of quality education outcome. Finland and Estonia employ such a formula in financing their secondary education (UIS, 2018). As such, these countries are not only ranked among the best

performing in Program for International Student Assessment (PISA) scores but also as countries that demonstrate the most equality of opportunity in quality learning outcome attainment. Most developing countries' governments employ equality in the financing of their secondary education. Notwithstanding, Southern and Eastern Africa Consortium for Monitoring Educational Quality (SEACMEQ) points that the best performing Southern and Eastern African countries' education systems also ensure a high degree of equality of opportunity in attainment of quality education outcomes. In Eastern Africa and largely Sub-Saharan Africa, Kenya's expenditure on education is relatively high.

In ensuring distributive pattern, the government of Kenya fully finances tuition costs in public day secondary schools by providing each student Ksh. 22,244 (Republic of Kenya, 2017). The government financing of school resources such as teaching and learning materials, administration, personnel emoluments, repairs, electricity, water and conservancy (EWC) and student's medical in Kenya illustrates particular subjects upon which the distributive pattern holds. Further, the government of Kenya has focused on the school lunch costs as the pattern to hold through the fashioning of different strategies to support students in public day secondary schools. Different strategies to support students in meeting lunch costs in public day secondary schools in Kenya are contained primarily in the School Health Policy and National Education Sector Plan (NESP) 2013-2018 which advocate for the provision of homegrown balanced school meals

by the parents in all Kenyan schools (Republic of Kenya, 2016). However, in the Arid and Semi-Arid Lands (ASALs), where providing homegrown meals is not probable, the Ministry of Education Science and Technology (MOEST) implements School Feeding Programmes (SFPs) jointly with the World Food Programme (WFP). More, the government of Kenya constituted the National Council for Nomadic Education in Kenya (NACONEK) under the nomadic policy and engrained it to the Basic Education Act 2013 (Republic of Kenya, 2009). NACONEK marshals communal sustenance on school lunch and eradication of social practices constraining realization of quality and equitable learning outcome in ASALs. Thus, the practice of financing public day secondary school resources in Kenya seem to equalise students' obstacles and guarantee equality of opportunity in attainment of quality secondary education learning outcomes.

According to the Republic of Kenya (2012), quality secondary education learning outcomes are characterized by grades A (12 points), A- (11 points), B+ (10 points), B (9 points), B- (8 points) and C+ (7 points) while poor learning outcomes are characterized by grades E (1 point) and D- (2 points) in the Kenya Certificate of Secondary Education (KCSE) examination mean scores. Kivilu (2015) observes that grades C (6 points) and C- (5 points) are average grades and are neither considered quality nor poor. Dooley and Schreckhise (2016) note that both the formative and summative examination mean scores could be used as indicators of the quality of education learning outcomes. Formative examination scores make valid estimates for the summative examination scores (Cerdeira et al., 2018).

In Tharaka Nithi County public day secondary schools, students' differences in the KCSE, summative examination scores have been observed to be the consistently highest compared to other Kenyan Counties in the period 2014 to 2018 (KNEC Data, 2018). Consistent with the KNEC Data (2018), in the period 2014 to 2018, Tharaka Nithi County best performed public day secondary school had a mean score equivalent to grade C+ and worst performed had a mean score equivalent to grade D-, a difference of 5 points. Whereas grade C+ is considered to be a quality secondary education

learning outcome, grade D- is considered to be a poor grade. This study sought to establish whether differences in the public day secondary school resources related to the differences in students' learning outcomes in public day secondary schools in Tharaka Nithi County, thus establish students' equality of opportunity in the attainment of quality learning outcomes. It thus aimed to answer the question, 'do differences in learning outcomes evidence equality of opportunity in the attainment of secondary education in public day secondary schools?' The study hypothesised that there is no statistically significant relationship between public day secondary school resources and differences in student's examination scores in Tharaka Nithi County, Kenya.

LITERATURE REVIEW

Equality of opportunity in education is guaranteed when a particular set of obstacles do not differentiate students' outcomes in learning, although students' outcomes in learning are not to be equal (Lazenby, 2016). UIS (2018) instructs that lack of a relationship between both availability and adequacy of school resources and differences in students' learning outcomes evidence equality of opportunity in the attainment of quality learning outcomes. However, O'Day and Smith (2016) observed that institutional structure differences in different schools account for students' disparities in quality overall. O'Day and Smith's study did not establish whether differences in students' school resources differentiated attainment of learning outcomes in public day secondary schools after holding other predictor variables constant.

In Norway, Stakkestad and Størdal (2017) concluded that technology use in schools had a significant effect on enhancing students' educational outcomes in secondary schools. Students who did not use technology in school were thus observed to have lower educational outcomes. However, Stakkestad and Størdal's study was done in Norway a developed country and not in a developing country. Cunningham et al. (2019) found that increased public investments in school infrastructure, school improvement grants and teacher characteristics on selected academic skills in India are associated with enhanced student's arithmetic, reading and writing skills. The presence

of few teachers serving many students in secondary schools was observed to be associated with poor student performance in selected schools in Tanzania (Nghambi, 2014). In Kenya, Echaune (2018) noted that school characteristics in public boarding secondary schools had a statistically significant effect on students' academic achievement. Therefore, differences in school resource characteristics were found to have consequences on students' learning outcomes. Reviewed studies however failed to control the other predictor variables that could contribute to differences in students' learning outcomes a gap that the present study sought to fill in public day secondary schools, Kenya.

METHODOLOGY

This study adopted a convergent parallel design methodology. Hierarchical multiple regression was used on quantitative data and the case study was used on the qualitative data to establish the relationship between public day secondary school resources and differences in students' examination scores in Tharaka Nithi County. The study operationalized public day secondary school resources as the materials both in teaching and learning, technology use, laboratory facilities, teacher characteristics and the school size. The differences in student examination scores in Tharaka Nithi County were indicated by the end of year one and two formative school examination scores for the Form 3 students. Student's gender and category of primary school attended were controlled for as moderating variables in this study.

The study was conducted in Tharaka Nithi County, Kenya. Tharaka Nithi County has a population of 72 public day secondary schools, thus a population of 72 principals, 9,495 (4,611 male and 4,884 female) Form 3 students and about 9,495 (4,611 male and 4,884 female) parents. Qualitative study participants were sampled using purposive sampling. Sampled qualitative study participants were involved in the larger quantitative sample to ensure comparison. Gay (1992) defines a small population to comprise less than 100 subjects and

recommends 20% of that population as the sample size. Thus, 20% of the public day secondary schools' population were involved in the study. In computing the quantitative sample size, the Cochran equations were used and the criterion sampling was used to determine the qualitative study participants sample size. Questionnaires were used to collect quantitative data, while the interview schedules were used to collect qualitative data.

Face and content validity was ensured in students' and parents' questionnaires through seeking the judgement and opinions of educational planning and economics experts. The principals and students group interview schedules were validated by experts in the research field. The test-retest reliability was used to assess the external consistency of both students' and parents' research questionnaires. The study established 0.8 and 0.9 external consistency in students' and parents' questionnaires, respectively. The inter-rater reliability was used to assess internal consistency. A Cronbach alpha of items on school resource characteristics was found to be 0.837. Data collected were analysed independently and the results were interpreted together.

RESULTS AND DISCUSSION

The study sought to establish whether differences in learning outcomes evidence equality of opportunity in the attainment of secondary education in public day secondary schools. It hypothesised that there is no statistically significant relationship between public day secondary school resources and differences in student's examination scores in Tharaka Nithi County, Kenya. School resource characteristics were operationalised as the teaching and learning process resources, teachers' qualifications, teachers' terms of employment, number of teachers, and number of students enrolled in a public day secondary school. These resource characteristics were then computed from these pointers. School resource characteristics pointers were analysed to obtain the mean, standard deviation, skewness and kurtosis. *Table 1* illustrates the findings.

Table 1: School resource characteristics Pointers

Pointers	Mean (M)	Std. Dev. (SD)	Skewness	Kurtosis
Teaching and learning process resources	1.91	.490	-.206	.965
Teachers' qualifications	5.42	2.128	-.325	-1.010
Teachers' employment terms	5.55	2.035	-.408	-.789
Number of teachers	5.34	2.193	-.252	-1.135
Number of students enrolled	5.48	2.120	-.343	-.983
Computed School Resource Characteristics	5.38	2.154	-.298	-1.058

Table 1 shows that school resource characteristics were distant from the mean since the standard deviation was more than 1 ($M = 5.38, SD = 2.154$). Nevertheless, students' indication of teaching and learning process resources in their class were close to the mean since the standard deviation was less than 1 ($M = 1.91, SD = 0.490$). Further, Table 1 illustrates that both the skewness and kurtosis statistics values of the indicated teaching and learning process resources, teachers' employment terms and number of students enrolled, indicated a normal distribution ($SK = -0.206, Kur = 0.965$); ($SK = -0.408, Kur = -0.789$); and ($SK = -0.343, Kur = -0.983$) respectively. Normal distribution of the

computed school resource characteristics showed that most of the pointers on school resource characteristics grouped around the mean, while some were distant from the mean. This finding signified that school resource characteristics in different public day secondary schools in Tharaka Nithi County were diverse and thus the need to establish the inter-relationship between pointers of school resource characteristics.

Partial correlation analysis was employed to establish the inter-relationship between pointers of school resource characteristics. The consequent correlation matrix is presented in Table 2.

Table 2: Table 2: Inter-relationship between pointers of School resource characteristics

Pointers	1	2	3	4	5	6
1. Teaching and learning process resources	-					
2. Teachers' qualifications	.520**	-				
3. Teachers' employment terms	.559**	.929**	-			
4. Number of teachers	.530**	.930**	.865**	-		
5. Number of students enrolled	.462**	.926**	.869**	.889**	-	
6. Computed School Resource Characteristics	.514**	.985**	.927**	.947**	.941**	-

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

Table 2 shows that computed school resource characteristics had a strong and positive statistically significant correlation with all the pointers at $p < .01$ excluding teaching and learning process. The teaching and learning process had moderate significant associations with all the school resource characteristic pointers ($r = .514^{**}$). The majority of the public day secondary school principals stated that the government sufficiently provided teaching and learning materials in public day secondary schools. However, some public day secondary school principals indicated that they needed teaching and learning materials. In agreement with Effiong and Igiri (2015) study's results, the current

study recognised varying delivery of teaching, instructional and learning materials in public day secondary schools.

Table 2 represented positive, moderate to strong correlations between the pointers of school resource characteristics which were statistically significant with all the pointers. The strongest correlation was between the teachers' qualifications and the number of students enrolled, statistically significant at $p < .01$ ($r = .926, p = .000$). The finding meant that teachers with higher qualifications were also found in public day secondary schools with the greatest number of students. A statistically significant relationship between teachers' qualifications and

teachers' employment terms was observed at $p < .01$ ($r = .929, p = .000$) implying that teachers with high qualifications had permanent employment with the Teachers Service Commission (TSC). The moderately high inter-correlations between the pointers of school resource characteristics showed that they were significantly equal and so measured identical concept, in this case, school resource characteristics.

Consequently, the study sought to establish the relationship between school resource characteristics and differences in examination scores. It, therefore, controlled the effect of other predictor variables to find the difference in student's examination scores attributed to school resource characteristics. The study employed a hierarchical multiple regression model analysis. *Table 3* demonstrates the findings.

Table 3: School resource characteristics and differences in examination scores

Model	R	R ²	ΔR ²	ΔF	Δdf1	Δdf2	Sig.ΔF
1	.025a	.001	.001	.215	2	702	.807
2	.292b	.085	.085	64.956	1	701	.000
3	.912c	.831	.746	309.255	1	700	.000
4	.930d	.865	.034	175.417	1	699	.000
5	.962e	.926	.061	580.341	1	698	.000

- a. Predictors: (Constant), category of primary school attended, gender;
- b. Predictors: (Constant), category of primary school attended, Gender, Student Conduct Characteristics;
- c. Predictors: (Constant), category of primary school attended, Gender, Student Conduct Characteristics, Students Household Characteristics;
- d. Predictors: (Constant), category of primary school attended, Gender, Student Conduct Characteristics, Students Household Characteristics, Students Parental Guardian Characteristics;
- e. Predictors: (Constant), category of primary school attended, Gender, Student Conduct Characteristics, Students Household Characteristics, Students Parental Guardian Characteristics, School Resource Characteristics;
- f. Dependent Variable: Differences in examination scores

scores. The model controlled for the effects of predictor variables. Predictor variables controlled for comprised of the category of the primary school attended, student's gender, student conduct characteristics, student's household characteristics, student's parental guardian characteristics and school resource characteristics.

Model 1 described in *Table 3* with student gender and category of the primary school attended had R-value 0.025, thus a positive relationship with differences in students' examination scores. Nevertheless, the relationship was weak. The R² (0.001 or 0.1%) was not statistically significant at $F_{(2, 702)} = .215, p > .05$; illustrating that the moderating variables (student gender and category of primary school attended) contributed 0.1% of the differences in public day secondary school students' examination scores. Thus, they could not predict differences in students' examination scores in the model. Nonetheless, student gender and category of primary school in this model had a positive relationship with differences in students' examination scores, thus the need for them to be controlled for. Student conduct characteristics, a predictor variable of differences in students' examination scores were put to Model 1, ensuing to Model 2.

Model 2 had three predictor variables which included the category of the primary school

Table 3 demonstrates a five-stage hierarchical multiple regression model findings summary examining the relationship between school resource characteristics and differences in examination

attended, gender, and student conduct characteristics. The model had an R of 0.292 and a change of R^2 , 0.085. The change in R^2 was statistically significant at $F_{(1, 701)} = 64.956$, $p < .01$. Student conduct characteristics accounted for 8.5% of the difference in students' examination scores in this model. Albeit, 8.5% of the difference in students' examination scores in the model could not be wholly attributed to student conduct characteristics since all the predictor variables had not been controlled for. Therefore, another predictor variable (Students Household Characteristics) was put to Model 2, building up to Model 3.

Model 3 had four predictor variables which comprised of the category of the primary school attended, gender, student conduct characteristics and student's household characteristics. The model had an R-value of 0.912 with a change in R^2 (0.746 or 74.6%). The change in R^2 was significant at $F_{(1, 700)} = 309.255$, $p < .01$. Thus, student's household characteristics in the model accounted for 74.6% of the difference in students' examination scores. Similar to Model 2, Model 3 did not have all the predictor variables controlled for. Consequently, 74.6% of the difference in examination scores could not be all credited to Students Household Characteristics. Students Parental/Guardian Characteristics, another predictor variable was added to Model 3 and Model 4 was assembled.

Model 4 had five predictor variables; they included category of the primary school attended, gender, student conduct characteristics, student's household characteristics and student's parental guardian characteristics. The model had R-value of 0.930 and a change in R^2 (0.034 or 3.4%) significant at $F_{(1, 699)} = 175.417$, $p < .01$. Students parental/guardian characteristics in the model accounted for 3.4% of the difference in students' examination scores in public day secondary schools. Notwithstanding, 3.4% of the difference in students' examination scores in this model cannot be wholly attributed to students parental/guardian characteristics. Thus, school resource characteristics were put to Model 4. This resulted in the final model, Model 5.

Model 5 had six predictor variables which encompassed, category of the primary school attended, gender, student conduct characteristics, student's household characteristics, students

parental guardian characteristics and school resource characteristics. The model had an R-value of 0.962. It had a change in R^2 (0.061 or 6.1%) significant at $F_{(1, 698)} = 580.341$, $p < .01$. School resource characteristics in this model accounted for a 6.1% difference in students' examination scores after controlling for all the other predictor variables.

School resource characteristics input to differences in students' examination scores challenge the equality of opportunity principle in this model. The equality of opportunity principle indicates that differences in outcomes should not be contributed by factors that an individual student cannot control. Students cannot control school resource characteristics. The Kenyan government thus makes an effort to provide school financing to public day secondary school resources. The government observes differentiated school financing in public day secondary schools through supporting NACONEK activities and school feeding programmes in ASAL communities, besides fully financing tuition costs of all students enrolled in the public day secondary schools. Public day secondary school resource characteristics input to differences in students' examination scores deny the evidence of equality of opportunity in financing public day secondary schools' resources in Tharaka Nithi County. These findings both related and varied from the qualitative data findings on the contribution of school resource characteristics pointers: teaching and learning process resources, teaching staff qualifications, teaching staff terms of employment, teaching staff size, and school size, to differences in the students' examination scores.

Public day secondary school principals and the students in the group interviews stated that differences in the availability of laboratory facilities among schools differentiated examination scores in public day secondary school. Most public day secondary school principals and students testified that they had some laboratory equipment but lacked a laboratory room to conduct experiments. They explained that classrooms were used as laboratory rooms by their science teachers and that practical experiments were theoretically taught. Further, they attributed their lower performance compared to other public day secondary schools to lack of laboratory facilities. Just like Cunningham et al. (2019) established, investments in school

infrastructure were associated with improved writing ability. Nevertheless, contrasting the current study, Cunningham et al. (2019) individualistically measured academic skills according to the Indian education system and not according to examination score attainment in the Kenyan education system.

Qualitative findings indicate that differences in public day secondary school examination scores were contributed to by the differences in the number of students enrolled, the number of teachers and public day secondary school teachers' terms of employment. The results further show that high enrolments in public day secondary schools attracted more and better school physical facilities such as laboratories which enhanced students' performance. Maingi et al. (2017) found that the availability of physical facilities had a positive relationship with levels of students' discipline in public secondary schools in Makueni County. Contrary to other studies such as Cunningham et al. (2019) and Maingi et al. (2017), the current study used hierarchical multiple regression analysis to model the relationship between the availability of public day secondary school resources and the differences in students' learning outcomes. Besides, public day secondary school principals stated that public day secondary schools with higher students' enrolment attracted greater support from the government and thus differences in school government support differentiated students' learning outcomes in different public day secondary schools.

This study finding deviates from Echaune's (2018) study results. According to Echaune (2018), the number of students in a school did not differentiate government support in schools and that students' learning outcomes were not related to the differences in the school government support. Echaune's (2018) study used a hierarchical linear model to find if there were statistically significant effects of school characteristics on students' academic achievement. Echaune (2018) study defined school characteristics as school size, location and school type such as day, boarding and co-educational and students' academic achievement as the KCSE scores, different from the current study. Echaune (2018) research was also conducted in all types of secondary schools including boarding and co-educational institutions. Differences in the

study subjects' characteristics and the measure of the variable of investigation between Echaune (2018) and the current study may have contributed to the differences in the two study findings.

Public day secondary school principals and students in the interviews stated that technology use in public day secondary schools does not contribute to students' examination score differences. They noted that in Tharaka Nithi County, public day secondary schools did not fully use technology in the teaching and learning process. Most public day secondary schools had one computer that was used only for office work. The principals and students were in agreement that the few public day secondary schools with a few computers for students did not achieve outstandingly well. This conclusion concurred with Stakkestad and Størdal's (2017) investigation, which concluded that there was no statistically significant change in students' educational outcomes as a result of technology use. While Stakkestad and Størdal (2017) investigation on change in students' educational outcomes as a result of technology use was conducted in a developed country, comparable findings were found in a developing country. The current study, however, examined the input of using technology in public day secondary school classrooms to differences in public day secondary school students' examination scores and not the causal effect on performance investigated by Stakkestad and Størdal (2017) of the one-to-one laptop program in secondary education.

Qualitative findings indicate that government provision of teaching and learning materials in public day secondary schools was adequate and did not contribute to the differences in public day secondary school's examination scores. A public day secondary school principal stated the following:

"The government provision of teaching and learning materials is sufficient in Public day secondary schools thus it would not contribute to the differences in student's performance"
(Public day secondary school Principal 1, 2020).

Nevertheless, a few public day secondary schools' principals and students noted that there were differences in the availability of teaching and learning materials in public day secondary schools and the difference contributed to the differences in

the students' examination scores. They specified that parents/guardians in public day secondary schools provided teaching and learning materials. These conclusions agreed with O'Day and Smith (2016) that educational achievement and attainment mirror school resource characteristics. O'Day and Smith (2016) reviewed the literature on the disparities within the educational system while the present study conducted convergent parallel mixed method research in Tharaka Nithi County public day secondary schools and arrived at the same conclusion.

Differences in the teacher-student ratio were reported to differentiate examination scores by all the interviewed public day secondary school principals and students in different public day secondary schools. They stated that public day secondary schools with an adequate number of teachers did much better in their examination scores than schools with an inadequate number of teachers. They also related differences in public day secondary schools' examination scores with the differences in the number of teachers. These results agree with Nghambi (2014) research findings in Tanzania which found a relation of students' low academic achievement with a high teacher-student ratio in Tanzanian community secondary schools. Nghambi (2014) study used descriptive statistics analysis on the quantitative data, while the present study employed hierarchical multiple regression analysis and made the same conclusion.

In their interviews, public day secondary school principals reported that differences in schools' examination scores could not be associated with the differences in teacher qualifications. The study found uniformity in the level of teacher qualifications in the Tharaka Nithi County public day secondary schools. Majority of the public day secondary school principals did not account for the input of teacher qualifications to the differences in students' examination scores. These conclusions varied from Bold et al. (2017), which shows that differences in teachers' qualifications showed by their curricula mastery differentiated schools' learning outcomes. Bold et al. (2017) focused on finding out what teachers know, do and whether it mattered in African primary schools. The current

study was, however, done in public day secondary schools. Bold et al. (2017) also used a national representative review in sub-Saharan African countries representative of 40% of the region's population, unlike the current study. These differences could contribute to the differences between the present study and what Bold et al. (2017) concluded.

According to seven public day secondary schools' principals, teachers employed by the schools' Board of Management (BOM) had no job security and therefore strived to teach better so as to secure their jobs. This is unlike those employed on permanent and pensionable terms by the government through the Teachers Service Commission (TSC). Even so, thirteen public day secondary school principals detailed that the difference in public day secondary schools' examination scores associated with the differences in the public day secondary schools' teachers' employer were very small. The study also found that teachers in public day secondary schools employed by the BOM tried to secure their job by maintaining high students' examination scores, thus differentiated public day secondary schools' students' examination scores. These conclusions moderately agreed with Tastan et al. (2018) and differed with Iqbal et al. (2016). Tastan et al. (2018) found a significant impact on teacher self-efficacy and motivation on academic attainment in science education in Iran and Russia. Different, Iqbal et al. (2016) established that there was no significant correlation between teachers' job gratification and secondary school students' academic achievement in Pakistan.

Further, the study tested the null hypothesis:

H₀: There is no statistically significant relationship between public day secondary school resources and differences in student's examination scores in Tharaka Nithi County.

The partial correlation coefficient was examined in a summary of hierarchical multiple regression analysis for school resource characteristics relationship on a public day secondary school students' differences in examination scores. Table 4 summarizes the results.

Table 4: Relationship between school resource characteristics and differences in examination scores

		B	Beta	t	Sig.	Partial Correlations
School Resource Characteristics		.258	.328	24.090	.000	.674

a. Dependent Variable: Differences in Examination Scores

Table 4 shows that there was a strong statistically significant positive relationship, $r = 0.674$ at $p < .01$, between school resource characteristics and differences in students' examination scores. Thus, a positive change in school resource characteristics would increase students' differences in examination scores. The null hypothesis was rejected and a conclusion made that school resource characteristics were significantly related to differences in students' examination scores.

CONCLUSION AND RECOMMENDATIONS

Consistent with the findings, the study concludes that the public day secondary school resource characteristics and differences in examination scores have a statistically positive relationship. The school resource characteristics were found to account for 6.1% differences in students' examination scores. The relationship between school resource characteristics and differences in students' examination scores in public day secondary schools evidence a lack of equality of opportunity among students attending public day secondary schools for their secondary education in Tharaka Nithi County.

The study therefore recommends that the government should use a funding formula to ensure equity in financing of public day secondary school resource characteristics. General financing of public day secondary school resource characteristics hampers equality of opportunity in the attainment of quality secondary learning outcomes among students. Moreover, given the government's role of ensuring public school staffing through the Teacher Service Commission, this study recommends that the government should ensure adequate staffing in Tharaka Nithi County public day secondary schools.

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