

# Do School Facilities in Eswatini Consumer Sciences Supports Quality Education?

Dumisa Celumusa Mabuza, Dlalile Cynthia Dlamini

*Department of Consumer Sciences Education and Community Development, Faculty of Consumer Sciences, University of Eswatini P. O. Luyengo, Eswatini*

**Abstract:** - Education is the anchor of every successful society, this study intended to find out the impact of school facilities on quality education in Eswatini high schools. A strong link exists between the school facilities, the learning process and quality education. A mixed method research design was employed to study Consumer Science teachers' perceptions school facilities as determinat for quality education in Eswatini. Hence, this article looks at the impact of school facilities on quality education. Random sampling and purposive sampling were used to select respondents for this study. Questionnaires and interviews were used to collect quantitative and qualitative data. Means and standard deviations through SPSS were used for data analyses. This article reveals that teachers face challenges in thriving for quality education. The study reveals that improvement of school facilities is key to responding to the challenges faced by teachers in the provision of quality education. Therefore, the ministry of education, businesses, organizations and all involved entities should provide enough funding to improve school facilities leading to better student outcomes of quality education.

**Keywords:** Quality education, facilities, Impact, Consumer Sciences

## I. INTRODUCTION

Ibrahim et al. (2017) defines school facilities as the material resources provided for staff and students to optimize their productivity in teaching and learning process. The realization that the transfer of knowledge does not only take place in the four walls of the classroom from teacher to students but rather that, learning takes place through discovery, exploration, interaction with the internal and external environment has necessitated the creative and innovative development of teaching and learning facilities that reflect these changes. This is enough evidence that quality education cannot be experienced unless good and adequate school facilities are provided. The importance of school facilities in the development of effective educational system, and provision of quality education cannot be over emphasized. Quality education cannot be achieved without provision, maximum utilization and appropriate management of the school facilities. School facilities includes classrooms, libraries, farms, gardens, laboratories, workshops, offices, stores, school buildings, staff quarters, chairs, tables, text books, magazines, journals, pictures, filmstrips, charts, bulletin board, posters, cartoons, school museums and archives chalkboard, play fields etc. the goal of school facilities is to provide quality education as it helps to increase school attendance, motivation and to improve academic performance of students.

Ministry of education and training (2018) states that Swaziland recognizes education as a catalyst for socioeconomic development and national economic growth. The mission of the education system is "to provide relevant, quality, and affordable education and training opportunities for the entire populace of the Kingdom of Eswatini in order to develop all positive aspects of life for self-reliance, social and economic development, and global competitiveness" (ME, 2011b).

Marope (2010) alludes that quality education has not been experienced in Eswawini High Schools due to deterioration and inadequacy of school facilities. Such a situation has resulted to reduced learning time, alienated students, inability to provide specialized curriculum, low staff morale, lack of technology proficiency, safety hazards, high rates of teacher attrition, and a reduced ability to meet special needs. Marope (2010) further, states that it is a common experience to see some schools with environments that not conducive for learning. Most schools, specifically government schools are generally in a poor state of repair. Thus teachers and students' effectiveness is limited by inadequate learning school facilities as well as inadequate learning materials. Poor working conditions and insufficient facilities have inevitably eroded motivation and satisfaction which demoralized teachers, quality education must prepare the child for an all-round development. This is enough evidence that quality education may not be experienced unless adequate and conducive school facilities are provided in Eswatini High schools. The purpose of this study is to examine the impact of school facilities on quality education. The study intends to find out the impact that our current high school facilities have on quality education.

## II. PROBLEM STATEMENT

Improving the quality of school facilities is an expensive undertaking. However, the positive impacts of facility improvement on teachers and students does not compare with the financial implications of school facilities. Ibrahim et al. (2017) defines school facilities as "engines of growth in learning" which support the teacher and the learner for effective and efficient teaching and learning for the attainment of goals and objectives of education. School facilities are also viewed as "physical and spatial enablers and enhancers of teaching and learning. The lack, school facilities and instructional materials can significantly affect instructional

effectiveness and student outcome. However, no child should be left behind global education policy is the latest approach in the improvement and closing of gaps in student academic performance. As a result of financial constraints and the increasing demand placed on education by population growth, the Eswatini education system is not coping with the needs of all its learners at present. Such situations adversely affect quality education and therefore the teaching and learning outcomes. Quality education is the anchor to all areas of our lives as well the challenges faced individually, in our families and community as well as nationwide and globally. It is of critical importance that all possible are exhausted towards provision of quality education. This implies that there is a need for rapid change in education and therefore school facilities must change rapidly too.

### III. LITERATURE REVIEW

Lack of physical facilities and learning resources: Okongo (2015) contends lack of physical facilities interferes with learning process hence the need for the development and maintenance of in educational institutions by communities, parents, and sponsors should continue to be encouraged Department For International Development (DFID, 2007). This suggests that it is of critical importance to ensure that there are adequate and appropriate facilities for teaching and learning so that educational programmes could be implemented effectively. UNESCO (2017) where facilities and resources are available, a qualified and motivated teacher will deploy methods that centre on the learner. Such an approach emphasizes practical activities and has the pupils experimenting, solving problems, discussing with each other and involved in practical hands-on-activities. This approach stimulates curiosity, imagination and critical thinking. It keeps the lessons exciting and captivating to the young people, particularly girls.

Using technologies to decrease rather than increase disparities; UNICEF (2000) it is critical for schools to provide diversity of school facilities due to the fact that technology and students' development of technology-related skills is a crucial factor in the 21st century knowledge-based global economy. Michaelowa (2001) explains that the use of technology helps to reduce global inequalities through internet-based distance learning, interactive video and educational television. In areas where electricity and telephone lines are available, such approaches to learning may contribute significantly to improve the quality of educational processes. And hence eliminate the barriers of time and distance, creating universal learning-on-demand opportunities for people, companies and countries.

Physical elements; Liouaeddine (2017) explains that physical elements refers to quality of school facilities or the places in which formal learning occurs, range from relatively modern and well-equipped buildings to open-air gathering places. Scheerens (2011) states that school quality can influence school participation and quality education. The quality of

school buildings may be related to other school quality issues, such as; the presence of adequate instructional materials and textbooks; working conditions for students and teachers; and the ability of teachers to undertake certain instructional approaches. Such factors as on-site availability of lavatories and a clean water supply, classroom maintenance, space and furniture availability all have an impact on the critical learning factor of time on task. Muvawal (2012) states that quality of school facilities have a direct effect on learning. Williams (2000) attest that learning environment is strongly correlated with pupils' achievement students who schools lack classroom materials and have an inadequate library are significantly more likely to show lower test scores and higher grade repetition than those whose schools were well equipped hence dilapidating quality education.

Class size: Many countries significantly expanded access to primary education during the 1990s, but the building of new schools has often not kept pace with the increase in the student population. In these cases, schools have often had to expand class sizes, as well as the ratio of students to teachers, to accommodate large numbers of new students. A UNICEF/UNESCO survey conducted in 1995 in 14 least developed countries found that class sizes ranged from not fewer than 30 students to 118 in developing countries. Liouaeddine et al. (2017) argues that effects of class size are lower in countries with high quality teachers. Woessmann and West (2006) in a study conducted in 18 countries on the effect of class size on student outcomes affirms that smaller classes have beneficial effects only in countries where teachers' salaries are relatively low. Krueger (2003) also states that students from smaller classes do better. Other studies have found that the effect of class size on student outcomes induces a significant and substantial increase in student test scores. Otherwise, Fredriksson, Öckert, and Oosterbeek (2013), demonstrates that smaller classes have positive effects, on the short-term, on cognitive and non-cognitive ability and positive effect on wages, and earnings at age 27 to 42. Hanushek and Woessmann (2017), suggests that class size is a pertinent factor only in settings with low teacher quality.

Furthermore, correct lighting prevents eye-strain and helps to keep students alert. Classroom light also boosts the morale of teachers and students. appropriate amounts of natural lighting also reduces off task behavior and improves test scores. Research shows that that students with the most exposure to natural daylight progressed 20% faster in math and 26% faster in reading than students who were taught in environments with the least amount of natural light (Evaluation and Education Policy Analysis, 2015; Malik & Rizvi, 2018).

### IV. METHODOLOGY

A mixed research methods was used in this study employing qualitative and quantitative approaches. McKim (2015) alludes that mixed methods research uses two different types of data and therefore the researcher ensured that good time management was employed. Mixed research methods helped

to increase the validity of the study findings, helps gain a deeper, broader understanding of the phenomenon as it allows for integration. Similarly, Doyle et.al. (2014) contends that mixed research methods helps to strengthen the results of the study while Trefryet al. (2018) allude that mixed research methods makes triangulation possible, thus providing a more complete and comprehensive understanding of research problem, more context specific research methods and it helps to explain findings.

The target population for this study were Consumer Science high school teachers and inspectors aged between 20 – 60 years who were selected from the four regions (Hhohho, Manzini, Shiselwini and Lubombo) of Eswatini. Teachers were randomly selected from government and private schools and inspectors were purposively selected. According to the Examination Council of Eswatini (ECOS) (2018), 2018 subject statistics report indicate that there are 158 high schools offering Consumer Science in Eswatini with approximately 316 Consumer Science teachers as each school has at least two teachers. A sample of 176 teachers (44 from each region) were randomly selected. This technique helps to prevent biasness in the study and reduces the chance of systematic errors thus leading to a better representative sample (Taherdoost, 2018; Hall, 2018). Then, 4 inspectors (1 per region) were purposively selected. Alvi (2016) contends that in purposive sampling involves identification and selection of individuals that are proficient and well-informed with a phenomenon of interest. It allows the researcher to draw upon a wide range of qualitative research designs. It leads to accurate results and low margin error.

Questionnaire was used for data collection; the questionnaire was developed from the literature review based on the objectives and variables of the study. Open and close-ended questions were asked about school leadership practices. Closed-ended questions were in form of a Likert scale with 6 levels of agreement. Data was collected using a questionnaire. Inspectors were interviewed through face to face interviews. Letters seeking permission were sent to the REO and high schools explaining the purpose and intentions of the study. According to Bruin (2018), the term validity refers to whether or not the test measures what it claims to measure, it seeks to find out if the instrument is trustworthy and accurate. Bruin (2018) further states that reliability reflects consistency and explicability. Reliability is seen as the degree to which a test is free from measurement errors; the more measurement errors occur, the less reliable the test time to test reliability. Content and face validity was tested, the instrument for data collection (questionnaire) was validated by six seasoned researchers from the University of Eswatini. Pilot testing was done consisting of 25 teachers from two high schools in the Hhohho region. Cronbach alpha statistics was used to calculate a reliability coefficient that was estimated to 0.89.

## V. ETHICAL CONSIDERATION

There was no deception; participants were told about the intentions, purpose and objectives of the study. There was no coercion; participants were not being forced to answer the questionnaire they will be free choosing to or not to take part in the study. Confidentiality was considered since the questionnaires were identical; participants were not required to write their personal details like name and surname. Therefore, the relationship with the respondents during the survey was kept professional but comfortable. In addition, in the analysis and reporting, identification of respondents (such as real name) was kept be anonymous.

## VI. FINDINGS AND DISCUSSIONS

The Consumer Science teachers were asked to respond to some questions on the school facilities . Results presented in Table 1 generally depicts that the Consumer Science teachers slightly disagreed that the facilities provided in their school can lead to quality education ( $\bar{x} = 3.34$  and  $SD = 0.64$ ). Results specifically present that Consumer Science teachers slightly agreed that the acquisition of instruments , didactic facilities, and textbooks fulfills in the library are relevant to the subject (Consumer Sciences ) the need of teachers and students ( $\bar{x} = 3.75$ ); that the ambient light in the class is of appropriate brightness in the class is of appropriate brightness ( $\bar{x} = 3.67$ ); that the food and nutrition laboratory are in good condition and spacious , with proper lighting ( $\bar{x} = 3.61$ ); that the fashion and fabrics laboratory are in good condition and spacious, with proper lighting ( $\bar{x} = 3.55$ ) and that instructional media are up to date, and ready to use ( $\bar{x} = 3.51$ ).

Results further present that the Consumer Science teachers slightly disagreed that sewing machines, stoves, refrigerators, and hand held equipment and motor driven equipment are in good condition ( $\bar{x} = 3.47$ ); that refrigerators are adequate ( $\bar{x} = 3.43$ ), that sewing machines are adequate ( $\bar{x} = 3.35$ ), that stoves are adequate ( $\bar{x} = 3.35$ ); the desks and chairs in the class are in good condition ( $\bar{x} = 3.33$ ); the classrooms are comfortable and have enough space for class activities ( $\bar{x} = 3.23$ ), that hand held equipment are adequate ( $\bar{x} = 3.22$ ); that motor driven equipment are adequate ( $\bar{x} = 3.22$ ); that the school library is useful and supports your teaching of Consumer Sciences ( $\bar{x} = 3.07$ ) that their students use the library for acquiring the knowledge and information needed for accomplishing assigned reports or projects ( $\bar{x} = 3.0$ ). Furthermore showed that Consumer Science teachers disagreed that the school library is modern , informative and equipped instruments accessible to sources of knowledge ( $\bar{x} = 2.43$ ) and that the AC and electric fans are in good condition as shown with lowest mean ( $\bar{x} = 2.38$ ). The overall standard deviation of ( $SD = 0.64$ ) indicate that there was insignificant variation in the opinions of the teachers.

Table 1: Consumer Science teachers' perceptions on the school facilities (n = 150)

School facilities	$\bar{X}$	SD	DE
1 The acquisition of instruments, didactic facilities, and textbooks fulfills in the library are relevant to the subject (Consumer Sciences) the need of teachers and students.	3.75	0.75	SLA
2 The ambient light in the class is of appropriate brightness in the class is of appropriate brightness	3.67	0.42	SLA
3 Food and nutrition Laboratory are in good condition and spacious, with proper lighting	3.61	0.75	SLA
4 Fashion and fabrics Laboratory are in good condition and spacious, with proper lighting	3.55	0.75	SLA
5 Instructional media are up to date, and ready to use	3.51	0.42	SLA
6 Sewing machines, stoves, refrigerators, hand held equipment and motor driven equipment are in good condition	3.47	0.60	SLD
7 Refrigerators are adequate	3.43	0.65	SLD
8 Sewing machines are adequate	3.35	0.60	SLD
9 Stoves are adequate	3.35	0.61	SLD
10 The desks and chairs in the class are in good condition	3.33	0.74	SLD
11 The classrooms are comfortable and have enough space for class activities	3.23	0.75	SLD
12 Hand held equipment are adequate	3.22	0.95	SLD
13 Motor driven equipment are adequate	3.22	0.63	SLD
14 The school library is useful and supports your teaching of Consumer Sciences	3.07	0.55	SLD
15 Our students use the library for acquiring the knowledge and information needed for accomplishing assigned reports or projects	2.01	0.65	SLD
16 The school library is modern, informative and equipped instruments accessible to sources of knowledge	2.43	0.54	SLD
17 The AC and electric fans are in good condition	2.38	0.56	SLD
<b>Average</b>	<b>3.34</b>	<b>0.64</b>	<b>SLD</b>

Scale:

0-1.4 = strongly disagree (SD),

1.5-2.4 = disagree (D),

2.5- 3.4 = slightly disagree (SLD),

3.5 - 4.4 = slightly agree (SLA),

4.5 – 5.4 = Agree (A),

5.5 = 6 strongly agree (SA)

Teachers to some extent disagreed that their school facilities are generally good and support their teaching as well as student learning. This was therefore in conflict with other researchers as it suggests that school facilities are not in good condition to support learning and hence quality education. Murillo and Roman (2011) argue that school facilities significantly impact the quality of education, Buckley (2004) further state that school facilities have a considerable impact

on students' and teachers' performance as it improves academic achievement. Further, Uline and Tschannen-Moran (2008) explains that there is a relationship between school facilities and student achievement. The acquisition of instruments, didactic facilities, and textbooks fulfills in the library are relevant to the subject (Consumer Sciences) the need of teachers and students. Uline and Tschannen-Moran (2008) advocates that schools have limitation in this regard.

Mcgowen (2007) states that school buildings and building age have an impact on student performance, research shows that new school facilities and their condition affect students' performance. Similarly Smith (2015) in his study conducted on school building and student performance in South Carolina points out that there are five major areas affecting student performance; Consumer Science labs; decoration of painting and furniture; the degree of security measurements; adequacy of the heating, ventilation and air condition in class and functionally and size of athletic facilities. This suggests that the current state of facility in Eswatini Consumer Science teaching and learning cannot promote performance.

Teachers to some extent agreed that there is ambient light in the class is of appropriate brightness in the class is of appropriate brightness and Consumer Science classes are taught in English. This shows that teachers are not in full agreement with the statements. This according to Shishegar and Boubekri (2016) who observed that natural light and artificial light as well as climate controlling systems have a positive impact on students' behaviour and attitudes suggests that these schools cannot provide a good learning environment for learners. Leung, Chan, and Wang (2006) attest that teachers and staff are significantly productive under sufficient and good-condition facilities. In addition, Buckley, Schneider and Shan (2004) in a study conducted in Washington D. C. public schools affirms that school facilities have a statistical significant relation to teacher retention and can be used as a good predictor of teacher turnover of teacher turnover rate. This therefore shows that this is a critical problem as many studies have been conducted at global level.

Furthermore, the teachers somewhat disagreed that the classrooms are comfortable and have enough space for class activities; hand held equipment are adequate; motor driven equipment are adequate; instructional media are up to date, and ready to use; refrigerators are adequate; the school library is useful and supports teaching of Consumer Sciences and students use the library for acquiring the knowledge and information needed for accomplishing assigned reports or projects. This shows that quality education is still far-fetched idea since all the school facilities determining quality education are not adequate or even available this therefore suggest that there is need to develop school facilities for effective learning and efficient use of time to be experienced as that will yield better student outcome. This was not in harmony with Buckley et al. (2004) who argued that deteriorated school facilities together with poor learning environment have an adverse impact on student' learning and

a significant effect on teachers' attitudes, behaviour, and performance. This therefore suggests that deteriorated school facilities and equipment should be discarded if they cannot be renovated.

## VII. CONCLUSION AND RECOMMENDATIONS

School facilities impact teaching and learning in profound ways. Even though government and local policymakers often overlook the impact facilities can play in improving outcomes for both teachers and students. While improving facilities comes at a financial cost, the benefits of such investments often surpass the initial fiscal costs. Policymakers, thus, should focus greater attention on the impacts of facilities and focus on efforts to improve school facilities.

The findings of this study revealed significant difference in the facilities availability between private and public secondary schools. Government should therefore inject more funds into the system for the procurement of teaching and learning facilities. This responsibility lies on the educational planners and administrators in the Ministry of Education. Also, corporate organizations and individuals should be encouraged by the government to donate generously in cash and kind for the provision of educational facilities especially the needed one for the core subjects in public schools. Apart from school and public libraries, education resource centres should be established by government such as teacher centres and audio visual centres. Teachers' centres could serve as place where teachers could work together in groups to generate ideas that would make them more competent in the profession. Also, teachers should be made to use instructional facilities while teaching and where they are not available improvisation should be adopted. It could be concluded that government did not inject facilities into public schools when compared with facilities available in private schools. Therefore, government should give priority to public schools in the provision of facilities.

It is recommended that architects, designers, construction businesses, and teachers as well as the wider Eswatini populace must exhort all possible efforts to renewing and development of school learning environments in collaboration with the ministry of education. From the results of this study it is recommended that environmental considerations should be embedded in teacher education and in school management training. Further, environmental improvement in schools should be locally driven, user-led and embedded in pedagogy.

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