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# **The Effects of School Feeding Programs on Students' Academic Achievement in Public Primary Schools of Wolaita Zone, Southern Ethiopia**

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## **ABSTRACT**

*Objective:* The study aimed to assess the effects of the School Feeding Program on Students' academic achievement by comparing beneficiary School feeding with non – beneficiaries of School feeding in SNNPR Wolaita Zone.

*Method:* A comparative cross-sectional research design was employed to compare student academic achievement in beneficiary and non-beneficiary schools. A mixed methods research approach was employed. Data were collected from 306 students from grades two to four, 32 teachers, and seven key informants. Document analysis, standardized test scores, questionnaires, and interviews were used to collect the data.

*Result:* Beneficiary school students wrote 8.6 words per minute in the standardized test, while non-beneficiary students wrote 6.16. It implied that the beneficiary school students wrote more words than non-beneficiaries. Additionally, the independent sample t-test found a statistically significant and positive impact of the School Feeding Programs on students' academic achievement indicators such as average test scores, reading progress of the mother tongue, and writing progress of their mother tongue.

*Conclusion and Recommendation:* The significant challenges were delays in food delivery, lack of close follow-up of executive bodies, and limited support from the community and other stakeholders. The study recommended that the local government expand and sustain the program by shifting to another modality of the school feeding program, which is a homegrown school feeding program, supporting the program by fundraising and income generating. The school community should also sensitize the significance of the school feeding program in primary school students' academic achievement.

**Keywords:** *School Feeding, Academic Achievement, Average Test Score, Writing Skill, Reading Skill*



## INTRODUCTION

The study assessed the effects of the school feeding program (SFP) on students' academic achievement in the public primary schools of Wolaita Zone. According to FAO & WFP (2018), School feeding refers to meal provision to school children. However, school feeding can be classified into two main groups based on their modalities: in-school feeding, where children are fed, and take-home rations, where families are given food if their children attend school. In-school feeding can also be divided into two common categories: programs that provide meals and high-energy biscuits or snacks to elementary school children. World Food Program (2017) stated that School Feeding Programs are far more than food-giving.

Ethiopia is one of the poorest countries in the Sub-Saharan region, where hunger has been a significant barrier to child education. The country has historically experienced severe famines, often drought-affected rural areas. According to Desalegn (2011), most households usually find it difficult to feed the entire family since their food production falls short of the demand in the household. Consequently, even children must engage in some activities to generate household livelihood. Thus, many children in food-insecure areas remain out of school. In addition, nearly half of all children under five years are stunted, and malnutrition has been associated with school-age children with special needs, again among the highest in the world.

Moreover, during 2015-2016 the country suffered the worst drought in 50 years, with 18 Millions of its 100 Million people needing aid, prompting the government to provide food assistance to millions of affected students. The study area, Wolaita Zone, was one of the food insecure areas in Ethiopia's Southern Nations, Nationalities and Peoples Region (SNNPR) because the number of chronically food insecure populations aided by productive safety net program for the past years was about 38,773 beneficiaries. In addition, the area is vulnerable to child and maternal malnutrition (stunting, wasting, and underweight), malaria infection, starvation, dependency, drop out of education, migration, and emergency food aid. It implies the existence of socio-economic, demographic, and other factors underlying the poverty and food insecurity problem in the study area (Adimasu, Senbetie & Yoseph 2019).

A school meal program is believed to be part of school feeding; it can improve test scores, promotion, enrolment, attendance, and late entry, address chronic hunger or micronutrient deficiencies, improve health or increase a student's focus in the classroom, can enhance learning. The present research aimed to assess the existing trend of school feeding during the implementation of SFP and assess the effect of SFP (i.e., whether statistical significance or not) when comparing beneficiary schools with non-beneficiary schools and identify its implementation challenges.

### Problem Statement

Wolaita Zone is generally described as one drought and famine-prone area. Farming in Wolaita Zone is mixed farming; the most common crops were inset, maize, sugar potato, and other cereal productions. Most of the land resources (mainly the soils and vegetation) of this part of the zone have been highly degraded because of the interplay between environmental and human factors such as relief, climate, population pressure, and the resultant over-cultivation of the land,



deforestation of vegetation, and overgrazing. As a result, the area is generally considered resource poor with limited or no potential and hence highly vulnerable to drought. Wolaita zone population pressure in this zone has led to very small landholdings. However, maximum use is made of the most varied cropping in Ethiopia, spread between two growing cycles per year. But rain failure and pests frequently push part of the population over the hunger threshold and into relief food aid. In ordinary production years, households with at least half a hectare of land will be nearly or self-sufficient in staple food. The main food crops are maize and beans intercropped and sweet potatoes in two harvests, while onset is generally small in volume but essential as a backstop in the lean months of February to May (Wolaita Zone Finance and Economic Development Department, 2014).

According to Adimasu & et al. (2019), in Wolaita Zone public primary schools, 10% of students never take lunch before entry every school day, and around 15% skip breakfast or lunch. As the researchers' preliminary observations of some public primary schools in the Wolaita Zone indicate, the school children's attendance and academic achievement are adversely impacted immediately after January's dry seasons. On the other hand, seasons preceding January were dry seasons, where great scarcity of food and water commences. For those reasons, primary school students either drop out or are absent for several days. As a result, they score below Standard or are detained in the same class. On top of that, many are exposed to child trafficking and labour exploitation in search of food. Though SFP has been under implementation in the selected public primary in Wolaita Zone since launching the program at the beginning of the 2017 G.C. academic year, the effects of the school feeding program on students' academic achievement in public primary schools may not be studied yet in the area.

### **Research Objectives (ROs)**

The following objectives of the study are: 1) To identify the existing trend of SFP in public primary schools of Wolaita Zone, 2) To examine the effect of SFP on students' academic achievement in public primary schools of Wolaita Zone, 3) To assess institutional support systems regarding school feeding programs and students' academic achievement, and 4) To assess the challenges of school feeding program implementation of the Wolaita Zone.

## **LITERATURE REVIEW**

### **Concept of School Feeding**

The school feeding program delivers food for school children to alleviate short-term hunger, attract students to increase attendance, and improve concentration and enrollment. Moreover, school feeding programs attract children to school by providing nutritious meals in exchange for school participation. The program may also boost learning and cognitive development if children are undernourished by improving attention spans and nutrition. In addition, the attraction of this program is its potential to improve both school participation and learning and cognitive outcomes by increasing the consumption of nutritious food by malnourished children. Government and donors are amid a debate about the future of the FFE (Food for Education) program (Adelman, Gilligan, & Lehrer, 2008).





School Feeding Program has been operated in two modalities: children are fed inside the school compound, which is nominated School Meals, or the entire family receives food conditional on the achievement of a certain level of school attendance by children is called Take Home Rations. In the School Meals scheme, children are fed breakfast, lunch, or both in school. Such incentive directly targets primary school children, as opposed to Take Home Rations which aims to reach other needy household members. Nevertheless, both schemes aim to offer educational opportunities with food-based incentives for children and for parents to send their children to school (Stephen, Berhanu, Alison, Zoe, George, Adam & Judith 2019). Hungry children have more difficulty concentrating and performing complex tasks, even if otherwise well nourished. School feeding programs can improve educational quality and efficiency: and alleviate short-term hunger in malnourished or otherwise well-nourished school children. This helps not only increase students' attention and concentration, producing cognitive function and learning gains, but also increase community involvement in schools, particularly where programs depend on the community to prepare and serve meals to children. Schools with their communities behind them are more effective than schools with less community involvement (George, 2007).

### **School Feeding Program Trend in Ethiopia**

Ethiopia recently experienced its worst drought in 30 years due to the El Nino crisis, with levels of acute need across all humanitarian sectors exceeding levels seen in the 2011 Horn of Africa drought. According to Government and UN partners, the prolonged food insecurity and disruption to livelihoods greatly affected seven regional states and one city administration of the country (Afar, Somali, Oromia, Amhara, Tigray, Harari, SNNPR and Dire Dawa). As per a rapid assessment conducted by the Ministry of Education and Regional Bureau of Education Cluster in August 2015, the emergency affected about 3 million schoolchildren in these areas of the country (WFP, 2018). The Ministry of Education required around USD 53m to implement the plan and requested the assistance of development partners. However, the expected funding support did not materialize. The Ministry of Education had to scale down the plan and focus its implementation on emergency school feeding by allocating around ETB 570m (approximately USD 27.5m) of the government budget (Stephen et al., 2019).

In the study area, WFP has been the largest provider of school meals in primary schools. A few local and international NGOs provide school meals to vulnerable urban and rural school children. But their efforts are independent and not centrally coordinated. Ethiopia's national SFP is a joint program that involves the WFP and the Federal Ministry of Education. In the study area, the program was initiated in 2018 G.C. According to the program guideline, students receive a 150 g hot lunch meal from wheat, corn, or bean from Monday to Friday.

### **Policy Framework of School Feeding in Ethiopia**

GoE (Government of Ethiopia) has implemented three phases of the multi-year Education Sector Development Program (ESDP). One of the main components of the ESDP has been the SMP, which the GoE has undertaken in partnership with the United Nations World Food Program (WFP). The third phase of the ESDP expanded school meals to schools in food-insecure and vulnerable areas in Ethiopia. In particular, the program targeted pastoralist areas and chronically food deficit highland districts in the country to attract children to school in chronically food



insecure areas, increase enrolment, stabilize attendance, and reduce dropout. The program also pays special attention to increasing girls' enrolment in program areas to bring about gender parity in school enrolment (Robert, Markus & Getinet, 2017).

According to the Ministry of Education Strategy Center (2018), introduce school feeding programs as most children come from low-income families without meals; this may also help curb absenteeism. Political commitment to school meal programs is a common strong feature in the region. Most countries have adopted a rights-based approach to school meals and are about to achieve universal coverage at the primary school level. However, in several countries, regulations are still fragmented or incomplete, and full compliance with norms and guidelines by all actors is still challenging. Governments have also demonstrated strong financial commitment to school meals, making tremendous efforts to expand their programs' coverage. However, ensuring adequate funding remains challenging for many countries and ensuring quality service provisions all year round (WFP, 2017).

### **Strategies for Sustainability of School Feeding Program in Ethiopia**

School feeding is sustainable when key drivers are in place. Over the past 45 years, WFP has handed over school feeding programs to 31 countries where it has worked; these countries still have school feeding programs offered at some level. The most recent countries where WFP phased out school feeding (WFP, 2009).

Evidence of growing interest and commitment to establishing a sustainable national school feeding program in Ethiopia exists.

The collaboration between WFP and MoE to pilot an HGSP (Homegrown School Feeding) program in SNNPR and Oromia region in 2012 has seen the regional government contributing a matching fund that has grown eightfold (from 2 million to 16 million Birr), testifies to this. Other actors are also supporting school feeding, for example, Ye EnatWeg. This charitable organization initiated SFP under the First Lady of Ethiopia's leadership, intending to improve the lives of impoverished children in Addis Ababa (WFP, 2018). In terms of cost-effectiveness, the 2017 Ethiopia Investment Case Report (WFP, 2017) highlights the cost-effectiveness of school feeding overall as an investment that yields significant returns. The study found that for the in-kind School feeding modality (used in Afar and Somali regions), every dollar invested in the school meals program brings an economic return of \$3.1 over the beneficiary's lifetime.

### **Benefits of the School Feeding Program**

Research has shown that nutrition is essential for cognitive and brain development; healthy food choices become vital to a student's academic performance. In addition to these, according to other literature, the following are significant benefits of the school feeding program.

#### **Improves Student's Academic Achievement**

Food insufficiency is a serious problem affecting children's ability to learn. Offering a healthy breakfast is an effective measure to improve academic performance and cognitive functioning



among malnourished populations. Unlike fasting, eating breakfast may improve performance in the morning meal. However, the long-term effects of eating breakfast on the performance of school children who do not have physical signs of severe undernourishment are less specific (FAO, 2007).

### **Students' Micro-Nutrient Improvement**

Micronutrient fortification is a low-cost means of including in meals, fortified biscuits, or snacks the essential vitamins or minerals that may otherwise be deficient in the diet. Iron, iodine, vitamin A, B vitamins, and zinc are the main micronutrients added. As with salt, oil, flour, and other foods, micronutrients can be added at the processing stage. However, a new technology is the addition of micronutrient powder after the food has been cooked. Fortification increases the intake of micronutrients, thereby improving micronutrient status, preventing damage caused by micronutrient deficiencies, and increasing cognition and nutritional status. School health and nutrition services may provide micronutrient supplements, most commonly iron supplements, in contexts where micronutrient deficiencies such as anemia are highly prevalent (W.B. & WFP, 2007).

### **Contributes to Students' Enrollment, Attendance, and Retention**

Another critical point is about the roles that school meals play in encouraging early enrollment. Even though in-school meals are believed to affect the age at entry through an income effect, i.e., by increasing household income and raising the benefit of attending school, this income effect should be significant enough to make households send their children to school. First, providing food offsets the cost of educating children by making available additional income for households, consequently raising the benefits of attending school. It is called the income effect of school feeding. Secondly, the "neighborhood effect" resulting from School Feeding Program may also influence the age at entry. That means households sending their children to school earlier with the commencement of the School Feeding Program would create social pressure and similar prompt action for those who haven't enrolled their children yet (Adelman et al. (2008), as cited Desalegn, 2011).

Kleinman et al. (2002) gathered information from voluntary participants of three inner city schools before and six months after implementing a universal school breakfast program in Boston public schools. A third of the children in the study had been identified as being at nutritional risk. In the six months following, students who decreased their nutritional risk over this period showed greater gains in school attendance and math grades than their counterparts who showed no change in nutritional risk.

### **Impacts of Malnutrition on Student's Academic Achievement**

As observed by Oyefade (2014), several factors significantly impacting many dimensions of poverty on school attendance and education quality, particularly early childhood malnutrition, deprivation based on gender, and income inequality, tend to be responsible. In many countries, such as Brazil, Philippines, Cambodia, Mali, El Salvador, Indonesia, Ghana, Bangladesh,



Ecuador, etc., where the school feeding program is implemented, data reveals that the program has increased enrolment and attendance rates over the years (Akanbi 2013).

In the short run, school meals are expected to alleviate hunger in the classroom and help the child to concentrate better and learn more. In the long run, improved nutrition is expected to increase children's physiological capacity for learning and reduce morbidity by strengthening the immune system, thereby reducing missed school days due to sickness. In addition, school meals make going to school more attractive. The impact of on-site school meals on learning is expected to operate through an increase in School attendance and through improvement in learning efficiency while in school because in the absence of hunger, children can concentrate better and because (micronutrient-fortified) school meals may also improve cognitive functions (Robert, Markus & Getinet, 2017).

### **Empirical Studies on School Feeding Program on Educational Outcomes**

Abiy Yohanis (2017) attempted to assess the effect of school feeding programs on the educational performance of primary public school children receiving support from the YenatWeg charitable society in the Arada sub-city of Addis Ababa. The research has employed a relatively strong statistical test of quasi-experimental design-Difference in Difference (DID), particularly for academic achievement and attendance. Moreover, the researchers assumed that the two groups were also in similar movement in attention ability by conducting correlation analysis on the average score of 2015/16 G.C and attention measure of 2016/17 G.C. Findings from this study provide further evidence that, though the result has shown School Feeding Program has some positive effect on children's academic achievement and attendance.

### **METHODOLOGY**

In this research, both quantitative and qualitative data are mixed to provide a better understanding of research problems which are the existing trend of SFP, its effect on students' academic achievement, and challenges facing program implementation in Wolaita Zone. The research applied a convergent design of a mixed research approach. Quantitative and qualitative data were collected concurrently, and the two data sets were analyzed separately and mixed the two databases by merging the results during interpretation and analysis. Furthermore, the comparative cross-sectional research design was employed for this study. Comparative research design is, as the term implies, a comparison of features in a particular prevailing condition of selected subjects or cases. According to Donald et al. (2010), cross-sectional surveys study a cross-section (sample) of a population at a single time and are the method of choice if you want to gather the data at one point.

Hence, the key initial task focused on distinguishing the object of analysis based on research questions and comprehending variables such as students' average test scores, reading skills of mother tongue, and writing skills. However, according to MoE, there was no clear standard to measure writing skills progress. So, the research evaluated students' writing progress using a standardized test called Curriculum-Based Measurement (CBM).

The Target of the research was 1 – 4 grades in four schools. Of those schools, 2 were beneficiaries, and 2 were non-beneficiaries of SFP Woreda. During the research, assessment or



evaluation methods were practiced typically for the selected beneficiary and non-beneficiary schools and kept comparisons and contrasts of outcomes. The critique of the study believes that no two groups are identical, as there should be at least one factor that differentiates them. The required data were collected from November to February 2012 E.C. to include beneficiary and non-beneficiary Schools' 1<sup>st</sup>-semester roster and to measure current reading and writing progress.

### **Data Collection**

The research was conducted through comparative cross-sectional data for academic achievement of sample schools of the academic year 2011 E.C – 2012 E.C first-semester end documents of grades 2 – 4 were collected. To this end, the researcher employed quantitative and qualitative data collection methods. Quantitative data was collected from the previous three semesters' students' roster records, EGRA file review, close-ended questionnaire, and standardized test tool in beneficiary and non-beneficiary schools. The relevant qualitative data was collected from teachers through open-ended questionnaires and Key Informants Interviews. Thus, the study used four data-gathering instruments: a questionnaire, a semi-structured interview, document analysis, and a standardized test.

Curriculum-based measurement (CBM) is a system of progress monitoring used to enhance the instructional decision-making of teachers and the achievement of students. The tool called CBM was developed in the late 1970s by Deno and his colleagues at the University of Minnesota Institute for Research on Learning Disabilities (Deno, Fuchs & Lynn, 1987). The spelling probes should be different but equivalent in grade level and include at least 12 to 13 words for Grades 1 through 3 and 17 to 18 for Grades 4 through 8. The spelling words should represent the skills the student is expected to master by the end of the school year. In spelling assessments using CBM, the instructor reads aloud words that students should try to spell correctly within a time limit. For example, the teacher may give 12 to 17 spelling words within 2 minutes. According to the CBM scoring technique, spelling words are scored for correct letter sequences.

### **Data Analysis**

#### **Existing Trend of School Meal Program in Wolaita Zone Primary Schools**

In this part of the study, the data on the existing trend of school feeding programs in Wolaita Zone gathered from three key informants such as Zone, Soddo Zuria, and Damot Gale Woreda focal persons' responses were presented and analyzed qualitatively; thus, analysis of stress on coverage of school feeding program.

One Wolaita Zone School Improvement Work process, which was the Zonal School feeding program focal person, said that:

*In Wolaita Zone, primarily a School feeding program was launched in 2010 E.C on a pilot basis in Kindo Didaye Woreda; later, in 2011, E.C extended to 5 Woredas such as Damot Gale, Duguna Fango, Humbo Abala, Kindo Koysha, and Damot Woyde Woredas. Currently, in 28 Primary schools, 5066 students are benefited from the program. Also, it further planned to focus and extend the program to reach out to the*



*food-insecure Woredas to reduce school dropouts, and to increase enrollment and retention, especially among the female and poor background children school-going population.*

## RESULTS

The result shows that SFP better affects internal school efficiencies and students' academic achievement. However, from twenty-two Wolaita Zone districts, only six woredas benefited from the school feeding program. The remaining woredas are suffering from the same food insecurity problems. The finding shows that the school feeding program was limited to a few Woredas.

School feeding has enhanced primary school children's nutrition and health, improving learning and decreasing morbidity, paving the way for healthier lives. In addition, school feeding programs alleviate child hunger and enhance nutrition, particularly when the food is fortified with micronutrients. It can improve a child's health, school performance, and educational attainment.

**Table 1:** Beneficiary School Teachers' Responses on the Existing Trend of SFP in their school

S. No.	Items	N	M	SD
1.	All enrolled students in the school gain enough food during breakfast or lunchtime	30	1.50	.50
2.	There is a delay in food delivery to students	30	4.46	.93
3.	Students gain variation of micronutrients from food delivered by the school feeding program	30	3.26	1.80

N = Total Population M= Mean SD= Standard Deviation

As depicted in item 1 of Table 7, respondents were asked to express their agreement on accessing SFP during breakfast and lunch. Accordingly, teachers of the SFP beneficiary (M= 1.5, SD=.50) disagreed on access to enough food during breakfast or lunchtime. Thus, it can be said teachers supported there is not enough food deliverance for beneficiary schools.

In the same table item 2 above, the respondents asked whether food delivery is a delay for students. Thus, teachers beneficiary schools teachers with (M =4.46, S.D=.93) strongly agree to support there is a delay in food delivery. Therefore, food for students is not regularly supplied and there is a delay.

In the third item of Table 7, respondents were asked to rate their agreement levels on whether or not teachers believe that students gain variation of micronutrients from food delivered by school feeding program with the (M= 3.26, SD=1.86), uncertainty of students achieving variation of micronutrients from SFP. From this, one can conclude that SFP has not resulted in improvements in students' micronutrient intake.





### 4.3. Effect of School Feeding Program on Student's Academic Achievement

The second research objective focused on the effect of school feeding programs on students' academic performance. This part of the research also examined the statistical significance of educational achievement between beneficiaries and non-beneficiary public primary schools.

**Table 2:** Independent Samples t-Test for an average test score, writing progress and mean reading difference in targeted school Students

Variables	Independent Samples Test					
	T	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Average Test Score	12.07	.000	9.87	.81	8.26	11.48
Reading Progress of Students Per Minute	8.37	.000	6.40	.76	4.90	7.90
Standardized Test Score	8.42	.000	2.51	.29	1.92	3.10

#### 4.3.1. The Effect of School Feeding Programs on Average Test Scores of Students

In Table 7 above, the student's average score mean for both SFP and Non-SFP schools has been separately shown; further statistical calculation was employed using an independent t-Test to obtain the test score means of the difference between SFP beneficiaries and Non-beneficiary SFP schools, which indicated in above Table 8.

The result shows that the difference in average student scores between SFP and Non-SFP Schools was statistically significant [ $P=.001$ , 95%CL: 8.26, 11.48]. It implied that SFP positively affected the average test scores of three previous semesters. The difference in average test score means between the two categories of targeted schools was attributed to the effect of the feeding program; following that the program was the only prevailing encouraging intervention in schools with incentive, it was indicated School Feeding Program had a positive effect on attracting children to school, in return, this resulted from students to perform better. Students from low-income families would not be able to come to school without breakfast in the absence of a school feeding program. Even if they attend class, they have the unwillingness to follow lessons. Additionally, the SFP had a role in encouraging food-insecure parents to send their children to school.



**Table 3:** The Summary of Students' Mean Average Test Scores and Standard Deviations between SFP beneficiaries and Non-Beneficiary Schools

Variable	School Type	N	Mean	Std. Deviation
<b>Average Test Score</b>	Beneficiary Schools of Schooling Feeding Program Students	153	68.5	6.88
	Non-Beneficiary Schools of School Feeding Program Students	153	58.6	7.40

**Source:** Author's Survey 2020

Table 3 shows the average test scores from the four targeted schools of Wolaita Zone for both beneficiary SFP and Non-beneficiaries SFP were analyzed to get the Mean of average test scores for both categories. As shown in the above table, the average Mean in beneficiary schools' average test scores for the last three semesters is 68.5 and  $\pm 6.8$  S.D. (Standard Deviation). In Non-beneficiary SFP schools, the average test scores are 58.6 students  $\pm 7.4$  SD. It implies the mean of SFP schools' beneficiaries' average test score was nearly 10% greater than that of Non-beneficiaries in SFP schools. It depicts that SFP has a positive effect on the program beneficiary schools. SFP supported tackling the problem of chronic food shortages for primary school students of beneficiary schools.

#### 4.3.2 The Effect of School Feeding Program on Reading Progress of Mother Tongue of Students

Referring to the independent sample t-test (Table 2), students reading progress mean for both SFP and Non-SFP schools has been separately shown. Further statistical calculation was employed using an independent t-Test to obtain the mean reading difference between SFP beneficiaries and Non-beneficiary SFP schools. The result shows that the difference in students' reading progress means between beneficiaries of SFP and Non-beneficiaries of SFP Schools was statistically significant [ $P = 0.001$ , 95% CL: 4.90, 7.90]. It implies that SFP has a positive contribution to the program participants. In other words, the analysis shows the causal relationship between SFP and reading progress. SFP greatly promotes the learning style of learners in classrooms. It is one of the key interventions for promoting learning to learners in food insecurity, like the Wolaita Zone. It can motivate learners to concentrate and learn better to improve learning capacity and performance. Learners involved in the SFP have access to enhancing their academic achievement since it enables them to attend school frequently and learn more efficiently. Students concentrating on lessons invest more time in classroom activities such as reading exercises. It results in beneficiary school students' reading more words than non-beneficiary primary schools.





**Table 4:** The Summary of Students' Mean reading progress and Standard Deviation between SFP Beneficiaries and Non-Beneficiary Schools

Variable	School Type	N	Mean	Std. Deviation
<b>Reading progress of Students Per Minute</b>	Beneficiary of Schooling Feeding Program Students	153	19.00	5.30
	Non-Beneficiary of Schooling Feeding Program Students	153	12.59	7.83

**Source:** Author's Survey (2020).

Table 4 shows the reading progress from the four targeted schools of Wolaita Zone for both beneficiary SFP and Non-beneficiaries SFP were analyzed to get the Mean of reading progress according to EGRA assessment documents. As shown in the above table, the average Mean in beneficiary Schools' reading progress in their mother tongue (Wolaita language) per minute up to the first semester of the 2012 E.C academic year is 19.00 and  $\pm 5.3$  S.D. (Standard Deviation) and 12.5 and  $\pm 7.8$  in beneficiary SFP schools and non-beneficiary schools respectively. It implies the mean reading progress of beneficiaries of SFP schools greater, and they read more than six words when comparing non-beneficiaries to SFP schools. SFP was supported to tackle the problem of chronic food shortages for primary school students of beneficiary schools. In the short run, school meals are expected to alleviate hunger in the classroom, help the child concentrate better, learn more, and attend tutorial classes. In the long run, improved nutrition is expected to increase children's physiological capacity for learning and reduce morbidity by strengthening the immune system, thereby reducing missed school days due to sickness. In turn, students beneficiary school students of SFP were to perform better in their reading skills than non-beneficiary schools.

### **The Effect of School Feeding Program on Writing Progress of Mother Tongue in Students**

In Table 2, the result of the independent t-test of students' progress in writing means for both beneficiaries of SFP and non-beneficiaries of SFP schools has been shown; and further statistical calculation was carried out using independent t-Test to obtain the standard test score mean of the difference between SFP beneficiaries and Non-beneficiary SFP schools. The result shows that the difference in students writing progress means between beneficiaries of SFP and non-beneficiaries of SFP Schools was statistically significant [ $P = .001$ , 95% CL: 1.92, 3.10]. It implied that SFP has a positive effect on the program participants. In other words, the analysis shows the causal relationship between SFP and writing skill progress in the mother tongue.

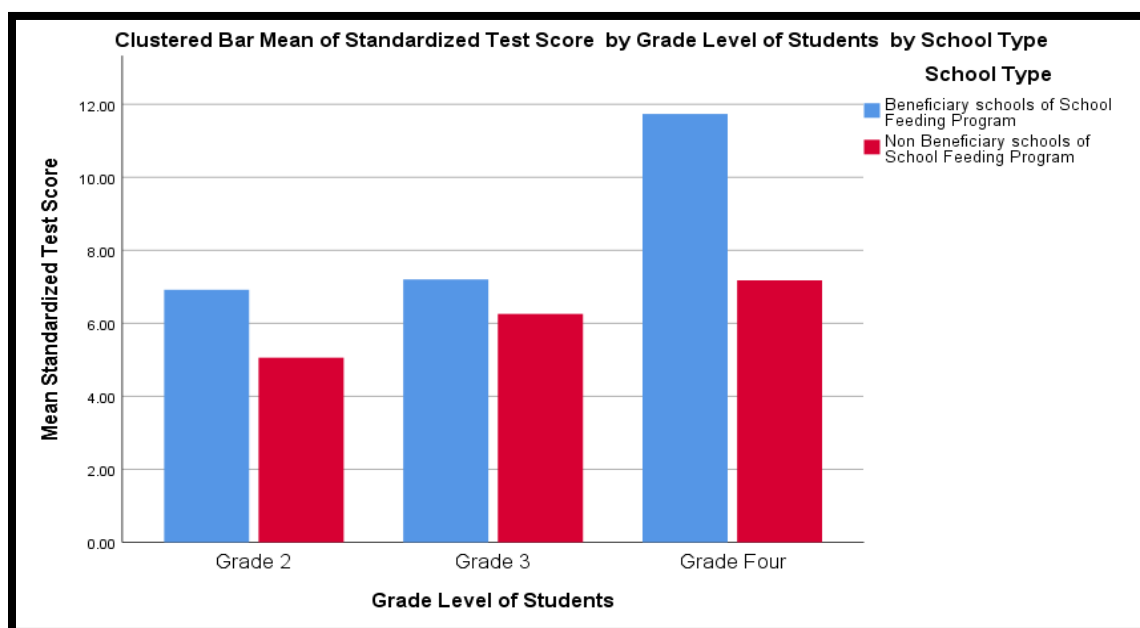


**Table 5:** The Summary of Students' Mean Standardized Test Score in writing progress and Standard Deviation between SFP Beneficiaries and Non-Beneficiary Schools

Variable	School Type	N	Mean	Std. Deviation
Standardized Test Score	Beneficiary of Schools of School Feeding Program	153	8.67	2.66
	Non-Beneficiary of Schools of School Feeding Program	153	6.16	2.55

**Source:** Authors' Survey (2020).

Above the table, table 5 shows that after the standardized test according to CBM was given to grade two up to four-grade level students scored a mean of  $8.67 \pm SD 2.66$  and  $6.16 \pm 2.55$  beneficiaries of SPM non-beneficiaries of SFP, respectively. It indicates that the beneficiary school students have better progress in their mother tongue writing skills.



**Figure 1:** Bar Shows mean standardized test Scores in Comparison between Non- Beneficiaries and Beneficiary Schools

**Source:** Authors Survey (2020)

Figure 1 depicts the changes in student writing progress in beneficiary and non-beneficiary schools. The standardized test scores from grade two to grade four show that the beneficiary school students writing skills in their mother tongue increased in better progress. In the figure, grade two students of beneficiary schools wrote up to seven, and non-beneficiary school students wrote less than five words. Grade three students of beneficiary school students wrote more words than the non-beneficiary. In grade four, there was a large difference between non-beneficiaries



and beneficiaries of SFP. Thus, beneficiary grade four students wrote twelve words, but in non-beneficiary school, students wrote around seven words in the same grade. It clearly shows grade four students of the beneficiary of SFP school were better prepared and transmitted the second cycle of primary education (from grade 5 – 8).

**Table 6:** Beneficiary School Teachers' Responses on Effects of SFP on Students' Academic Achievement in Public Primary Schools

S. No.	Items	N	M	SD
1.	School Feeding Program improved students' academic achievement	30	3.86	1.30
2.	School feeding programs improved students reading progress in their mother tongue (Wolaita language)	30	2.76	1.65
3.	School feeding programs improved students writing progress in their mother tongue (Wolaita language)	30	4.36	.66
4.	School feeding programs improved students' average test scores in three previous academic semesters	30	4.46	.57
5.	There is better nutrition in the school feeding program students, and it improves academic achievement	30	4.20	.99
6.	Students' academic achievement is not related to School feeding; other factors affect students' academic achievement	30	3.8	1.21

N = Sample Population M = Mean SD = Standard Deviation

Source: Authors' Survey (2020).

As shown in item 1 of Table 6, respondents were asked to rate their agreement levels on the contribution of SFP to students' academic achievement. Accordingly, teachers of SFP with the (M=3.86, SD=1.30) agreed that SFP improved students' academic achievement. Thus, it can be said teachers supported the effect of SFP on students' academic achievement from grades 1 – 4 in government primary schools.

Regarding item 2 of Table 6, one of the questions raised to respondents was whether the school feeding program improved students reading progress in their mother tongue. However, teachers of beneficiary schools with (M=2.76, SD=1.65) were undecided about the contribution of the school feeding program on reading progress. Therefore, based on most teachers' respondents, it can be concluded that teachers were unaware of the significance of the SFP in the study area.

As the responses to item 3 indicate, respondents were asked whether or not SFP contributed to the progress of writing skills progress of students with the (M =4.36, S.D. =.66). Thus, it can be concluded that teachers of the beneficiary of SFP agree with the contribution of SFP on students writing skill progress.

In the case of item 4, the School feeding program improved students' average test scores in three previous academic semesters, which was rated agreed with weighted (M =4.46, S.D. =.57). From this, it can be concluded that implementing SFP in primary schools improved students' academic achievement.



According to the responses to item 5, respondents were asked whether or not the SFP has access to better nutrition in school feeding program students. It improved academic achievement with the ( $M = 4.20$ ,  $S.D. = 0.99$ ). Thus, it can be concluded that teachers of the beneficiary of SFP agreed on the contribution of SFP to students writing skill progress.

Concerning item 6 of table 6, which deals with Students' academic achievement, whether or not related to School feeding, other factors affected students' academic achievement. The respondents rated this item as agreed with weighted ( $M=3.8$ ,  $SD=1.21$ ). From this, it can be concluded that implementing SFP is not the only factor that affects students' academic achievement; other external factors also affect students' academic achievement.

**Table 7:** Beneficiary School Teachers' Response to the Challenges in the Implementation of SFP in Primary Schools

S. No.	Items	N	M	SD
1.	Lack of community participation in terms of supplying water, firewood, and payment for cooks:	30	4.20	1.27
2.	Lack of cooking utensils	30	1.50	0.81
3.	Ware house is unclean and unsafe to store food	30	4.40	0.86
4.	The lack of trained cooks affected the implementation	30	2.40	1.61
5.	There is a lack of close follow-up of executive directors of the program	30	2.66	1.47
6.	There is a lack of close follow-up of local bodies such as Kebele, Woreda & Zone	30	2.73	1.61

As it can be observed from Table 7 item 1, respondents were asked to rate their agreement levels on community participation in terms of supplying water, firewood, and payment for cooks, with the ( $M=4.20$ ,  $SD=1.27$ ) agreed that there is a lack of community participation in terms of supplying inputs to SFP. Therefore, it can be concluded that the beneficiary schools lack community participation to support the program in local resources.

Regarding item 2 of Table 7, respondents were asked to rate their agreement availability of cooking utensils in their Schools. Accordingly, teachers with ( $M=1.5$ ,  $SD=0.81$ ) disagreed on the availability of cooking utensils. From this, one can be concluded that there is a lack of cooking utensils, such as spoons, dishes, plates, etc., in beneficiary schools of SFP.

As Table 7 item 3 indicates, respondents were asked to rate their agreement levels on the warehouses in schools that were not clear and unsafe to store food. Teachers with the ( $M=4.4$ ,  $SD=0.85$ ) agreed that there are unclear and unsafe warehouses. Thus, it can be concluded that schools that benefited from school feeding program food warehouses are unclear and unsafe. However, unsafe and unclear warehouses can cause unexpected consequences.

As indicated in item 4 of Table 14 above, teachers were asked whether or not the lack of trained cooks affected the implementation. The ( $M=2.40$ ,  $SD=1.61$ ) disagreed that the lack of trained



cooks affected the implementation. Therefore, it can be concluded that employing trained cooker have unsatisfactory in the study area.

As it can be observed from Table 7 item 5, respondents were asked to rate their agreement levels on the lack of close follow-up of executive directors of the program; the teachers with the ( $M=2.66$ ,  $SD=1.47$ ) were not sure about the issue that the lack of relative follow up of executive directors. Therefore, it can be concluded that the lack of close follow-up of the executive director has been unsatisfactory in the study area.

In the same table item 6 above, the respondents asked whether or not the program implementation lacks close follow-up of local bodies such as Kebele, Woreda & Zone. Thus, teachers beneficiary schools teachers with ( $M =2.73$ ,  $S.D=1.61$ ) were also not sure about the issue of the lack of close follow-up of executive directors. Therefore, it can be concluded that the lack of close follow-up of the executive director has been unsatisfactory in the study area.

## CONCLUSIONS

This study aimed to assess the effect of the School feeding program on students' academic achievement in government primary schools of Wolaita Zone, Southern Ethiopia. This chapter deals with the summary of findings, the conclusions drawn, and the recommendations forwarded based on results and conclusions.

In this sub-section, the research provides a conclusion based on the thesis's research questions.

The trend of school feeding program in the Wolaita Zone have shown the improper targeting of the program, delay in food delivery, and inadequacy of school meals to augment the nutritional status of students. As a result, students of non-beneficiary children cannot come to school or, if they do, cannot stay there for the whole school hours due to short-term hunger or hunger-related diseases. Moreover, the size of the meals allocated for the students is insufficient to encourage their school attendance and alleviate their short-term hunger.

The SFP positively affected students' academic achievement in the two sample beneficiary schools. It improved on indicators of academic achievement such as average test scores, reading progress, and writing progress compared to the non-beneficiary schools in the other Woreda of equivalent socio-economic settings. However, when comparing them with non-beneficiary schools, even classrooms were overcrowded, the student-teacher ratio was more extensive than Standard, over enrollment, and lack of teaching materials such as textbooks. However, the independent t-test of academic achievement was statistically significant. Better average test scores and writing and reading progress were witnessed in the sample SFP beneficiary schools compared to the non-beneficiary schools. In addition, because the students have better concentration in the classroom and retention, students were eager to stay in the school compound; all students followed tutorial lessons, alleviated short-term hunger, and had regular attendance.

However, several challenges were reported regarding implementing SFP in the Wolaita zone. For example, a small amount of food delivered during breakfast and lunchtime, delay in food delivery, lack of community support, monotonous type of food, inadequate access to clean and



safe warehouses, and limited close follow-up from executive bodies have been reported as major SFP implementation challenges faced.

## RECOMMENDATIONS

In practice, the school feeding program is a complex and expensive intervention in education. In Wolaita Zone, the program faced different difficulties in sustaining and expanding. For program sustainability and expansion, WFP and the Wolaita Zone government are advised to shift other modalities of School feeding from a school meal to homegrown school feeding. Homegrown School feeding program is a school feeding program that offers food produced and purchased at a local level. Its focus is to make and buy food for the school feeding program from local small-scale farmers. It is known that most rural parents in Wolaita Zone are small landowners. Therefore, the Wolaita Zone education department, Woredas education offices, and school committee should support the feeding program in schools by initiating income-generating activities to raise funds to supplement the program issued by the government the school feeding program. The school communities and stakeholders should sensitize the significance of the school feeding program among primary school students' academic achievement, concentration, attendance, and retention. It is advisable if they support the program by availing different types of food and necessary utensils to the schools.

The school feeding program committee should adjust school meal times. School meals are less effective if served at the end of classes. Therefore, school meals should be served in the early morning. That means breakfast should be served at 1:30 – 1:55 local time, and lunch should be between shift breaks at 6:15 – 6:35 local time to alleviate short-term hunger, improve students' concentration and protect learning time in the classroom.

School feeding programs faced sustainability challenges. The program usually faced expensive, and the situation has only worsened due to a sharp rise in food prices over the last few years. But, most rural schools in Wolaita Zone owned farmland cultivated by the school community. So, schools should try to support school feeding programs through local food production. As a result, schools have reached relatively high self-sufficiency in their feeding programs through their school farming activities, thus compensating for the otherwise very high costs involved if all ingredients had to be bought. Therefore, the program donors like World Food Program and stakeholders suggested assisting the school community in giving workshops and technical guidance to enhance the school-based feeding program.

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**Technical Terms:** 1) The Ethiopian people usually use technical terms, and the government also exercises in the Official documents and reports, 2) Woreda means District, 3) Kebele means Village, 4) Dega means High land, 5) Wyne Dega means Mid-highland, and 6) Kolla means lowland

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# **The Association between Chief Executive Officer (CEO) Characteristics and Company Performance in Vietnam**

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## **ABSTRACT**

*Objective:* This study aims to examine how the characteristics of the Chief Executive Officer (CEO) impact the performance of firms.

*Method:* Specifically, the study focuses on the influence of the CEO's educational background, professional experience, and tenure on the performance of 245 listed companies on the HCM stock exchange from 2015 to 2020 in Vietnam. The study utilised a panel model and formulated three equations using the GMM method, which aligns with previous empirical research.

*Result:* The study found that the educational background of the CEO plays a significant role in company performance, with companies performing exceptionally well when the CEO holds a degree in business administration, economics, finance, or accounting. In addition, the study found that having a postgraduate qualification, such as an MBA, master's, or PhD, positively impacts a company's stock performance.

*Conclusion and Recommendation:* The study demonstrated that a CEO's related work experience also positively impacts firm performance. Finally, the study found that a CEO's long tenure improves corporate performance. Overall, the study demonstrates that CEO attributes are critical factors explaining differences in Saudi firms' performance. These findings can assist shareholders in selecting the appropriate CEO to manage their company.

**Keywords:** Chief Executive Officer (CEO), Characteristic, Firm Performance, Vietnam

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## INTRODUCTION

Financial performance has been a common area of research in corporate governance, with many concerns guiding this research. Companies have always been interested in improving their performance, and value creation has become a crucial factor in evaluating companies in a more financially oriented economy. This emphasis on value creation has raised questions about how companies manage or transfer their risks.

Much literature has been developed to explore the factors that impact firms' performance, with many factors being identified as significant contributors (Agarwal, 2020; Bennouri et al., 2018). Among these factors, the characteristics of executive directors, such as the CEO, are considered to play a crucial role (Chowdhury & Fink, 2017). Executive managers are essential players in this process, and the success or failure of a company is often attributed to their decisions. These managers are constantly evolving and are tasked with driving growth, managing complexity, and controlling costs. Recent financial crises have highlighted the importance of effective corporate governance, particularly concerning the behaviour of top managers. The crucial decisions that determine a company's survival are made by executive managers, whose focus is now shifting towards investment matters that promote growth and long-term success.

While previous research has investigated the relationship between CEO characteristics and firm performance, most studies have focused on the US and European markets. In contrast, this study focuses on the Saudi market, which has received less attention in the literature. This research aims to fill the gap in the literature by examining the impact of CEO characteristics, such as education, professional experience, and tenure, on the performance of Saudi-listed firms. The adoption of international financial reporting standards in Viet Nam has led to structural changes in the country's business practices, making it an interesting case study for exploring the relationship between CEO characteristics and firm performance. Also, most Saudi companies are family-owned, which may affect CEO succession and performance. Therefore, this study aims to increase our understanding of the relationship between CEO characteristics and firm performance in the unique context of Vietnam.

The paper makes several contributions to the research on firm performance. Firstly, it is one of the leading studies investigating the connection between CEO characteristics and firm performance, specifically in the context of an emerging market like Viet Nam. Secondly, it assesses the impact of traditional factors identified in previous studies on the performance of Saudi-listed firms. Lastly, the study provides a foundation for future research on firm performance in emerging markets.



## LITERATURE REVIEW

### Theories

The purpose of the theoretical framework is to clarify the role of the CEO in making decisions for the company and how this impacts the organisation's performance. Several theories suggest that top executives are good indicators of a firm's financial performance. This paper focuses on the agency and stewardship theories, two corporate governance theories examining the relationship between shareholders, top managers, and firm performance (Jensen, 1986; Jensen & Meckling, 1976). The theories are relevant to the topic of CEO attributes and how the characteristics of top managers can influence the value of the firm and its shareholders.

The agency theory focuses on the association between shareholders and top managers in a company, where shareholders are considered the principals and top managers as the agents. According to this theory, losses occur when managers make decisions that do not benefit the shareholders, resulting in what is known as agency costs (Jensen & Meckling, 1976). The agency theory assumes that interests inside the firm may not necessarily align because decision-makers do not have a common objective of increasing shareholders' wealth. On the other hand, the stewardship theory proposes that managers are collectivist, honest, and responsible for the company's resources (Jensen, 1993). Unlike the agency theory, the stewardship theory advocates giving more control to managers within the company since they are more likely to act in the shareholders' best interest by seeking the organisation's long-term performance. Thus, top management executives can use their operational control to increase the firm's value and achieve the shareholders' goals.

### CEO Characteristics and Firm Performance

Previous studies have highlighted the significance of the educational qualifications of management personnel. A company's human capital is predominantly based on the education level of its staff, with a higher level of education for the CEO resulting in enhanced value for the company's human capital. CEOs with advanced educational backgrounds are better equipped to make informed decisions in complex environments and possess better problem-solving abilities, adaptability to innovative solutions, and handling any uncertainties that may arise. This higher level of education translates to better stability and fewer turnovers for the CEO, which positively affects the company's financial performance. In general, higher education levels are indicative of better managerial effectiveness.

Nevertheless, thorough research indicates that managers with an MBA degree tend to opt for less risky approaches, prioritise short-term objectives, and resist embracing innovation. On the other hand, those who possess technical education tend to promote innovation and establish greater administrative complexity. On the other hand, firms whose managers hold degrees in economics exhibit lower organisational complexity.



## Hypothesis Development

The existing empirical literature broadly supports the theoretical arguments mentioned above. One study by Boubaker et al. (2020), which analysed a sample of firms listed on the Nairobi Securities Exchange, found that CEO education and age positively and significantly impact firm performance. These findings are supported by another study conducted by Almustafa et al. (2023), which investigated the effect of CEO attributes on the performance of US manufacturing firms and found that CEO education level positively affects company performance. The proposed first hypothesis is as follows:

*H1: CEO education increases firm performance.*

Another body of literature focuses on the importance of a CEO's professional experience in explaining firm performance variations (Custódio & Metzger, 2014; Dang et al., 2020). Some studies suggest that CEOs with good qualifications, skills, and experience are more likely to enhance the company's financial performance. Notably, according to Serra et al. (2016), CEOs with expertise in finance, accounting, and law are better equipped to make effective strategic decisions. Furthermore, appointing a CEO with substantial professional experience results in better monitoring and elicits a stronger stock market reaction (Dang & Nguyen, 2021b; Duru et al., 2016). Consequently, companies tend to seek managers with good expertise (Dang & Nguyen, 2021a). It is anticipated that companies that appoint CEOs with professional qualifications will perform better than those that hire CEOs without professional qualifications.

The literature examining the relationship between CEO experience and firm performance presents conflicting results. The theory of learning transfer suggests that learning should occur after a new position is assumed (Cristea & Nguyen, 2016; Dang & Nguyen, 2022). This theory posits that if a CEO has prior experience, they may suffer from the negative transfer of learning. Their experience may not align with the skills and abilities required in the new position. Moreover, replicating actions that led to success in the previous context may not produce the same outcomes in the new role, ultimately hindering the company's financial performance (Dang et al., 2022). It is important to note that firms operating within the same industry may exhibit culture and operational differences, which can affect the CEO's performance (Custódio & Metzger, 2014). Thus, the proposed second hypothesis is as follows:

*H2: CEO experience and qualification increase firm performance.*

The results of studies examining the relationship between CEO tenure and firm performance are mixed. Some scholars argue that there is a positive correlation between executive tenure and firm performance, while others claim that the relationship is either negative or insignificant. The first group of researchers explains this connection by suggesting that the CEO's longer experience



with the company improves their understanding of its compelling strategy, resulting in improved company performance. Elsaid and Ursel (2011) found that longer tenure allows CEOs to gain more knowledge, power, and skills, leading to better control in a risky environment and boosting the company's performance. Habib and Hossain (2013) argued that a more remarkable tenure implies more profound knowledge and advanced skills, which can help keep risks under control.

The effect of CEO tenure on firm performance is a topic that has varying findings in the literature. Some researchers argue that longer tenure positively correlates with firm performance, while others suggest the relationship is negative or insignificant. According to the first perspective, longer CEO tenure leads to a better understanding of the company's effective strategy, which can improve firm performance. This understanding is gained through long experience with the company, which gives the CEO more knowledge, power, and skills to control risky environments better. Conversely, scholars from the second viewpoint argue that longer CEO tenure may lead to less effective strategies due to more obligations and a tendency to pursue traditional strategies. Additionally, the effect of CEO tenure may depend on their life cycle seasons; for example, earlier seasons may lead to improved performance due to the CEO's willingness to take up new initiatives and expand their knowledge and skills, whereas later seasons may lead to a negative impact on performance as CEOs become more committed to their views and less adaptable to the external environment. Empirical literature findings are also inconclusive. For instance, while some studies have found a positive relationship between CEO tenure and firm performance, others have found no relationship or even a negative correlation. For example, Chowdhury and Fink (2017) found that higher CEO tenure improved the financial performance of 505 of the largest US companies between 2000 and 2015. However, Kolias and Koumanakos (2022) found no relationship between CEO tenure and firm performance in 95 CEOs from the top 36 performing public-listed companies from 2009 to 2016. Tsai (1994) found that CEO tenure negatively affects the firm's performance in a sample of 304 listed firms in Taiwan, including 63 family-controlled companies. The proposed third hypothesis is as follows:

*H3: CEO tenure reduces firm performance.*

## **METHODOLOGY**

### **Data Collection**

The information regarding financial and accounting variables was gathered from the HCM stock exchange and the annual reports of the chosen companies. These reports contain statements of comprehensive income and financial position. Furthermore, the educational background and experience of the CEOs were obtained from their CVs and/or social media profiles. The study involved a sample of 245 listed firms between 2015 and 2020. Companies with incomplete information or in the financial sector were excluded from the sample selection due to their unique reporting standards.



## Models and Data Analysis

To examine how CEOs' characteristics affect firm performance, we utilise a panel model commonly employed to address the problem of unobserved. We follow the method of previous studies (Nguyen & Dang, 2020; Nguyen, 2020, 2021, 2022a, 2022b, 2022c) and estimate equations (1), (2), and (3) using the GMM method developed by Arellano (2003). Our econometric estimates consider CEOs' characteristics as exogenous variables, while other explanatory variables are regarded as endogenous and instrumented by their lags of up to three periods. The specifications we use are as follows:

$$ROA_{it} = \beta_0 + \beta_1 \text{Postgraduate}_{it} + \beta_2 \text{Field}_{it} + \beta_3 \text{Tenure}_{it} + \beta_4 \text{Experience}_{it} + \beta_5 Z_{it} + e_{it} \quad (1)$$

$$ROE_{it} = \beta_0 + \beta_1 \text{Postgraduate}_{it} + \beta_2 \text{Field}_{it} + \beta_3 \text{Tenure}_{it} + \beta_4 \text{Experience}_{it} + \beta_5 Z_{it} + e_{it} \quad (2)$$

$$\text{Tobin's } Q_{it} = \beta_0 + \beta_1 \text{Postgraduate}_{it} + \beta_2 \text{Field}_{it} + \beta_3 \text{Tenure}_{it} + \beta_4 \text{Experience}_{it} + \beta_5 Z_{it} + e_{it} \quad (3)$$

The study measures firm performance through three variables: return on asset (ROA), return on equity (ROE), and Tobin's Q. These variables are commonly used in the existing literature and are employed to evaluate various aspects of financial performance. ROA is calculated by dividing net income by total assets and is widely used to assess financial performance because it considers the company's historical background over the year in addition to its operational events. It measures how effectively a company uses its resources to generate a reasonable rate of return. In contrast, the ROE is computed by dividing net income by total equity to determine the return on investment for shareholders. The ROE represents the profit earned as a percentage of shareholders' equities and reflects the firm's capacity to generate income from shareholder investments. Tobin's Q is another metric used to evaluate financial performance. It is computed by adding the market value of equity and the book value of total assets, subtracting the book value of equity, and dividing the result by the book value of total assets. This variable measures the company's market performance and is considered a long-term performance measure. When the ratio is less than 1, the market value is lower than the replacement costs of the company's assets, implying that the stock is undervalued. Conversely, when the ratio is greater than 1, the stock is considered overvalued (Nguyen, 2022d).

Regarding dependent variables, the selected CEO characteristics include education, tenure, and professional experience. CEO education is measured by two variables: a dummy variable that indicates whether the CEO holds a postgraduate degree and another dummy variable that indicates whether the CEO has a degree in business-related fields. CEO tenure is measured by the number of years since appointment, while CEO professional experience is measured by a dummy variable that indicates whether the CEO has relevant industry experience. Prior studies have reported mixed results regarding the effect of CEO tenure and professional expertise on financial performance (Nguyen, 2022e).



Following prior research (Nguyen & Nguyen, 2020), we include a group of commonly utilised control variables in our analysis. Specifically, we incorporate four control variables: firm size (Size), which is determined by the natural logarithm of total assets at year-end; firm leverage (Leverage), measured by the proportion of total debts to total assets; sales growth of the company (Sales-Growth), calculated as the change in sales between the current and prior year divided by recent year sales; and tangibility of assets (Tangible), represented by the ratio of fixed assets to total assets (Al-Gamrh et al., 2020; Arora, 2022; Nguyen & Dang, 2022). The researchers employed software in data analysis.

## RESULTS

**Table 1.** Descriptive statistics

Variable	Sample Size	Mean	SD.	Min	Max
Tobin-Q	723	0.311	0.216	.0137	0.667
ROA	723	0.046	0.064	-.411	0.377
ROE	723	0.062	0.202	-2.766	0.603
Tenure	723	4.346	3.700	0.00	23
Experience	723	0.636	0.361	0.00	1.00
Field	723	0.347	0.376	0.00	1.00
Postgraduate	723	0.447	0.377	0.00	1.00
Leverage	723	0.300	0.204	.013	0.667
Sales	723	-0.123	2.273	-26.212	7.661
Tangible	723	0.362	0.233	.0123	.770
Size	723	13.761	1.432	11.31	11.70

SD. = Standard Deviation



**Table 2.** Correlation matrix

	Tobin	ROA	ROE	Tenure	Exp	Field	Postg	Lev	Sale	Tang
Tobin	1									
ROA	-0.437	1								
ROE	-0.315	0.656	1							
Tenure	0.061	0.037	0.066	1						
Exp	0.053	0.117	0.056	0.144	1					
Field	-0.054	0.040	0.046	-0.155	-0.141	1				
Postg	0.076	-0.016	-0.037	-0.104	0.164	0.360	1			
Lev	0.577	-0.366	-0.165	0.043	0.045	-0.046	0.047	1		
Sale	0.004	0.354	0.504	0.015	0.033	0.037	0.053	-0.001	1	
Tang	0.150	0.004	0.005	0.313	0.064	-0.047	0.046	0.134	0.076	1
Size	0.440	0.011	0.043	0.046	0.114	0.101	0.300	0.460	0.045	0.331

To further explore the relationship between the explanatory variables and the financial performance of the company, we can examine the correlations between them. Table 2 presents the correlation matrix. The results indicate that the CEO characteristic variables have a positive correlation with the firm performance measures. However, the variable (Postgraduate) has a negative correlation with ROA and ROE. Moreover, all control variables are statistically significant and have the expected signs. It is worth noting that the explanatory variables are not strongly correlated with each other, which supports their inclusion in the same model.

**Table 3.** Estimation Results

		(1)	(2)	(3)
		ROA	ROE	Tobin-Q
Lag-ROA	$\beta$	0.407***		
	p-value	0.001		
CEO Tenure	$\beta$	0.000713	0.00357**	0.0244***
	p-value	(0.134)	(0.017)	(0.001)
CEO Experience	$\beta$	0.0117*	0.0371**	0.00733**





	p-value	(0.047)	(0.035)	(0.0033)
CEO Field	$\beta$	0.0451*	0.133***	0.0547***
	p-value	(0.057)	(0.007)	(0.0111)
CEO Postgraduate	$\beta$	-0.0334	- 0.0515	0.00411**
	p-value	(0.003)	(0.000)	(0.00374)
Leverage	$\beta$	-0.103***	-0.145***	1.004***
	p-value	(0.0002)	(0.000)	(0.0130)
Sales-growth	$\beta$	0.00541***	0.00757***	0.00431*
	p-value	(0.000)	(0.000)	(0.051)
Tangibles	$\beta$	-0.0344**	-0.00331	-0.0447***
	p-value	(0.017)	(0.517)	(0.005)
Size	$\beta$	0.0171***	0.0115***	0.00150
	p-value	(0.005)	(0.000)	(0.0534)
Lag-ROE	$\beta$		0.514***	
	p-value		(0.001)	
Lag-Tobin-Q	$\beta$			0.0157*
	p-value			(0.047)
Constant		-0.315***	-0.337***	-0.0775
		(0.004)	(0.000)	(0.0413)
Sample Size		733	733	733
No of firms		245	245	245
Instruments		35	34	36
Hansen: p-value		0.335	0.385	0.365
AR(1): p-value		0.000	0.000	0.080
AR(2): p-value		0.116	0.201	0.121

Table 3 presents the results of our estimation. In specification (1), the dependent variable is ROA, while in specifications (2) and (3), ROE and Tobin's Q are used as the dependent variables, respectively. ROA and ROE are accounting measures of corporate performance, while Tobin's Q



is a market-based measure of financial performance. This research used the system-GMM method to estimate all the specifications. The first report the results of the Hansen overidentification test, which confirms the validity of our instruments. We also performed the Arellano Bond AR (2) tests, which indicate the absence of second-order autocorrelation of the model's residuals in the first differences. The lagged dependent variable is also significant across all specifications, meaning our dynamic specification is appropriate. Before interpreting the results of the explanatory variables, we want to highlight the intense significance of the autoregressive term.

## DISCUSSIONS

The data presented in Table 3 reveal that the variable (Tenure) possesses a positive and significant coefficient across most of the specifications, indicating that enhancing the number of years after the CEO's appointment leads to an improvement in the company's financial performance. This outcome supports previous studies demonstrating a positive correlation between executive tenure and firm performance, as highlighted in Wu et al. (2005). It is because CEOs with longer tenure tend to invest in higher-risk ventures that usually yield greater returns. Moreover, CEOs who have served for an extended period are more inclined to maintain consistent and stable strategies, which can enhance their dedication to the firm and, in turn, improve company performance.

The results in Table 3 confirm the importance of CEO-related experience. The variable (experience) has a positive and significant coefficient in all specifications, indicating that companies with executives with experience in a related field perform better. This finding is consistent with previous studies that have found a positive correlation between executive professional expertise and corporate performance (Erickson et al., 2005). This result can be attributed to CEOs with relevant professional experience being better equipped to monitor the firm and receive a stronger reaction from the stock market when appointed. As a result, companies seek out managers with good expertise (Hayes & Abernathy, 1980). The impact of the CEOs' education level is highlighted in Table 4, and it varies depending on the measure of financial performance. The variable (Field) has a positive and significant coefficient in all specifications, indicating that the executives' field of study significantly impacts the company's financial performance. The results suggest that CEOs with degrees in business administration, economics, finance, or accounting possess the aptitude to enhance company performance. It is due to their possession of the necessary expertise to manage the firm efficiently. CEOs with training in management or economics can make sound judgments in intricate settings, have a greater willingness to accept innovative solutions, and can navigate any challenges or uncertainties that may arise. Additionally, prior research has demonstrated that CEOs with a technical education are more likely to establish a higher level of administrative complexity, which could impede the company's performance.



The results for the second education proxy are different. While the coefficient for postgraduate education is not significant when using ROA and ROE measures, it becomes positive and powerful when using Tobin's Q measure. It suggests that having executive directors with postgraduate degrees such as MBA, master's or PhDs does not improve a company's financial performance. However, it seems that CEOs with high levels of education significantly increase firm value, as indicated by the positive and significant coefficient associated with Tobin's Q. These findings are consistent with previous research, which shows that investors prefer CEOs with postgraduate degrees, leading to higher stock market returns. It may be due to intangible benefits such as broader connections and a better reputation, resulting in superior market performance. Furthermore, the hiring of CEOs with advanced education by a firm is reflected in the market value, which indicates a broader range of investment prospects and diversified financing sources associated with the business networks that these CEOs established during their university years. Finally, the CEO's education level may have a long-term impact on firm performance (Tobin's Q) but not on short-term performance (ROA and ROE).

## CONCLUSIONS

The study found no evidence that Viet Nam companies perform better when their CEOs hold postgraduate degrees than those with law degrees. However, it was observed that firms with highly educated CEOs had a higher market value than those with undergraduate executives. These results suggest that CEO education may positively impact the firm's value but does not necessarily translate to better accounting profitability. Investors may perceive highly educated CEOs as an excellent reason to invest in the company, thus enhancing its overall value. However, a higher degree does not guarantee successful management of the firm. This study adds to the existing literature on the factors that contribute to the performance of firms in Gulf countries, specifically Viet Nam. The results suggest that specific attributes of executives are significant determinants of firm performance. This information would be valuable to those responsible for making decisions within the company and to shareholders in their selection of CEOs. Family-owned businesses, which are common in Viet Nam, are encouraged to consider the qualifications and experience of potential CEOs when making hiring decisions rather than solely relying on family succession plans. Executives with related experience and a background in business administration, economics, finance, or accounting are recommended for recruitment. Hiring postgraduate CEOs can increase a company's market value. Increasing the tenure of executives is also advised to improve financial performance and reduce agency issues. By taking these steps, Saudi companies can improve their competitive position in the global market.



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# The Impact of Smart Education on Learning Outcomes in the Digital Era: A Systematic Review

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## ABSTRACT

*Objective:* Smart education refers to the use of technology to enhance and transform the traditional education system. The aim of this systematic review is to explore the impact of smart education on learning outcomes.

*Method:* A narrative synthesis was employed. The data was analysed using the documentary method and content analysis via systematic review. NVivo, a qualitative data analysis software, was also used for interpretation and analysis.

*Result:* Smart education plays a critical role in this digital age. It has a positive impact on student engagement, motivation, and achievement. However, the effectiveness of smart education varies depending on the context and the technology used.

*Conclusion:* Smart education is vital in the digital era as it has the potential to transform the traditional education system and provide students with a personalised learning experience.

*Recommendation:* Programme executives, directors, and teachers are encouraged to create and implement strategies that meet the learning needs and expectations of students and improve their academic performance through the use of smart education. By doing so, they can provide a personalised learning experience that enhances student engagement, motivation, and achievement. Additionally, carefully considering the context and technology used in implementing smart education can lead to successful integration into the curriculum.

**Keywords:** *Smart Education, Learning Outcome, Student, Technology, Digital*





## INTRODUCTION

In comparison to the twenty-first century, the educational sector 50 years ago was no longer adequate for success in college, career, and citizenship. It is difficult to prepare students for work, citizenship, and life in the twenty-first century. Globalisation, innovation, migration, international competition, changing markets, and transnational environmental and political challenges place a new emphasis on developing the skills and knowledge learners will need to succeed in the twenty-first century (Limna, Siripipatthanakul, & Siripipattanakul, 2021; Namraksa & Kraiwanit, 2023). Moreover, the COVID-19 pandemic impacted the traditional learning methods of academic institutions worldwide (Kaewbuadee & Kraiwanit, 2022; Limna & Siripipatthanakul, 2022). Furthermore, the educational landscape has recently changed due to technological advancements. Higher educational institutions (HEI) make the best use of available resources and keep learning up to date as human knowledge grows and technology advances. Information and Communications Technology (ICT) provides numerous benefits in an age determined to create new paths to quality education. ICT simplifies many mundane tasks and allows for communication from virtually anywhere on the planet. ICT in education has been linked to an improvement in people's lives by improving teaching and learning. In addition, the use of ICT techniques in learning and teaching has a significant positive impact on a student's learning abilities. It has been established that when students use computers to complete tasks assigned to them, they reflect a very positive attitude toward work and education, encouraging and motivating them to soak up the knowledge. Students in educational institutions who used technology to learn had higher self-esteem and self-confidence. As a result, a growing number of educational institutions are incorporating ICT into their educational systems. With the advancement of technology, HEIs can now keep track of resources, develop smarter lesson plans, design safer campuses, and improve information access. Education looks very different today, thanks to the use of mobile phones and tablets in the classroom (Kuppusamy, 2019; Siripipatthanakul, Siripipattanakul, Limna, & Pholphong, 2022). Concisely, recent advances in technology enable learners to learn more effectively, efficiently, flexibly, and comfortably. Learners use smart devices to connect to digital resources via a wireless network and immerse themselves in personalised, seamless learning. Smart Education is a popular concept that describes learning in the digital age (Zhu, Yu, & Riezebos, 2016).

Smart education has emerged as a new paradigm in education that utilises technology to enhance and transform the traditional education system. Smart education is a system that combines the use of technology, pedagogy, and content to provide students with a personalised learning experience. With the rise of digital technologies, smart education has become increasingly popular, and many schools and universities are adopting this approach to teaching and learning. However, there is a need to evaluate the impact of smart education on learning outcomes to determine its effectiveness. Therefore, the aim of this systematic review is to explore the impact of smart education on learning outcomes.

## RELATED LITERATURE

Li and Chen (2020) investigated the impact of smart education on learning outcomes in a Chinese context. The study involved 312 students in grades 7-9 who were divided into two groups: a smart education group and a traditional education group. The smart education group received instruction using a smart education platform that incorporated multimedia resources and interactive activities, while the traditional education group received instruction using



traditional methods. The results of the study showed that the smart education group had significantly higher learning outcomes than the traditional education group in terms of knowledge acquisition, critical thinking, and problem-solving skills. The researchers attributed these results to the fact that the smart education platform allowed for more personalised and engaging learning experiences, as well as the use of multimedia resources that enhanced the students' understanding of the material.

Kassim and Ali (2020) examined the impact of smart education on learning outcomes in the context of higher education in Malaysia. The study involved 100 undergraduate students who were divided into two groups: a smart education group and a traditional education group. The smart education group received instruction using a smart education platform that included features such as online lectures, discussion forums, and multimedia resources, while the traditional education group received instruction using traditional methods. The results of the study showed that the smart education group had significantly higher learning outcomes than the traditional education group in terms of knowledge acquisition, critical thinking, and information retention. The researchers attributed these results to the fact that the smart education platform allowed for more flexible and interactive learning experiences, as well as the ability to access course materials and resources at any time.

Wang and Chen (2020) examined the impact of smart education on learning outcomes among college students in China. The study involved 321 students who were divided into two groups: a smart education group and a traditional education group. The smart education group received instruction through an online platform that included interactive multimedia content, while the traditional education group received instruction through lectures and textbooks. The study found that the smart education group had significantly higher scores on tests of learning outcomes than the traditional education group. In addition, the smart education group showed higher levels of engagement and motivation in their learning compared to the traditional education group. The study concluded that smart education has a positive impact on learning outcomes in the digital era.

Siripipatthanakul, Limna, Kraiwanit, and Siripipattanakul (2022) explored the intention of higher education students in Thailand to use smart education technology during the COVID-19 pandemic. Through the mediating effect of student satisfaction, the determinants of intention to use smart education technology adopt perceived usefulness and perceived ease of use of the technology acceptance model (TAM). The online convenience sampling collected data from 238 Thai university students. SPSS Version 27 and the partial least square structural equation model (PLS-SEM) were used to analyse the data. The results support the TAM model's inclusion of perceived ease of use and perceived usefulness. Student satisfaction plays an important role in mediating the TAM model and the intention to use smart education technology. The TAM model, on the other hand, has no discernible direct effect on the intention to use smart education technology. This study's findings could help educators and instructors improve their intentions to use smart education technology by using the TAM model, as well as student satisfaction.

According to Siripipatthanakul et al. (2023), the impact of technology on education has been revolutionary, with e-learning and digital instruction becoming increasingly integrated into modern teaching practices. One such approach is game-based learning, which incorporates educational computer games and software to enhance student learning and assessment. However, while gamification has been used for several years, it appears that game-based





learning has reached a stalemate in which seamless integration between learning and gaming has yet to be fully realised. Nonetheless, gamification can provide a systematic approach to designing effective digital teaching and training systems. Creating appropriate games can also increase the acceptability of instructional material among learners. Despite these challenges, game-based learning and gamification have captured the attention of numerous researchers and continue to hold great potential for transforming education in the twenty-first century. The concept of gamification, which originated from marketing initiatives, has now made its way into educational structures, scientific research, degrees, and workplace productivity. As technology continues to advance, it is likely that game-based learning and gamification will play an increasingly significant role in the future of education.

## METHODOLOGY

Narrative synthesis is the process of conducting a systematic review and synthesis of findings from multiple studies that heavily rely on words and text to summarise and explain the synthesis's findings (Siripipatthanakul et al., 2022; Limna & Kraiwanit, 2022). A systematic review of the literature was conducted to identify studies that investigated the impact of smart education on learning outcomes. The search terms used included “smart education,” “technology-enhanced learning,” “digital learning,” “e-learning,” and “online learning.” The inclusion criteria were studies that (1) investigated the impact of smart education on learning outcomes, (2) were published between 2010 and 2023, and (3) were written in English.

According to Viphanphong, Limna, Kraiwanit, and Jangjarat (2023) and Woodeson, Limna, and Nga-Fa (2023), content analysis is a qualitative method for systematically and objectively describing and quantifying specific phenomena using valid inferences drawn from verbal, visual, or written data. Thus, content analysis was employed, as recommended by Limna, Onjan, and Silasak (2022). Also, NVivo, a qualitative data analysis software, was used to interpret the results, as recommended by Siripipattanakul, Siripipatthanakul, Limna, and Auttawechasakoon (2022) and Viphanphong, Kraiwanit, and Limna (2023).

## RESULTS

Many studies have investigated the impact of smart education on learning outcomes, and the overall consensus is that it has a positive effect on academic achievement. The findings suggest that smart education has a positive impact on student engagement, motivation, and achievement. In addition, the studies found that the effectiveness of smart education varies depending on the context and the technology used. For example, studies that used interactive whiteboards found a positive impact on student learning outcomes, while studies that used virtual reality technology found mixed results.

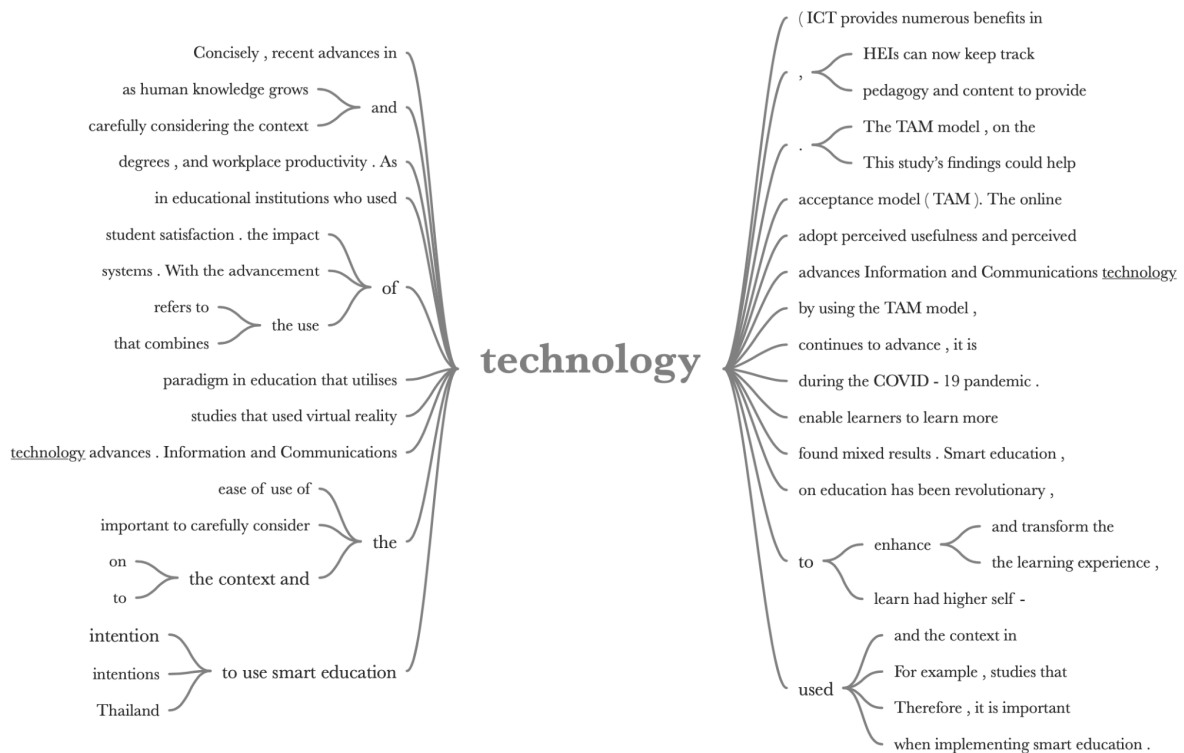
Smart education, which refers to the use of technology to enhance the learning experience, has become increasingly popular in the digital era. One key advantage of smart education is its ability to provide personalised learning experiences that cater to the individual needs and preferences of learners. With the use of interactive multimedia content, simulations, and gamification, students can engage with the material in a more interactive and engaging way, leading to improved retention and understanding of the content.

## NVivo Analysis

The interpretation and analysis were based on NVivo. The following images depict word frequency query (word cloud) and text search (word tree).



**Figure 1.** Word cloud



**Figure 2.** Word tree (Technology)

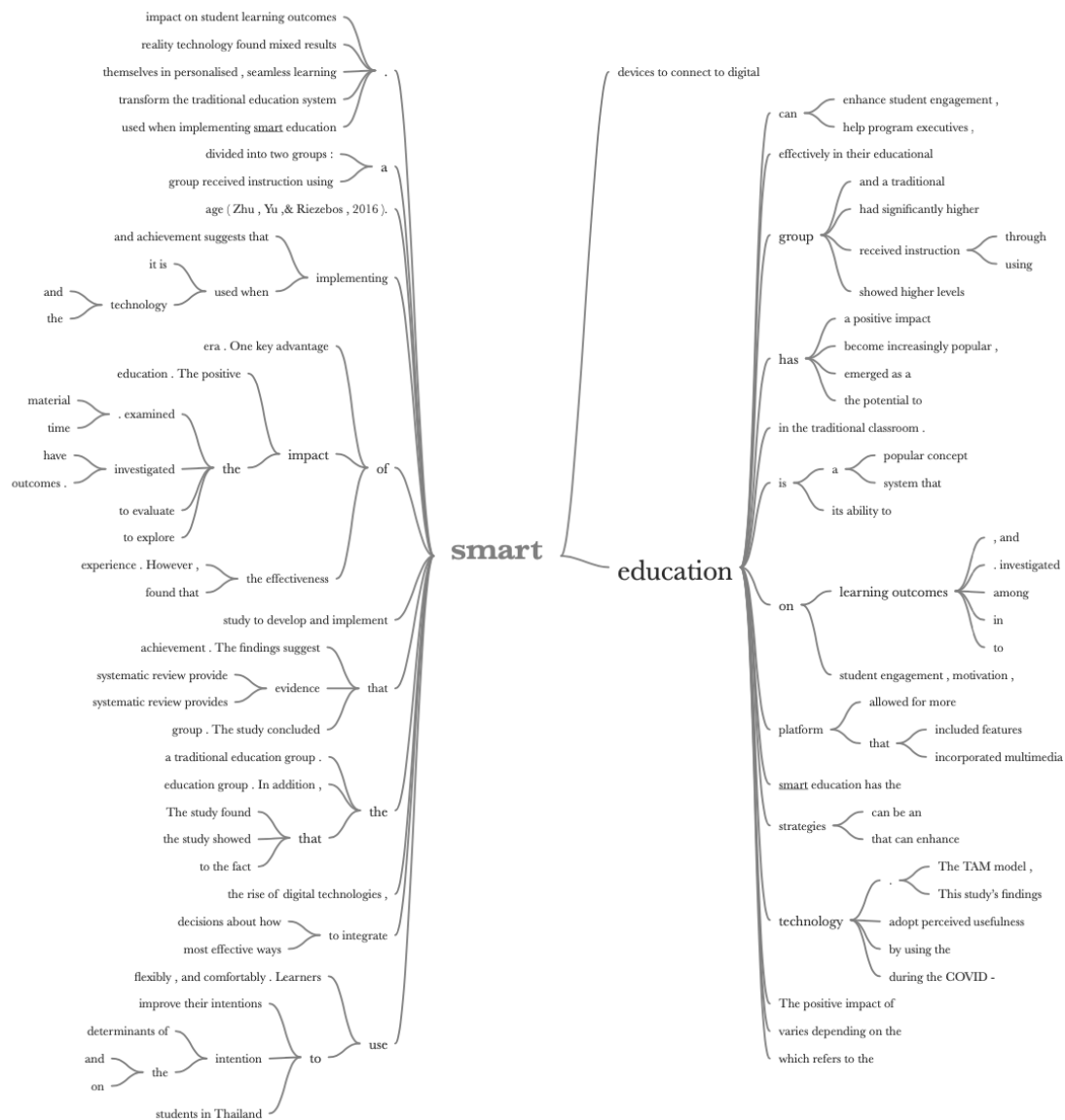


Figure 3. Word tree (Smart Education)

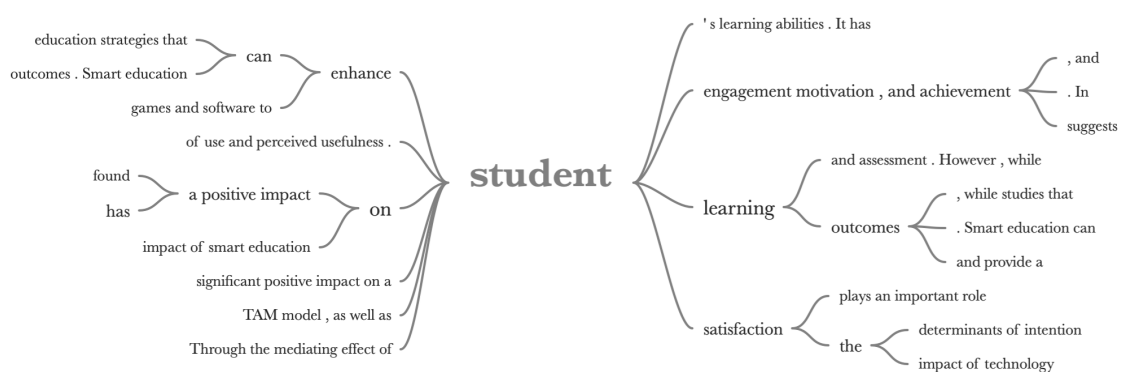


Figure 4. Word tree (Student)



## DISCUSSIONS

The findings of this systematic review provide evidence that smart education has a positive impact on student learning outcomes. Smart education can enhance student engagement, motivation, and achievement, and can provide students with a personalised learning experience. However, the effectiveness of smart education varies depending on the context and the technology used. Therefore, it is important to carefully consider the technology used and the context in which it is used when implementing smart education.

Dicheva, Dichev, Agre, and Angelova (2015) examined the impact of smart education on student achievement in K-12 schools in the United States. The study analysed 19 previous studies on smart education and found that it had a positive impact on student achievement. Specifically, the study found that smart education improved student achievement in maths, science, and reading by an average of 16 percentile points. Moreover, Warschauer, Lin, and Chang (2016) examined 48 studies on the impact of technology-enhanced learning on student achievement. They found that the use of technology had a small but positive effect on student performance, particularly in science and maths. Another meta-analysis by Tamim et al. (2011) looked at 99 studies on the effectiveness of interactive whiteboards, a popular smart education tool. They found that the use of interactive whiteboards led to moderate to large gains in student achievement across various subject areas. Lou, Lei, and Wang (2017) found that the effectiveness of smart education varied based on these factors. When technology and instructional materials were of high quality and teachers were properly trained, smart education had a positive impact on student achievement and engagement. Abdullah and Ward (2016) investigated the impact of a smart education system on student learning outcomes in a Saudi Arabian university. They found that students who used the system achieved significantly higher grades than those who did not. Similarly, Oztok et al. (2013) explored the impact of an online discussion tool on student learning outcomes in a college-level computer science course. They found that students who participated in the online discussions had higher grades and were more engaged in the course. Hwang and Tsai (2019) examined the impact of smart education on learning outcomes across a range of educational contexts. The analysis found that smart education was associated with significant improvements in students' academic performance, cognitive abilities, and attitudes towards learning.

## CONCLUSIONS

Smart education has the potential to transform the traditional education system and provide students with a personalised learning experience. This systematic review provides evidence that smart education has a positive impact on learning outcomes. However, more research is needed to determine the most effective ways to integrate smart education in the traditional classroom. The findings of this review suggest that careful consideration should be given to the context and the technology used when implementing smart education.

The positive impact of smart education on student engagement, motivation, and achievement suggests that implementing smart education strategies can be an effective way to meet the needs and expectations of students and improve their academic performance. Therefore, program executives, directors, and teachers can use the findings of this study to develop and implement smart education strategies that can enhance student learning outcomes and provide a personalised learning experience. Additionally, the study's recommendations for carefully considering the context and technology used when implementing smart education can help



program executives, directors, and teachers to make informed decisions about how to integrate smart education effectively in their educational setting.

This study added to the existing literature on the impact of smart education on learning outcomes. Hence, this study's findings may aid academics in broadening their research by incorporating more potential elements. The measurements could be used to guide future research on the impact of smart education on learning outcomes. For further research, a quantitative study, such as questionnaires, should be considered to explain the phenomenon of relationships in a large group in general. A qualitative approach, such as interviews, could also provide a clear picture of insight results.

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## **Digital Marketing Strategies : A Case of Charles & Keith**

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### **ABSTRACT**

*Objective:* This case study explains how Charles & Keith adopts its marketing to motivate consumer behaviours of the company in the digital era.

*Method:* The investigation for this case study was synthesised using the documentary method and content analysis.

*Result:* Charles & Keith adopted a new business model for their label after determining that the traditional model of selling shoes acquired from wholesalers needed to be more sustainable. The company began designing its shoes based on consumer feedback to distinguish itself from the intense competition. It enabled the company to increase brand recognition among its target market. As the company expanded, it started working directly with production factories as a unique brand, eliminating the intermediary. Furthermore, marketing strategies and digital marketing are crucial.

*Conclusion and Recommendation:* Digital marketing strategies could develop a content-rich website with SEO to communicate with Charles & Keith's customers via social media and engage them with emotional marketing and a personal touch. Digital marketing provides numerous opportunities for every business in the modern world. Many companies, including fashion labels, are emphasising digital marketing. In addition, Charles & Keith is already using digital marketing to target potential consumers. Still, if it follows the plan mentioned above, it can expand its market more effectively.

**Keywords:** Marketing Strategies, Purchasing, Online, Charles & Keith, Social-Media

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## INTRODUCTION

Charles & Keith started its operation in 1996 as a women's footwear store in Singapore. Then the Wong brothers realised that there was a cost advantage in selling shoes as a wholesaler. However, lacking in uniqueness, the industry has limited growth. Therefore, it made them realise the potential of creating a brand that consumers could identify with. Today, Charles & Keith are well-known among fashion brands for their quick season sale and typical trendy designs; every week in their stores, they offer a turnaround of 20 to 30 new designs (Charles & Keith, 2018). Today the product range of Charles & Keith includes tech accessories, bracelets, shades, belts, and bags. Therefore, Charles & Keith has evolved from a footwear brand to a lifestyle brand. The company is operational in various global markets, such as Asia, Europe, the Middle East, and the United States of America. Charles & Keith also offers online shopping via its website CharlesKeith.com. This report suggests a digital marketing plan for Charles and Keith, and the social media channels are the focus of the researcher's proposed project.



**Figure 1.** Charles and Keith's Digital Marketing Channels (Author, 2023)

The consumer in today's world has moved towards advanced technologies and media, and every



time customers make interaction with marketing messages via the internet. Therefore, it is only possible for a business to survive with Internet digital marketing. The company may target its potential customers by spending much via digital marketing mediums (Chaffey & Smith, 2013). The retailing industry is a fast-growing and changing sector as Charles & Keith has an international presence in various regions. In those regions where Charles & Keith is physically absent, they sell their products via the website. Therefore, Charles & Keith must utilise digital marketing mediums with an effective digital marketing plan to compete with its competitors. Charles & Keith can retain its share in the market and increase its revenue. Furthermore, digital marketing is a cheap source to reach the maximum potential customers and target its customers without facing any barriers (Chaffey, 2016).

Customers are usually searching for budget deals and always looking for maximum satisfaction within their budget. Therefore, marketers place budget deals in their advertisements to attract customers to buy their products. Digital marketing is helping marketers communicate with potential customers and has been more effective than other advertising mediums (Chaffey & Smith, 2013). Moreover, various international brands are focusing more on digital marketing than traditional marketing to penetrate their customers to purchase their products, making digital marketing the future of marketing.

Focusing more on digital marketing does not mean Charles & Keith should reduce their marketing budget (Chaffey, 2016). Charles & Keith is supposed to change the marketing budget mechanism, and the focus should be more on digital marketing. It is the right time for Charles & Keith to divert their marketing strategy towards digital marketing to continue to do well in the competitive business environment.

### ***Situation Analysis***

A business may perform well and earn revenue without spending on digital marketing and the latest technologies. Still, it cannot target the potential market effectively and efficiently. There is always an open space for the competitor to cut off some of the organisation's market share. Charles & Keith are doing well with their appearance on Instagram and Twitter, but there are more opportunities to grow with a new and redefined digital marketing plan. The presence of Charles & Keith on Facebook is less effective compared to their presence on Instagram and Twitter. Although Charles & Keith is doing well on various social sites, there are still some other platforms like YouTube, LinkedIn, and Email marketing where Charles & Keith is lacking (Charles & Keith, 2018). Moreover, the online presence of Charles & Keith is much more complicated; there are fewer changes in their username in all the powerful social media platforms Facebook, Instagram, and Twitter. Furthermore, the tradition of marketing via print



media like magazines and the newspaper is not as effective today as in previous decades; even the fashion of marketing via television is not working according to expectations. These changes in marketing trends indicate that digital marketing is the future of marketing (Chaffey & Smith, 2013).

## **LITERATURE REVIEW**

### ***Digital Marketing Strategies***

As technology advances, increasingly complex instruments are created that can be used to develop consumer-focused business operations. Many businesses are still ineffective at implementing digital marketing strategies, even though many companies are shifting from traditional to digital marketing. The significance of digital marketing in the current digital era and technological advancements that influence how businesses interact with their consumers are discussed. Utilising digital marketing techniques in marketing practices is one way to combine these technologies (Zanubiya, Meria, & Juliansah, 2023). Digital marketing is an essential aspect of the hospitality industry because it enables the company to connect with potential customers who spend most of their time online. Not all companies spend annual budgets on improving the effectiveness of digital marketing strategies, such as social media, which only makes promotions without interaction with their followers (Bhandari & Sin, 2023).

### ***Charles and Keith's Digital Marketing Strategies***

#### ***Facebook***

Facebook is the biggest and most attractive social site in today's world. Billions of people use it daily. It allows brands to communicate with potential customers by posting ads on Facebook Feeds (Chaffey, 2016). Therefore, many clothing brands are using Facebook as the primary platform for social media marketing, such as H&M and Zara. H&M has around 32 million followers on Facebook and keeps posting about its new designs, products, budget sales, and fashion events (H&M, 2018). Moreover, Charles & Keith has a presence on Facebook, but it emphasises more on Instagram. While Facebook is the biggest and most attractive market for brand promotion, people from every market segment interact with the social world daily via Facebook. On the other hand, some brands are doing well on Facebook. Charles & Keith must prioritise Facebook marketing to reach customers beyond the boundaries.

Furthermore, if Charles & Keith starts daily posting videos and pictures of their attractive models wearing their beautiful apparel on Facebook Feeds, billions of potential customers will notice the brand daily, and there is vast potential many of them will communicate with Charles



& Keith via Facebook messenger. Furthermore, Charles & Keith may also post their budget sales and fashion events on Facebook Feeds. These amendments in the digital marketing plan of Charles & Keith will result in a revenue increase for Charles & Keith.

### ***Instagram***

Instagram is the most focused social site by Charles & Keith to promote their products. It is a fast-growing social site that allows communication with potential customers. Various fashion brands use Instagram as an effective platform for the engagement of fans and customers. People following the brand may like the posts, comment on the posts, and share or mention their friends on posts (Chaffey, 2016). Therefore, Instagram is an attractive platform for fashion brands like Charles & Keith.

It has millions of followers on its verified Instagram account and 4392 posts on its profile, which is a decent number for a fashion brand. Furthermore, customers mention Charles & Keith in the hashtags of their Instagram posts as a routine practice, providing an absolute advantage to Charles & Keith in the shape of positive word of mouth (Charles & Keith, 2018). Charles & Keith can boost their market by posting high-quality videos and pictures of their valuable products.

### ***Twitter***

Charles & Keith is already on Twitter with 12.8K followers and 5,123 Twits, but it is comparably much lower (Charles & Keith, 2018). Fewer numbers followers mean less number of interactions with your Twitter post. The number of total Twits is also comparably much lower, and the biggest lacking is that their Twitter account is not verified. On the other hand, various leading apparel brands are using different verified accounts for countries with millions of followers and enough Twits. For example, H&M has separate Twitter accounts for the United Kingdom, United States, Belgium, and Canada, and their main Twitter account has 8.6 million followers (H&M, 2018). Twitter has some similar features to Facebook. Large-size videos and pictures can be showcased on Twitter, and there are also some unique features, such as Twitter Feeds flow like news clips, and provides better user engagement. Therefore, Charles & Keith should increase their number of followers initially. If they start Twitting Daily by utilising the various essential features of Twitter, there is an opportunity for Charles & Keith to increase their market.

### ***LinkedIn, YouTube, and Pinterest***

LinkedIn is a new market for digital marketing. It is required to cite companies, but marketers reach every social platform to connect with people (Royle & Laing, 2014). Facebook was



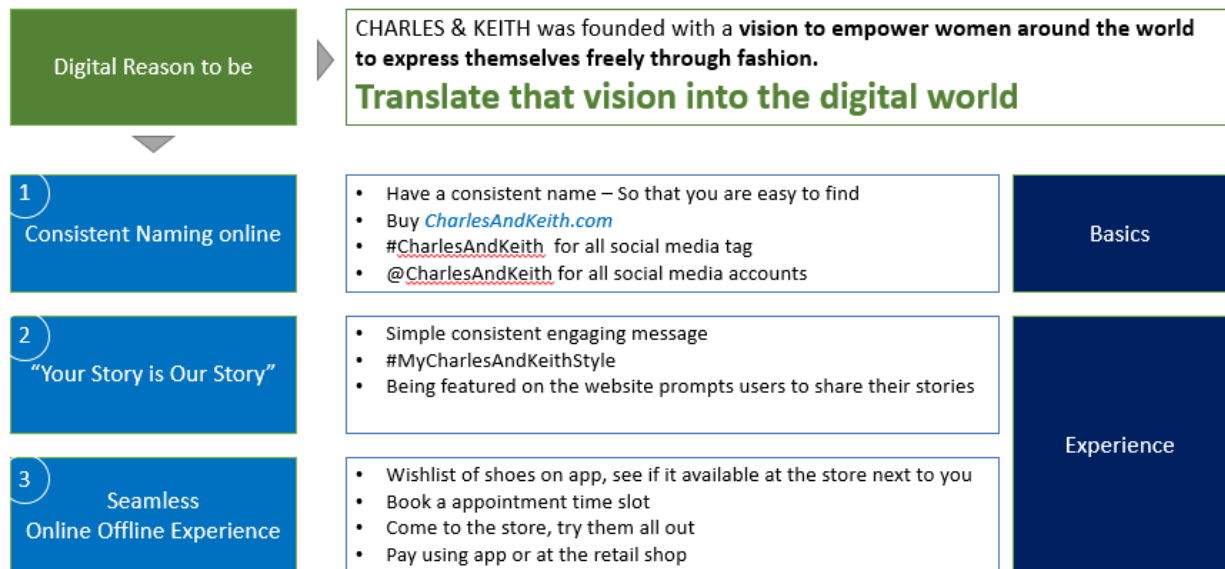
initially platformed for social interaction, and now it is the biggest marketing platform for various brands. If Charles & Keith consider using LinkedIn as a medium to reach their potential customers, there is an opportunity for them. Furthermore, YouTube is an essential platform for engaging followers; various brands are getting good results by posting videos on YouTube. For example, The newest Fall Collection video of H&M was viewed by 91,000 people in two weeks (Royle & Laing, 2014). Charles & Keith may also focus on posting videos on YouTube to increase their market with new fans and followers. Moreover, Pinterest is also an essential platform for digital marketing. Charles & Keith may use Pinterest to market their products via posting images of their products on Pinterest. People also follow boards and save pins on Pinterest. Therefore, Charles & Keith has an opportunity with Pinterest as the other fashion brands also market their products via it.

## **METHODOLOGY**

This extensive literature review included a narrative summary. The goal of narrative synthesis is to summarise and explicate the results of a synthesis through academic writing (Siripipatthanakul et al., 2023; Jaipong et al., 2023). The qualitative research procedure includes four steps: research design, data collection, data analysis, and report writing. Content analysis is a qualitative method that uses verbal, visual, or written data to describe specific phenomena systematically and objectively, thereby facilitating the formation of valid conclusions (Kok, 2023; Siripipatthanakul et al., 2022; Limna et al., 2022). It is also an adaptable method of data analysis applicable to systematised qualitative reviews. Systematic qualitative evaluators must modify or adapt content analysis strategies to match highly organised and contextualised material to locate knowledge and theory. Lastly, qualitative content analysis was employed in this study (Kok & Siripipatthanakul, 2023; Jaipong, Nyen Vui, & Siripipatthanakul, 2022). The keywords for the purposive sampling of secondary data to find were Marketing Strategies, Purchasing, Online, Charles & Keith, and Social-Media.

## **RESULTS**

The researcher has identified and proposed nine critical elements of a successful digital marketing plan for Charles & Keith.



**Figure 2.** Social Media Marketing of Charles & Keith (Author, 2023).

- 1) Online advertising. One of the first steps should be spending more marketing budgets on online advertisements. A short list of the primary online advertisements is compiled: Google AdWords: Online advertisements created within Google's AdWords platform using Targeted keywords. Another one is PPC Ads: With pay-per-click advertisements. Others will be Display Advertisements: Image-based advertising that often appears on the side, the top or bottom section of a website.
- 2) Search Engine Optimisation (SEO). It increases the brand's online visibility through successful search marketing.
- 3) Online content, blogging, and other forms of content distribution have become mainstream. Brown, Broderick, and Lee (2007) found that blogs are the most trusted info source.
- 4) Web PR – Online press release distribution improves online visibility to connect with the target audience.
- 5) Social Media Management and Listening. Social media has become a significant source of



- 6) Interaction between consumers and their favourite brands is the medium to converse with the customers.
- 7) Email and Online Newsletter Marketing. Apply email campaigns that can be highly effective.
- 8) Mobile Marketing – We can access a wider audience through mobile devices using SMS to advertise the products. With the growth of mobile web usage, locally based advertising also involves mobile devices and GPS, which can exploit the knowledge about where a mobile device user is.
- 9) Web Analytics – Use Web analytics such as Google Analytics to measure digital marketing effectiveness and record online customer behaviour. By using analytics, we can gain better insights into our target audience.

## DISCUSSION

The findings support Siripipatthanakul & Sixl-Daniell (2021) that brand image is crucial to the beliefs created by the marketer and developed by consumers through product and brand service encounters. The reputation or image of a firm relative to its competitors is founded on customer-valued critical dimensions. Satisfaction is the emotion of delight or disappointment a person experiences when comparing the perceived outcome of a product or service to their expectations. Consumer or brand satisfaction is both an objective and a marketing tool. The internet allows consumers to spread both positive and negative word-of-mouth rapidly.

This result supports the study of Siripipatthanakul & Vui (2021) that companies must be concerned with customer satisfaction. In addition, endeavour to deliver a high level of customer satisfaction subject to acceptable levels to other stakeholders, given the company's total resources. The repeated purchase indicates brand loyalty. A customer's recommendation can serve as a predictor of their future purchasing behaviour.

The result also supports Siripipatthanakul et al. (2022) that the quality of a website is essential for the company's image and the likelihood that visitors will return to the website. The company's reputation influences electronic word-of-mouth or e-WOM, transforming it into the intent to follow its website. The implication could describe the connection between website quality, brand image, e-WOM, and the intention to follow a company's website.

According to Charles & Keith (2023), Charles & Keith has historically relied on printed flyers and television commercials as their primary advertising mediums until the digital age began to acquire rapid global momentum. Today, it uses various methods to convey its brand position and values,





including its unique in-store environment and store locations, product displays, brand campaigns, and digital and social media marketing. The in-store environment of Charles & Keith is one of the company's primary brand communication methods. The brand is also well-known for its scent marketing; regardless of which Charles & Keith store a consumer enters, they will experience the same atmosphere. It utilises a professionally curated sound environment in stores to enhance the retail experience. New arrivals are always displayed at the front of the store, highlighting the rapid turnover of designs during the season. Shoes on sale are displayed on a separate rack, indicating their affordability to the general public. Charles & Keith's in-store experience distinguishes it from other rapid fashion competitors whose stores are jam-packed with shoes and do not emphasise customer service, contributing significantly to the effective communication of its brand philosophy.

## CONCLUSION

Charles & Keith invests in accessible and prominent store locations. Its stores are always in main, easily accessible areas within significant shopping districts. In Singapore, for instance, retail outlets can be found in the renowned ION Orchard and The Shoppes at Marina Bay Sands shopping complexes and the regional shopping malls. Advertising and events: The brand employed a very niche marketing strategy from the outset; all their fashion photo spreads and print and online advertising featured only European models wearing the brand's products. It has allowed Charles & Keith, a fashion brand selling trendy products, to effectively establish couture, high-fashion image and perception among its following. Thus, customer satisfaction is essential to avoid complaints regarding the company's responses to customer needs and expectations by adopting digital communications for its marketing strategies.

Additionally, Charles & Keith adopted a new business model for their label after concluding that selling shoes acquired from wholesalers could have been more sustainable. The company began basing its shoe designs on consumer feedback to distinguish itself from the rigorous competition. It allowed the company to increase brand awareness among its target market. As the company grew, it began working directly with production factories, eliminating the need for an intermediary. Also essential are marketing strategies and digital marketing.

Use the nine steps Digital Marketing strategies mentioned above. Develop a website rich in content while keeping SEO in mind to connect with Charles & Keith's customers via social media to engage with the customers with emotional marketing and human touch. In today's world, Digital Marketing provides various opportunities for every business. Many businesses, including fashion brands, are emphasising digital marketing. Moreover, Charles & Keith is already using digital marketing to target its potential customers, but if the company follows the above-proposed plan, it can grow its market more efficiently.



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## **Audit Committee Effectiveness and Financial Reporting Quality in Vietnamese Stocks Exchange**

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### **ABSTRACT**

*Objective:* The objective of this research is to examine the connection between the efficiency of the audit committee and the quality of audits on the accuracy of financial reports.

*Method:* The study collected data from annual reports and financial statements of listed companies across three industries on the Vietnamese Stock Exchange between 2015 and 2020. The data was analyzed using a Panel Fixed Effects Model.

*Result:* The findings indicate that the audit committee's effectiveness has a significant positive correlation with the quality of financial reporting. When the audit committee's size increased, the financial reporting quality improved. However, the study discovered that a decrease in financial reporting quality could occur due to discretionary accruals. Furthermore, audit quality was found to have a significant positive relationship with financial reporting quality, as evidenced by an unqualified audit opinion.

*Conclusion and Recommendation:* It could be concluded that financial reporting adheres to



accepted accounting standards. Additionally, the size of the board of directors, financial risk, return on assets, and growth were all positively linked to financial reporting quality, as management is encouraged to perform well, thereby enhancing trust among investors and shareholders.

**Keywords:** audit committee, audit quality, financial reporting, Vietnam

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## INTRODUCTION

Financial reporting involves discretionary decision-making by executives, which can be manipulated to achieve their operational goals using earnings management techniques. Research has shown that discretionary accrual is a proxy for earnings management and indicates the quality of financial reporting (Dang et al., 2020; Dechow & Dichev, 2002).

However, administrators or those in authority may try to alter performance to suit their needs by resorting to methods such as accounting or earnings manipulation, which can be managed through optional accounting standards. Any adjustments to accounting policies to reflect business operations may impact users' decision-making regarding financial statements and necessitate high-quality financial reporting. Audit committees are responsible for hiring and evaluating the performance of auditors and assessing the impact of audit quality on the relationship between the effectiveness of the audit committee and the quality of financial reporting (Cohen et al., 2014; Dang & Nguyen, 2021a, 2021b).

The audit committee plays a vital role in enhancing the quality of financial reporting, particularly in publicly traded companies. Its primary responsibility is overseeing the financial reporting process, including selecting and monitoring the external auditor, ensuring that the company's financial statements comply with accounting standards and regulations, and reviewing the adequacy of internal controls. The audit committee can help prevent or detect any potential errors, misstatements, or fraudulent activities in financial reporting by ensuring the audit process is rigorous and transparent. In addition, the audit committee's oversight of the financial reporting process can promote transparency, integrity, and accountability within the company. It is crucial for maintaining the trust of shareholders, stakeholders, and the wider public. The audit committee's independence and objectivity can help ensure that financial reporting is accurate and trustworthy, enhancing the credibility and reputation of the company. As a result, the audit committee is a critical component of corporate governance. Its effective functioning is essential for promoting high-quality financial reporting and ensuring that companies operate with integrity and accountability.

The quality of financial reporting is critical for listed firms in Vietnam as it directly impacts the confidence of investors, stakeholders, and the broader public. High-quality financial reporting



ensures that the financial information disclosed by listed firms is reliable, accurate, and transparent. Investors use this information to make informed decisions about their investment decisions. Any misrepresentation or errors in financial reporting can result in financial losses and reputational damage to the listed firms.

Moreover, high-quality financial reporting is crucial to a robust financial system. It promotes accountability, transparency, and governance and helps to prevent financial crimes such as fraud and money laundering. In Vietnam, where the capital market is relatively young and developing, high-quality financial reporting is necessary to attract foreign investment and promote economic growth. Therefore, listed firms in Vietnam must ensure that they adhere to the highest standards of financial reporting quality. It will benefit their stakeholders and contribute to the economy's overall development.

This study examines how the audit committee's effectiveness and the audit's quality impact the financial reporting quality for companies listed on the Ho Chi Minh City Stock Exchange (HOSE). The findings of this study could increase the awareness of shareholders and stakeholders regarding the quality of financial reporting, potentially reducing the occurrence of earnings management. Additionally, this study could demonstrate a commitment to good corporate governance, transparency, and credibility.

## **LITERATURE REVIEW**

### **Theoretical Framework**

Corporate governance aims to ensure that companies produce high-quality financial reporting. Previous research has examined the role of the board of directors, audit committees, and external auditors in supervising financial reports and ensuring the effectiveness of audit committees. The quality of financial reporting depends on various factors, including the composition of each company's board of directors and audit committee (Dang & Nguyen, 2022; Dang et al., 2022; Vafeas, 2000). In addition, according to Ball's study in 2015, financial reports have significant economic importance. As such, company executives act as agents responsible for producing financial statements to report financial performance and position to shareholders, who act as principals in agency theory. However, management holds more information than shareholders, resulting in asymmetric information between the parties (Jensen & Meckling, 1976; Nguyen & Dang, 2020; Nguyen, 2020).

Shareholders play a vital role in ensuring the accuracy of financial reports prepared by company executives. Typically, executives engage the services of external auditors to audit and provide an opinion on financial statements and ensure compliance with generally accepted accounting standards. The auditor's opinion can give assurance to financial report users. According to theory, auditors work to benefit shareholders and reduce agency problems between executives and shareholders. It is possible that executives would hire high-quality auditors to ensure the production of reliable financial reports. As such, the agency



theory predicts that agency problems can be minimized by providing high-quality financial reporting to shareholders, creditors, and other investors (Becker et al., 1998; DeFond et al., 2005; Nguyen, 2022a, 2022c).

The opportunity for administrators to manage earnings through optional accounting procedures is closely linked to earnings management. It occurs when administrators are incentivized to use discretionary accruals by selecting accounting policies that increase profits in the current accounting period, depending on the effectiveness of the operation. Consequently, financial statements are used as a tool for evaluating management performance. However, it is not always the case that management is motivated to increase earnings. In some cases, if wages in any given year are lower than the expected level for bonus payments, the management division may choose to reduce earnings in that year by recognizing losses as far as possible. It is because the chance of not receiving a bonus is very high. This behaviour is known as "Taking an Earning Bath," which can increase profits the following year, resulting in the desired bonus being paid. This phenomenon is called the Bonus Plan Hypothesis (Nguyen, 2022d; Watts & Zimmerman, 1983).

### **Hypothesis Development**

An audit committee is a group within the board of directors that plays a critical role in ensuring the accuracy and reliability of a company's financial reporting. Specifically, the audit committee oversees various financial reporting functions, including implementing internal controls, auditing processes, and other essential procedures like communication with external auditors (Alderman & Jollineau, 2020; Nguyen, 2022e; Nguyen & Dang, 2022). Scholarly research has demonstrated that the audit committee's effectiveness is crucial in its ability to carry out these responsibilities. Prior studies have relied on a range of different variables and metrics, such as the number of meetings held by the committee, the size and composition of the committee, and the level of engagement and communication between the committee and other key stakeholders to assess this effectiveness (Almustafa et al., 2023; Krishnan & Lee, 2009; Miettinen, 2008).

Previous research has revealed that the committee's size positively impacts an audit committee's effectiveness. A larger number of audit committee members is generally better than a smaller committee size, as per studies conducted by McMullen (1996). However, an extensive committee may lead to problems in audit committee effectiveness. The process and workload distribution may become immoderate, leading to more losses. Therefore, previous research has suggested that the optimal size of an audit committee is crucial for ensuring high-quality financial reporting monitoring.

According to studies conducted by Collier and Gregory (1999), the number of meetings an audit committee holds impacts its effectiveness. Increasing the frequency of meetings is expected to enhance the committee's effectiveness (DeFond et al., 2005; Haddad et al., 2021; Saleh et al., 2007). Committee members must be willing to allocate more time to auditing to





be more effective (Lisic et al., 2019). Additionally, prior research has shown that the frequency of meetings held by audit committees is linked to improved earnings quality (Xie et al., 2003). However, studies conducted in Australia found no significant evidence linking the frequency of meetings with earnings management (Cheng et al., 2008).

Previous research has demonstrated that audit committee members who possess expertise in accounting, financial reporting, internal controls, and auditing, as outlined in SOX 2002, are better suited to provide direction on financial reporting quality than non-expert auditors. They are also more equipped to comprehend risks and auditor opinions, resulting in an improved audit output. These findings are supported by studies conducted by Chang et al. (2020), which found that audit committee members with accounting and financial expertise were more effective in controlling earnings management and reducing issues related to auditor disagreement. However, Budiyo and Sabilla (2021) conducted research that contradicted these findings, as no significant correlation was found between audit subcommittee properties and earnings management. As a result, a hypothesis was formulated to investigate this discrepancy further.

H1: The quality of financial reporting is expected to increase with the audit committee's effectiveness.

As discussed in DeAngelo et al. (1994), previous research has defined audit quality as the probability that auditors can detect and report significant errors. Additionally, a study by Becker et al. (1998) found that high-quality auditing is associated with less manipulation of financial reports. Several variables have been investigated in previous studies as indicators of audit quality.

Previous research suggests that the auditor's opinion indicates auditor independence, as auditors must provide unbiased and honest opinions to the public. Several studies have also demonstrated a negative relationship between the possibility of financial statement manipulation and the level of audit fees, indicating that a higher audit fee is associated with better audit quality (Arora, 2022). It is important to note, however, that the rate of audit fees is influenced by the number of hours spent on the audit (Birindelli et al., 2018; Helleiner, 2010).

Audit firm size has been found to have a strong positive correlation with the level of disclosure in companies annual reports. It is because larger audit firms have more authority to demand that their clients provide more information in their reports (Rose, 2007). The recent trend of mergers between the four largest international audit companies, also known as the Big 4 - Price Waterhouse Coopers (PwC), Deloitte Touche Tohmatsu (DTT), Ernst & Young (EY), and KPMG - may have an impact on smaller audit firms, as mergers are a way to prevent earnings management (Aldamen et al., 2012; Khurana & Raman, 2004). Based on these findings, the following hypothesis is proposed:

H2: The quality of financial reporting has a positive relationship with the quality



of auditing.

The study employs various variables to explore the principles of corporate governance for listed companies, including the board of directors' responsibility in overseeing management to attain shareholder objectives and serve as their representative, as stated by the Ho Chi Minh City Stock Exchange in 2000.

Al Farooque et al. (2019) discovered that a more significant number of board members leads to faster information dissemination and increased performance efficiency. However, Jensen (1986) argued that a larger board size might result in lower operating efficiency and other related issues. Some members may free-ride by assuming that others will undertake the required tasks.

Al Farooque et al. (2019) found that having more independent directors on the board leads to more effective monitoring and management. Meanwhile, the number of board meetings is often used as an indicator of the board's commitment to fulfilling their responsibilities as representatives of shareholders. When directors meet more frequently, they can better understand the company's operations and quickly identify any issues, leading to improved performance (Davis & Garcia-Cestona, 2021).

H3: Financial reporting quality is positively correlated with the presence of a board of directors.

## **METHODOLOGY**

### **Data Collection**

The study collected data from a homogenous population of HOSE-listed companies that were classified into three industry groups. The data was gathered from six-year annual reports (2015-2020), retrieved from the SEC website. Financial statements were obtained from the HOSE website. The data was analyzed using STATA Software.

### **Model Specification and Variables**

Financial reporting quality (FRQ) is measured from the earnings management of a firm with changes in discretionary accruals. It can be calculated from the equation model developed in Modified Jones (1995). Dechow (1996), Teoh (1993), Ching (2002) and Klein (2002) measured earnings management.

The proposed model to test the hypotheses is as follows:



$$EFRQ_{it} = \beta_0 + \beta_1 AC\_SIZE_{it} + \beta_2 AC\_MEETING_{it} + \beta_3 AC\_EXP_{it} + \beta_4 AUDITFEE_{it} + \beta_5 AUDITSIZE_{it} + \beta_6 AUDITREPORT_{it} + \beta_7 BSIZE_{it} + \beta_8 BIND_{it} + \beta_9 BMEET_{it} + \beta_{10} LEV_{it} + \beta_{11} ROA_{it} + \beta_{12} GROWTH_{it} + \beta_{13} QR_{it} + \beta_{14} FIRMSIZE_{it} + \beta_{15} GROUP_{it} + \varepsilon$$

Where

**Dependent variables**

$EFRQ_{it}$  = Financial reporting quality measured through exponential of discretionary accrual

**Independent variables**

Audit committee effectiveness:

$AC\_SIZE_{it}$  = Audit committee size

$AC\_MEETING_{it}$  = Ratio of number of audit committee meetings to total meetings

$AC\_EXP_{it}$  = Auditors with expertise in accounting and finance ratio

Audit Quality:

$AUDITFEE_{it}$  = Audit fees

$AUDITSIZE_{it}$  = Audit firm size, 1=Big 4 and 0=others

$AUDITREPORT_{it}$  = Auditor report, 1 = Clean report and 0 = others

**Control variables**

$BSIZE_{it}$  = Number of board members

$BIND_{it}$  = Board independence ratio

$BMEET_{it}$  = Frequency of board meetings

$LEV_{it}$  = Leverage ratio

$ROA_{it}$  = Return on assets

$GROWTH_{it}$  = Rate of growth of assets

$QR_{it}$  = Quick ratio

$FIRMSIZE_{it}$  = Firm size measured from the natural log of assets

$GROUP_{it}$  = Industry group

$\varepsilon_{it}$  = Errors of the model

## RESULTS

Table 1 displays the outcome estimation of each industry group analyzed through Panel fixed effects.

**Table 1:** Result estimation of each industry group analyzed using Panel fixed effects.

VARIABLE	MANUFACTURING	CONSTRUCTION	REAL ESTATE
<b>Audit Committee</b>			
<i>AC_SIZE</i>	0.1101 ***	0.0667 *	-0.0300
<i>AC_MEETING</i>	-0.0314	0.3633	0.0043
<i>AC-EXP</i>	0.0065	0.1067	0.1760
<b>Audit Quality</b>			
<i>AUDIT FEE</i>	-0.0614	0.0018	-0.0406
<i>AUDIT SIZE</i>	-0.0430	-0.0544	-0.3008
<i>AUDIT REPORT</i>	-0.3517 **	-0.1658	0.0364
<b>Control variable</b>			
<i>BSIZE</i>	0.0030 *	-0.0364	-0.0063
<i>BIND</i>	-0.0876	0.0818	-0.3185
<i>BMEET</i>	0.0066	0.1766	-0.0711
<i>LEV</i>	0.1706 ***	-0.0636	0.0441
<i>ROA</i>	0.0001	0.0043 ***	0.0067 ***
<i>GROWTH</i>	0.3860 ***	0.3850 ***	0.1530 ***
<i>QR</i>	0.0001	0.0036	-0.0010
<i>FIRM SIZE</i>	-0.0460	-0.0673	0.0406
<i>_cons</i>	1.8814 ***	1.7461 **	1.0314
Number	165	168	370
F-test	5.8575	10.0680	7.3667
R-squares	0.4654	0.5444	0.4440
Adjusted R-squares	0.1487	0.4514	0.0804
Fixed Effects F-test	3.0440	3.4448	1.0014
Correlation of Fixed Effects	-0.7610	-0.7546	-0.7333
Overall R-squares	0.0686	0.1744	0.1853
Within R-squares	0.4654	0.5444	0.4440
Between R-squares	0.0054	0.0378	0.1865

\*  $p < 0.1$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$



Table 1 presents the outcome of the Panel fixed effects analysis, indicating a significant positive association between the effectiveness of the audit committee and the quality of financial reporting. However, for the Manufacturing industry and Technology groups, an increased number of audit committee members led to higher discretionary accruals, reducing the quality of financial reporting. On the other hand, no such relationship was observed in the Industrial Products group. Additionally, the analysis indicated that increased audit committee members resulted in enhanced financial reporting monitoring. In contrast, the frequency of meetings and audit committee expertise in accounting or finance did not significantly correlate with financial reporting quality in all three industry groups.

The results indicate a strong positive correlation between audit quality and financial reporting quality. In contrast, no significant correlation was found between audit fees, firm size, and financial reporting quality across all three industry groups. Furthermore, the auditor's opinion was positively associated with financial reporting in the Manufacturing industry, but no such relationship was observed in the Construction groups.

In the Manufacturing industry, the size of the board of directors was found to have a significant positive correlation with financial reporting quality. However, no such correlation was observed in the Construction groups. The independence of the board and the frequency of board meetings did not show any significant correlation with financial reporting quality in any of the three industry groups.

The Manufacturing industry showed a significant positive relationship between leverage and financial reporting quality, while no such association was observed in the Construction groups. The rate on assets variable had a strong positive correlation with financial reporting quality in the Construction groups, but no such correlation was observed in the Manufacturing industry. Growth was found to have a significant relationship with financial reporting quality in all three industry groups. At the same time, no association was found between quick ratio and firm size with financial reporting quality.

## DISCUSSION

The study examined the relationship between audit committee effectiveness, audit quality and financial reporting quality. The findings suggest that a larger audit committee is positively associated with improved oversight of financial reporting. However, the study also found that an extensive audit committee may decrease financial reporting quality due to excessive workload and process management issues. Previous studies have also shown that an appropriately sized or large audit committee can enhance financial reporting quality, consistent with the current research. The study found no significant relationship between the ratio of audit committee meetings to total meetings or the number of audit committee members with accounting or financial expertise and financial reporting quality in the three



industry groups studied. It is consistent with previous studies that attribute this to the low proportion of experts in accounting or finance required by HOSE regulations. Higher ratios of experts may be needed to address limitations in internal control and corruption issues and to advise on accounting procedures, financial reporting, and proper disclosure of information.

The study revealed a significant positive relationship between financial reporting and audit quality when considering unqualified auditor reports. However, this correlation was not found in the Construction groups. Previous research has indicated that companies receiving qualified auditor report face problems often, such as instability and going concern issues. Hence, companies that receive unqualified auditor reports typically pay a lower audit fee than those receiving qualified auditor reports. The audit fee was not associated with financial reporting quality in all industry groups in this study. Similarly, audit firm size was not found to be related to financial reporting quality in all industry groups. However, other studies have shown that a high-quality audit firm can reduce discretionary accruals, increasing financial reporting quality. The study also supports the idea that certified public accountants can provide oversight on the audit, including director behaviour, which can help mitigate agency costs and assure clients. It may lead to increased disclosure of information in annual financial reports as auditors work to benefit shareholders and mitigate the agency problem between shareholders and administrators.

The study observed a positive relationship between financial reporting quality and the board of directors. It indicates that having a larger board size can help improve the effectiveness and efficiency of information dissemination to users. This finding supports the research of Beasley (2000), which suggests that a giant board can lead to better performance and diversity in audit performance. However, no significant correlation was found in Construction groups, as a larger board may lead to free-riders, as per the research by Jensen (1986). Furthermore, board independence and frequency of board meetings did not show any association with financial reporting quality across all industry groups. This finding aligns with the research by Nguyen (2021) and Nguyen (2022b), which states that having a high proportion of independent board members can result in extra control on management. Still, such independent directors may lack business expertise, leading to operational inefficiencies.

## CONCLUSION

The board of directors, audit service, and audit committee are crucial in enhancing financial reporting quality in Vietnam. Companies can improve the accuracy and transparency of their financial information by ensuring that financial statements are prepared following accounting standards, reviewed and audited by independent professionals, and overseen by a competent committee. It can help to build investor confidence, increase access to capital, and contribute to the sustainable growth of the economy.





To sum up, the board of directors, audit service, and audit committee are integral components of the financial reporting system in Vietnam. These institutions help promote financial information's reliability and integrity by providing oversight, review, and assurance services. By working together, these stakeholders can help to detect and prevent financial fraud, identify areas for improvement, and promote best practices in financial reporting. It can ultimately benefit both companies and investors by promoting transparency and accountability.

In summary, the board of directors, audit service, and audit committee are essential players in the financial reporting ecosystem of Vietnam. These entities ensure that companies maintain accurate and transparent financial records and comply with accounting standards. Through their efforts, they can help to mitigate risks, enhance the credibility of financial information, and build trust with stakeholders. By upholding high standards of financial reporting quality, companies can improve their reputations, attract investment, and contribute to the sustainable development of the Vietnamese economy.

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# **Designing a Debit Card for Visually Impaired Children : Challenges and Solutions**

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## **ABSTRACT**

*Objective:* The objective is to develop a debit card that allows visually impaired children to use it independently without external assistance. This research explains the challenges and solutions in designing a blind debit card for visually impaired children.

*Method:* A qualitative approach was conducted using focus group discussions. Research articles from various sources were used for random sampling. The design includes a tactile keypad and audio prompts to assist visually impaired children in entering their PIN number, a braille display to provide feedback on transaction details, and additional security features to ensure the protection of the user's sensitive information was utilized with a confidential mode of visual impairment users. The data was analyzed using content analysis.

*Result:* The challenges faced in designing the blind debit card include the lack of accessibility features in the current debit card technology, the absence of tactile feedback, and the need to protect sensitive information. The findings to these challenges include the implementation of audio cues, the use of braille, and the development of specialized hardware and software for the utilities of debit cards.

*Conclusion:* This research highlights the importance of considering accessibility issues in the design of financial products accessibility for individuals with disabilities. As a result, visual impairment individuals must use this type of debit card for future accessibility perspectives and develop effective strategies for sustainable development.



*Recommendation:* The proposed debit card offers a solution regarding visually impaired children's challenges in accessing and managing finance, so further study is recommended.

**Keywords:** *Accessibility, Assistive Technology, Visual Impairment, Debit Cards, Design*

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## INTRODUCTION

Debit cards have become essential to our lives, and it is almost impossible to imagine a world without them. They offer convenience, security, and flexibility, allowing us to purchase and access cash without needing physical currency. However, for visually impaired children, using a debit card can be a challenging experience. Most debit cards are designed with visual cues, such as colour coding and printed information, that can be difficult for visually impaired children to interpret. There is a need for a blind debit card designed specifically for visually impaired children to address this issue. Such a card must provide a tactile interface that allows children to easily identify different features and navigate the card's functions. The design process for a blind debit card would involve numerous challenges and considerations that must be addressed to ensure that the card is functional, user-friendly, and secure. This article will explore some of the challenges involved in designing a blind debit card for visually impaired children and propose possible solutions to address these challenges. However, using a standard debit card can be difficult or impossible for visually impaired children. This article explores some of the challenges that come with designing a blind debit card for visually impaired children, as well as some potential solutions (Borzekowski et al., 2008; Runnemark, Hedman & Xiao, 2015; Bachas et al., 2021; Mann, 2002). The aim of designing a blind debit card for visually impaired children is to provide them with a secure and accessible way to manage their money. It includes making purchases, withdrawing cash, and checking account balances. The card should be designed to allow visually impaired children to use it independently and confidently without requiring assistance from others. The card should enable children with visual impairments to quickly and independently carry out various financial transactions, including purchases and withdrawals.

## LITERATURE REVIEW

### The Need for Debit Cards

The needs of visually impaired children in debit cards differ from those of sighted individuals. They require a tactile interface that provides clear and distinguishable cues to help them navigate the card's functions. It includes features such as raised letters, braille, and audio prompts. The card should also have security features that prevent unauthorized access and fraud. A blind debit card should provide a tactile interface, audio prompts, and other non-visual cues to enable visually impaired children to interact with the card independently.



Additionally, the card should be easy to use, secure, and compatible with various devices and payment systems (Wang & Zhang, 2014; Borzekowski, Elizabeth & Shaista, 2008).

### **The Challenges of Debit Card Designing**

This project's scope includes identifying the critical challenges in designing a blind debit card for visually impaired children and proposing solutions to address these challenges. The proposed solutions will consider the functional and practical aspects of the card's design, including the user experience, security, and ease of use. The plan will also consider the regulatory requirements for debit cards, such as compliance with the Payment Card Industry Data Security Standard (PCI DSS). Finally, the design will consider the card's production and distribution, including cost considerations and partnerships with financial institutions (Shukor et al., 2015; Galbraith, 2014).

### **Accessibility of the Debit Cards**

Accessibility for blind persons involves designing products, services, and environments that enable people who are visually impaired or blind to access and interact with them (Bachas et al., 2021). Here are some ways to improve accessibility for blind persons:

- Provide alternative text for images: When designing websites or apps, use alternative text descriptions for pictures so that screen readers can describe them to users.
- Use proper heading structure: Proper heading structure makes it easier for screen reader users to navigate content.
- Provide audio descriptions: In videos or multimedia presentations, provide audio reports of visual content so that blind users can understand the content.
- Use high-contrast colours: Use high-contrast colours for text and background to make reading easier for low-vision users.
- Provide tactile cues: Use tactile cues such as braille, raised lettering, or other tactile indicators to help blind users navigate physical environments.
- Audiences like beeps or tones help blind users navigate digital interfaces.
- Use accessible technology: Use technology accessible to blind users, such as screen readers, text-to-speech software, and refreshable braille displays.
- By implementing these strategies, you can improve the accessibility of your products, services, and environments for blind persons.

### **Assistive Technology for Debit Card Usage**

Assistive technology refers to devices, equipment, or software that are designed to improve the functional capabilities of individuals with disabilities. The technology is intended to assist people with disabilities to perform tasks that might otherwise be difficult or impossible. Assistive technology can enhance mobility, communication, learning, and daily living





activities. Assistive technology can include many devices and software, such as hearing aids, wheelchairs, screen readers, braille displays, speech recognition software, etc. It can also fit simple solutions, such as grab bars or raised toilet seats, making daily tasks more accessible and safer for people with disabilities. Assistive technology can be customized to meet the specific needs of individuals with disabilities. It can help individuals to achieve greater independence, improve their quality of life, and increase their ability to participate in social, educational, and occupational activities. Assistive technology for blind children can include hardware and software tools that support reading, writing, and communication, such as screen readers, braille displays, and voice-activated assistants. It can also benefit from devices that support mobility and independence, such as white canes, GPS navigation systems, and mobility training tools. Assistive technology for blind children enhances their abilities and provides greater access to information and opportunities, allowing them to participate more fully in home, school, and community activities. These tools can help blind children to overcome challenges and achieve their full potential, allowing them to become more independent and active members of society (Sriram & Nithiyanandham, 2013; Ahmad, 2015).

### **Debit Card Usage for Visual Impairment (Blindness)**

According to the Indian Law Rights of Persons with Disabilities Act- 2016:

"Blindness" means a condition where a person has any of the following conditions after the best correction;

- A total absence of sight; or
- Visual acuity less than 3/60 or less than 10/200 (Snellen) in the better eye with the best possible correction; or
- Limitation of the field of vision subtending an angle of less than 10 degrees.
- "Low-vision" means a condition where a person has any of the following conditions, namely:
  - Visual acuity not exceeding 6/18 or less than 20/60 up to 3/60 or up to 10/200 (Snellen) in the better eye with the best possible corrections; or
  - Limitation of the field of vision subtending an angle of less than 40 degrees up to 10 degrees.

### **Debit Card Designs**

A debit card is a plastic payment card that is linked to a checking or savings account. When a transaction is made using a debit card, the funds are withdrawn directly from the associated account. Unlike credit cards, debit cards do not allow the cardholder to borrow money or pay interest on outstanding balances (Klee, 2004).

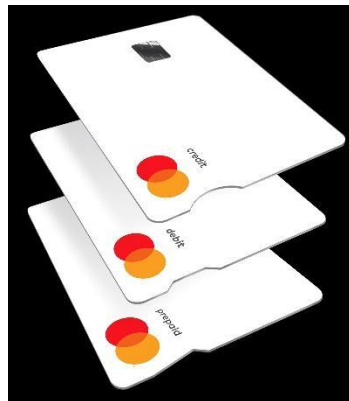


Figure 1. Debit Cards are used for transactions.

*Source: MasterCard Said Its New Touch Card Designs Will Be Available In Early 2022. Photo: MasterCard Inc.*

Merchants widely accept debit cards which can be used for a variety of transactions, including purchases in-store and online, ATM withdrawals, and cashback transactions. Banks or credit unions often issue credit cards and may be given by other financial institutions.

Debit cards are a convenient and secure payment method, as they do not require cash and often include fraud protection measures. However, cardholders must monitor their account balances and transaction history to ensure they are not charged for unauthorized transactions or overdraft fees.

### Challenges

The primary challenge associated with designing a blind debit card is creating a card that is easy to use and navigate for visually impaired children. The card should be accessible and intuitive, allowing children to manage their finances independently. Some of the challenges that must be considered when designing such a card include:

#### Designing an intuitive interface

One of the primary challenges of developing a blind debit card is creating an interface that is easy to use and navigate for visually impaired children. The card should have a simple and intuitive interface that allows children to understand their account balance and make transactions quickly.

#### Ensuring privacy and security

Another important consideration when designing a blind debit card is ensuring the privacy and security of the child's account information. The card should have robust security features that protect the child's account from unauthorized access or fraud.



### **Providing tactile feedback**

Blind debit cards must provide tactile feedback to visually impaired children, allowing them to differentiate between buttons and features. This feedback can be in braille, raised letters, or other tactile features.

### **Maintaining compatibility**

Blind debit cards must be compatible with existing point-of-sale systems, ATMs, and other financial infrastructure. This compatibility can be challenging, especially if the card incorporates new and innovative features.

## **METHODOLOGY**

The method employed was qualitative. The sampling was conducted using review articles from diverse sources. The design features a tactile keypad and audio prompts to assist visually impaired children in entering their PIN number, a braille display to provide feedback on transaction details, and additional security features to protect the user's sensitive information with a confidential mode for visually impaired users.

This extensive literature review included a narrative summary. The goal of narrative synthesis is to summarise and explain the results of synthesis through academic writing. The qualitative research procedure consists of four steps: research design, data collection, data analysis, and report writing. Content analysis is a qualitative method that uses verbal, visual, or written data to describe specific phenomena systematically and objectively, thereby facilitating the formation of valid conclusions. It is also an adaptable method of data analysis applicable to systematized qualitative reviews. Systematic qualitative evaluators must modify or adapt content analysis strategies to match highly organized and contextualized material to locate knowledge and theory. Lastly, qualitative content analysis was employed in this study (Lim, 2023; Woodeson, Limna & Nga-Fa, 2023; Kok & Siripipatthanakul, 2023, a & b).

Researchers regularly employ focus groups, a fundamental qualitative style of inquiry, to glean and better comprehend "opinions, feelings, and attitudes from a small group of carefully targeted participants" (Martin & Hanington, 2012). Focus groups are helpful for researchers as a first step towards refining research questions that may be further studied by traditional quantitative approaches to enhance the study of a research subject (Kreuger & Casey, 2014). The researchers held the focus group meetings in Ranchi, India. Each session started with a survey to gather demographic data on the participants' age, family status, employment status, household income, vision score, source and duration of their visual loss, and any accompanying training in adapted living techniques. The next 20 minutes were spent in group discussions that were moderated. Target Open-ended questions were posed to participants regarding various subjects, such as how vision loss has affected their everyday life and issues utilizing their debit cards when making daily purchases of goods and services.



A few participants gave their opinions by relating personal stories from their own lives and, on occasion, by offering solutions to their difficulties. Data were transcribed and qualitatively examined after discussion codes were applied. Members of the study team separately reviewed the comments of a select few participants several times, categorized them into manageable categories, and arranged them into linked themes using a consensus method to settle disagreements over interpretation. Instead of imposing preconceived coding schemes, traditional ways of content analysis were applied; category themes were created from the data transcripts (Hsieh, 2005), an analytical strategy thought appropriate when little relevant theory or literature was accessible.

## **RESULTS**

The researchers conducted the focus group meetings in Ranchi, India. Each session began with a survey to collect demographic information about the participants' age, family status, employment status, household income, vision score, source and duration of their visual impairment, and any training in adapted living techniques. Twenty minutes were subsequently devoted to moderated group discussions. Participants were asked open-ended questions about various topics, including the impact of vision loss on their daily lives and issues with using their debit cards to purchase products and services. A few participants expressed their opinions by relating personal anecdotes from their own lives and, occasionally, by providing solutions to their problems. It could be summarized as follows.

### **Solutions**

Despite the challenges of designing a blind debit card for visually impaired children, several potential solutions exist. Some of these solutions include:

#### **Incorporating tactile features**

One solution to the challenge of creating an intuitive interface for blind debit cards is to incorporate tactile elements such as raised letters or braille. These features can help visually impaired children navigate the card's interface and easily make transactions.

#### **Using audio feedback**

Another potential solution is to use audio feedback to provide information about the child's account balance and transaction history. This audio feedback can be delivered through headphones or speakers, allowing visually impaired children to access the information independently.



### **Integrating with mobile devices**

Blind debit cards can also be combined with mobile devices, allowing children to access their account information and transact using smartphones or tablets. This integration can be achieved through mobile apps or mobile web interfaces.

### **Training and support**

Finally, it is essential to provide training and support to visually impaired children using blind debit cards. This training can include tutorials on using the card's interface and information on managing their finances and staying safe from fraud.

This qualitative research shows that low-vision people face difficulties using debit cards, which reduces their independence and increases their dependency on others for daily tasks. The study's findings have revealed demands in the real world; for example, customers with low vision have trouble navigating tight spaces and other impediments, and they have trouble seeing tags due to the range of debit cards' text styles, sizes, and colours. Our study also highlighted the significance of intangible service elements, such as informants' dissatisfaction with either excessive or reluctant service from merchant partners. Exasperation with incomprehensible payment processes and dealing with merchant associates who lack product and service understanding was frequently expressed by informants. Despite the accessibility requirements and compliance with the new design of the debit card for blind people, more efficient and consistent work needs to be done. The study's conclusions can be used as a starting point for creating master card design experiences that are accessible to both visually impaired and non-disabled customers.

### **CONCLUSION**

Designing a blind debit card for visually impaired children is a challenging task, but it is an essential one. Blind debit cards can help visually impaired children manage their finances independently, empowering and promoting financial literacy. By incorporating tactile features, using audio feedback, integrating with mobile devices, and providing training and support, it is possible to design a blind debit card that is accessible and intuitive for visually impaired children. Using braille, contrasting colours, and intuitive design can ensure that the card is easy to use and understand, even for children who may not have fully developed their literacy skills. Overall, designing a blind debit card for visually impaired children is critical in promoting financial inclusion and accessibility for all. In conclusion, a blind debit card for visually impaired children can provide a practical and accessible solution to help children manage their finances independently. Understanding the unique needs of visually impaired children and designing a debit card that caters to them can empower them to take control of their finances and live more independently.



## RECOMMENDATIONS

- According to Iwarsson and Sthl (2003), the foundation of universal design is "the principle that there is only one population composed of individuals representing diverse characteristics and abilities." This essay has emphasized the concrete and abstract difficulties faced by those with visual impairments in the banking industry.
- Thanks to the Touch Card, the 2.2 billion persons with visual impairments worldwide would feel more secure, included, and independent. It might be tricky for those who are blind to recognize their credit or debit cards. Thanks to this haptic approach, customers can appropriately orient the card and identify the payment card they are using.
- As more cards adopt flat designs without embossed names and numbers, it would be efficient for the visually handicapped to immediately recognize whether they are holding a credit, debit, or prepaid card. MasterCard is tackling this issue with a straightforward yet powerful innovation.

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