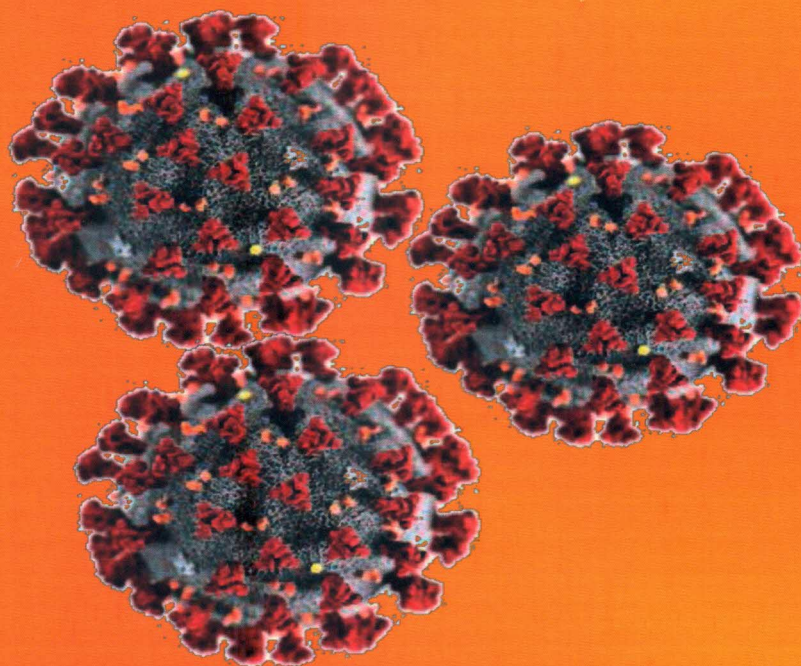


Coping With COVID-19 Pandemic in Africa and Beyond

Editors: Maurice N. Amutabi and Linnet Hamasi Henry



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Chapter 22

Transformational Leadership Practices of a Teacher and its Effects on Students' Academic Performance Kirinyaga County Schools the Covid-19 Pandemic

By

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Abstract

Leadership plays an essential role in education development and teachers' pedagogical innovation. This chapter investigated the relevance of the Teacher Transformational Leadership style in teachers' pedagogical innovation. In the 21st Century, transformational leaders are perceived as symbols of high value due to their ability to offer followers the chance to develop and transform their abilities. Globally, education systems continue to go through changes in reaction to elements like; authorities' policies, unstable economy, increased calls by stakeholders for better levels of learning outcomes, professionalism, and accountability. This is further aggravated by the changes that emerge out of disruptions of crisis situations. Thus, there is a strong need for instructors to act as leaders towards change in pedagogical initiatives. Teachers with sufficient leadership and pedagogical skills can navigate through the complexities of the demanding and dynamic nature of education in the modern world. Essentially, the objective of the study was to investigate transformational leadership and its implications on pedagogy in high schools in Kirinyaga County during the Covid-19 global Pandemic. In that context, this chapter employed a positivist philosophy, using a quantitative research design to determine the relationship between transformational leadership and the impact of pedagogical practices of teachers amid the Global Pandemic posed by Covid-19. Electronic questionnaires were distributed to 130 participants who were randomly selected to help in answering the research questions. The findings established that the transformational leadership traits of a teacher influence learner's academic performance in high schools. As such, the study recommended that teachers may incorporate transformational leadership practices in their pedagogical approach.

Keywords: Kenya, Idealized Management practices, Pedagogy, Academic performance, Transformational leadership, leadership, Global Pandemic

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Introduction

Education plays a vital role in bringing enlightened transformation in society. Indeed, education, directly and indirectly, leads to individual and national development (Zhu, Newman, Miao & Hooke, 2013). As a result, education reforms geared towards enhancing effectiveness and efficiency are widely sought after throughout the world. School leaders play a significant role in implementing education changes. Leadership plays a vital role in any organization's efficiency and effectiveness. Teachers' leadership plays a central role in uplifting students' performance and implementing the education policies (Vecchio, Justin & Pearce, 2008). With that in mind, the global COVID-19 Pandemic has had a disruptive effect on multiple facets of day-to-day living, including learning. As Ngwacho (2020) notes, COVID-19 related challenges have informed a clamor of new learning approaches. The emergence of COVID-19 brought a myriad of challenges, such as the closure of schools and some learners got married. In contrast, a number got involved in the motorbike phenomena leading to accidents, drug abuse, alcoholism, and moral decadence. The COVID-19 related challenges called for a new pedagogical approach. Transformational leadership in education offers a great promise in addressing the challenges emanating from COVID 19. Transformational teachers play an integral part in providing psychosocial support through innovative ways of teaching and learning. This can be realized by using technology in teaching and learning. The research reviewed the literature on transformational teacher leadership and its implications on student outcomes. Due to the new and strained learning conditions during the global Pandemic, transformational teaching practices prove to be ideal for achieving sustained positive educational results in high school education.

Statement of the Problem

The emergence of COVID-19 brought a myriad of challenges, such as the closure of schools and some learners got married. In contrast, a number got involved in the motorbike phenomena leading to accidents, drug abuse, alcoholism, and moral decadence (Ngwacho, 2020). The current study examined the implications of teacher transformational leadership practices (attitude) and students' academic performance. The study explored teacher transformational leadership practices as an approach helpful in teaching students' and teachers' integrity and moral values. A teacher with transformational leadership practices may build trust in students, supports, and emphasizes honesty, thus enhancing their learning outcomes. The researcher argues that teachers' transformational leadership practices hold great promise in enabling teachers to instill skills in learners to mitigate COVID-19 related issues. The Teachers' ability to practice the four I's of Transformational leadership (Idealized influence, Inspirational motivation, Intellectual Stimulation, and Individualized consideration) about learners in and outside the classroom may enhance academic integrity (Thoonen et al., 2011). The

study informs policymakers to adopt a transformational leadership model for teachers to improve students' academic performance. Twenty-first-century researchers have started investigating the connection between transformational leadership behavior and conduct and learning outcomes (Blokun & Goodboy, 2009; Wu, Hoy & Tarter, 2013).

Purpose of the Study

The purpose of the study was to investigate transformational teacher leadership practices and their implications on students' academic performance in county schools in Kirinyaga County during the global Pandemic. The Covid-19 has affected all aspects of life, with notable impacts on how people work, travel, shop, and socialize. In that context, the new normal has also been seen in the education system, with students required to attend virtual classrooms facilitated by technologies, such as Google Meet and Zoom. In that context, it is apparent that this new normal is the battle at which teachers and students in Kenyan schools, particularly in Kirinyaga County, are stretched to adjust to a scenario where money and education are at stake. For this matter, a lot has been written about the impacts of Covid-19 on the education system. However, there is no study addressing this Pandemic's implication on the education system in Kenya, exceptionally high schools in Kirinyaga County. In this context, the present study endeavors to fill this research gap by investigating whether the transformational leadership style adopted by high teachers has a significant impact on the pedagogy during this global Pandemic.

Research questions

1. What is the link between a teachers' idealized practice students' academic performance in Kirinyaga County's high schools?
2. What impact do teachers' individualized leadership skills have on students' academic performance in Kirinyaga County schools?
3. What effect do teachers' inspirational practices have on students' academic performance in Kirinyaga County schools?

Review of Related Literature

Learning is a process that can be described as "the persistent change in human performance or performance potential due to the learner's interaction with the environment" (Thoonen et al., 2011). Vecchi, Justin & Pearce (2008) observed that learning is caused by changes in an individual's behavior as they interact with the environment. The current research reviewed the effects of a transformational teacher on students' academic performance in public secondary schools. The review focuses on transformational practices of a teacher as a pedagogy that is appropriate in equipping learners with intellectual and psychosocial skills vital for learners' outcomes in public secondary schools.

Pedagogy

Pedagogy refers to a Greek word meaning "to lead a child" (Bruner, 1996). In a learning institution context, the term 'pedagogy' referred to shaping learning institutions, their learning, and teaching practices to attain higher learning and expected student outcomes (Male & Palaiologou, 2015, p. 215). In the current research, pedagogy is perceived as the

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technique used by teachers to educate learners to maximize the learners' academic outcomes. In this context, our view of pedagogy is a technique of instilling and sustaining transformational teaching practices towards expected student outcomes. Importantly, pedagogy intertwines with leadership because students tend to follow the instructions of their teacher. Moreover, leadership acts as the glue that sticks multiple pedagogical approaches with the administration of the learning institutions. Given the need for innovative ways that should close the gap that the Covid-19 Pandemic caused in the pedagogical practices in high schools, transformational leadership style is one of the leadership styles that can accommodate

Global Pandemic's (Covid-19) impact on Pedagogy in Schools

Ngwacho (2020) observed that the Covid-19 Pandemic mostly upset needy families. The closure of learning institutions has led to the adoption of virtual online teaching and learning. Online learning provides access to training, coaching, teaching without physical contact in response to the COVID-19 crisis. According to Mwangi and Ndiritu (2021), Virtual learning has experienced resistance and many challenges, especially in developing countries, including Kenya. Indeed, a high percentage of learners are being excluded due to the inaccessibility and high cost of virtual resources (Mwangi & Ndiritu, 2011).

Consequently, it is not surprising that the closure of schools in Kenya has led to standard examinations (KCSE) being postponed. Mbogo (2020) observed that learners from marginalized groups, learners with a disability might be restricted in terms of academic resources, which may lead to low literacy rates. Alvi and Gupta (2020) stated that school closures affected students' food sources as school feeding packages were a prime food supply since most of the households could not afford to provide meals. Additionally, the COVID-19 Pandemic curtailed livelihood due to a lack of profits and jobs (Ngwacho, 2020). School feeding packages have continually led to growing enrollment rates and lowering absenteeism in schools (Kinsey et al., 2020). Owing to the closure of learning institutions, there is a global need for an appropriate pedagogical approach in schools to ensure that teaching and learning are sustained during the closure of schools due to the COVID-19 Pandemic.

The disruption caused by the global COVID-19 Pandemic has created the need for changes in leadership approaches that align with the current crisis. As a result of the Pandemic, the role of educationists has changed drastically and unexpectedly without history from which to draw their experience (Ngwacho, 2020). This situation requires a new kind of school leadership to ensure that all the stakeholders are on board to carry out their traditional teaching roles. Secondary school teachers may adopt the transformational leadership practices for effective leadership that have been established through research that puts learners' needs first. The current study seeks to investigate the effects of transformational leadership practices of a teacher on students' academic performance in county secondary schools. The researcher holds that a transformational approach is a pedagogical approach that may bridge the pedagogical gap created by the Covi-19 Pandemic. Transformation leadership teacher's traits (pedagogical approach) may advance high school teaching and learning, leading to good academic performance.

Transformational Leadership

Burns (1978) first developed the transformational Leadership style and later expanded by Bass (1985). Burns and Bass argued that TL is a way a leader influences followers to do more than they expect by making them more aware of the importance and significance of goals, which influences them to go beyond their achievements. Jess (2014) describes transformational leadership as a means of leadership designed to convey a change in social systems and individuals. Transformational leadership dynamics lead to a positive and vital transformation of the followers, ultimately making them leaders. As Gill et al (2010) noted, transformational leadership improves the character of the followers, motivation, and performance. Bayler (2012), in agreement, confirms that TL uses methods such as imitation, understanding the inner needs of the follower, and connecting the concept of ownership to the organization's resources. Bayler (2012) emphasized a need to restore the values of the revolutionary leader 'in today's troubled world. Bass (1985) considered the TL model as four: 1's) Positive influence: Leaders behave in ways that promote follower's confidence and demonstrate high ethical standards, share risks with followers in setting and achieving goals, and use power to move people or groups towards their goal and vision. 2) Motivation: Leaders behave in ways that motivate followers. 3) Promoting creativity:

Leaders inspire followers' efforts to create and act by analyzing problems and approaching old situations in new ways. 4) Individual considerations: Leaders look at individuals' needs for success and growth by acting as a coach or mentor. New learning opportunities are created, and the supporting climate will increase. Individual variations depending on needs and desires are recognized. Extensive research conducted in various organizations has shown that TL has indirectly affected the organization's performance through multiple organizational outcomes and individual outcomes.

The empirical literature on academic performance in learners in secondary schools reveals a correlation between the learner's academic performance and the type and quality of leadership adopted by the stakeholders (Kitavi, 2019). Kitavi (2019) believes that the school leadership style influences learners' ability to acquire a culture of academic integrity. Transformational leadership has been found to encourage open communication with followers, which consecutively enhances student learning in the classroom (Gill et al., 2010). Owusu-Agyeman (2019) observes that transformational leadership makes schools flourish; individuals are confident that their voice matters, henceforth increasing learners' academic performance. Transformational leaders also endeavor to improve academic performance by fostering genuine collaboration between all learning institutions. Transformational leadership promotes autonomy for all, thus empowering followers to become creative and innovative to solve problems confidently and with minimal supervision (Gill et al., 2010).

According to Ayiro and Sang (2011), teachers play a significant role in facilitating change. The scholars further assert that teachers may influence students, shape their growth and professionalism and help them focus on specific tasks (Ayiro & Sang, 2011). Moreover, Ayiro and Sang explain that the way teachers carry out their activities is similar to how organizational leaders influence, start, focus, monitor, and coordinate activities towards fulfilling organizational goals (Ayiro & Sang, 2011). In addition, similarities have been found between transformative leadership learning contexts (Bolkan & Goodboy, 2009; Kothari, 2008). The four dimensions of transformational leadership

(idealized influence, individualized consideration, inspirational motivation, and intellectual stimulation) provide a framework for understanding educational, transformative leadership. Teachers who demonstrate each aspect should positively impact students' behavior, attitudes, and learning performances (Bolkan and Goodboy, 2011). However, these relationships need to be assessed through an exploratory methodological approach.

Transformational Leadership in High School Education

Hallinger, Wang, Chen, and Liare (2015) define leadership as a legitimate authority, power, and influence attained by the leader to transform an organization. They state that leaders use their position to direct human resources and enable people to achieve the desired outcomes (Hallinger et al., 2015). For this reason, leaders and administrators must identify an appropriate and suitable leadership style that is effective for motivating and guiding followers (Nemanich & Keller, 2007). In learning institutions, leadership plays a vital role in enhancing learning outcomes through guiding, influencing, motivating learners, and shaping the school climate (Hallinger, Wang, Chen & Liare, 2015). The leaders advance a challenging and appropriate vision, then use their leadership attributes to specify and translate it into action. Transformational leaders are optimistic about the vision and depict confidence and decisiveness in its implementation (Van Niekerk & Blijnaut, 2014). The concept is then realized through the effective planning of processes and procedures that yield significant gains throughout its performance.

Spiel, Evans, and Langberg's (2014) study focused on the impact individualized learning approaches had on the learning outcomes of young students with attention deficit and hyperactivity disorder. The study's objective was to assess the high school student's academic achievement and functional goals within the United States Department of Education, presenting both scope and contextual gaps (Spiel, Evans, and Langberg, 2014). The study revealed that the individualized education program was essential for promoting academic achievement in learners with attention deficit and hyperactivity disorder. It offered learner-specific approaches to academic performance. Notably, teachers may employ idealized influence as one way of customizing pedagogical approaches in high schools. Idealized influence primarily centers on the zeal and dignity that transformational leaders show towards their followers, thus facilitating a shared vision (Bass & Riggio, 2006; Bass, 1985).

Implications of Teachers' Idealized Influence Leadership on Student academic performance

Teachers who display idealized influence reassure learners, inculcate confidence, and enable students to overcome academic-related obstacles (Bass & Riggio, 2006). According to Yulk (2002), teachers who exhibit idealized management practices express their beliefs and appeal to followers at an emotional level, thus spurring followers to overcome the status quo and achieve expected results to the vision-mission of the follower's institution. Jess (2014) believes that idealized managers lead by example, are positive, optimistic and create a school culture where learners strive to achieve their educational goals.

Transformational teachers use their ability to convey enthusiasm and show concern and respect to students regardless of their prevailing circumstances. For example,

teachers may smile during class (Tschannen-Moran & Barr, 2004). The instructor may offer compelling examples, change their tone, use practical jokes during content delivery (Garner, 2013). Equally transformative, teachers can use disclosure, display appreciation for learners, offer incentives to inspire students' participation (Bolkan & Goodboy, 2011). Enthusiasm is related to the internal motivation of students, which contributes to the high retention rate of learners (Ayiro, 2014; Bettencourt, Gillett, Gall, and Hull, 1983). Teachers with idealized influence traits exhibit a sense of selflessness, integrity, and a moral commitment to students. The teachers focus on subordinates' collective good and are ethically committed to the organization's long-term success (Bass & Bass, 2008; Riggio, 2006).

Teachers who exhibit transformational traits instill pride in followers, a sense of power, confidence, and emphasis on a collective mission and vision (Bass, 1998). Ayiro (2014) affirms that leaders who support their followers and influence them successfully can increase school improvement initiatives. Transformational leadership style may be attributed to establishing a positive school culture in which teachers are more interested and involved in schools' day-to-day programs (Jess, 2014).

Individualized Consideration

Individualized consideration is exhibited by leaders with the ability to demonstrate a unique interest in the distinctive needs of their followers (Bass, 1985; Bass & Riggio, 2006). In a school setting, instructors or teachers may have the ability to identify learners' weaknesses and strengths (skills and talents), call students by their names, spend more contact hours with slow learners, use various teaching materials and verbal exchange, altered the schoolroom environment and varied teaching aids to capture the learners' attention and retention (Bolkan & Goodboy, 2011). The teacher may engage learners in participatory activities such as drama to master concepts or give them additional incentives to accomplish (Thoonen et al., 2011). Teachers also may be interested in the well-being of the learners; for example, ask them how they may be feeling.

Inspirational Motivation

Inspiration motivation involves teachers' ability to inspire their followers to do extra and boost their power (Bass, 1985). Educational leaders who exhibit inspiring motivation instill hope and encourage learners, which lead to improvement of students' outcomes. Teachers who show inspirational motivation deliver to the learners their perception that they can meet their goals (Barron & Harackiewicz, 2001; Valentine & Prater, 2011). By treating students as capable, students are much more likely to succeed (Jess, 2014).

Intellectual Stimulation

The fourth component of transformational leadership is intellectual stimulation which involves teachers' ability to seek out learners' opinions and address new ways (Bass, 1985; Bass & Riggio, 2006). Transformational teachers exhibit innovative motivation with coaching strategies that shape learners, inspire them to work independently, use their thoughts to accomplish tasks, and provide students with opportunities to learn how to use their new skills to do assignments or solve problems (Bolkan & Goodboy, 2011). In a classroom setting, teachers with intellectual stimulation traits may use videos, songs, concept presentations (dramatize the concepts), and exercises to instill new skills in

students (Yukl, Gordon & Taber, 2002). In addition, transformational instructors ensure that physical exercises are part of learning (Bolkan & Goodboy, 2011). The use of varied traits in teaching inspires students to increase their genres and impact the Student's ability to recognize or interpret matters in new ways. Using examples that might be logical and applicable to the learners, the transformative teacher draws the students' attention to the content material (Valentine & Prater, 2011).

Further, alternate teaching methods may inspire students to solve problems or do assignments independently. Instead of giving solutions to all questions, the teacher can encourage students to search for answers to their questions (Bolkan & Goodboy, 2011). A teacher's transformational leadership traits can contribute to students' positive attitude to learning, hence positive outcomes (Bolkan & Goodboy 2011).

Implications of Transformational Leadership for Pedagogy in High Schools

Multiple scholars within the realms of organizational and educational study have affirmed the positive impacts caused by transformational leadership, including the consequences of moral and ethical issues (Bolkan & Goodboy, 2009; Walumbwa, Wang, Lawler & Shi, 2004). However, as noted earlier, there has been a significant shortage of academic literature that explains how transformational leadership leads to better student outcomes. The primary contribution of the present study is explaining how transformative leadership teacher practices shape students' attitudes and outcomes.

For a school to achieve tremendous academic success, school administrators and teachers must set high expectations for students, promote cooperative and collaborative leadership, and build commitment. Malusu (2003) reported that academic performance in a school is almost identical to good management. Transformational leadership is suggested to be appropriate in the school environment because a transformative teacher can reach the highest levels of society (Sergionvani, 2007). Specifically, the magnitude of the positive influence of transformational leadership embraced by the teacher encourages the teacher-student relationship needed for effective student performance (Rahman et al., 2011). Teacher management in and out of class directly affects students' academic performance. Rahman et al. (2011) suggested that the transformational leadership pedagogical approach may be suitable in secondary school for the teacher to identify areas requiring new solutions and individual considerations, redefining their values and goals to mimic those of the school. While many forms of leadership focus on one side or the other, transformational leadership take a broader view of leadership issues, positioning them as the driving force behind achieving organizational goals (Bayler, 2012). Teachers are expected to develop their leadership strategies designed to improve student academic achievement.

Conceptual Framework

A conceptual framework is defined as integrating some concepts related to describing or predicting a particular event or providing a broader understanding of what the researcher is interested in or the research problem (Imenda, 2014). A conceptual framework is a dynamic process; possible relationships are envisaged based on integrating individual concepts (Imenda, 2014). In other words, the conceptual framework is used to show how the diverse elements of the study are related.

The conceptual framework for this research established how transformational leadership practices (TL) by teachers relate to students' academic performance (SAP). TL has four dimensions: idealized management practices, individualized consideration, inspirational motivation, and intellectual stimulation. The teacher is expected to practice, which is assumed to influence the students' academic performance. Students' academic performance (SAP) is the dependent variable, with indicators such as high grades in the KCSE, a high student transition rate, reduced KCSE examination malpractices, and an exhibition of knowledge, skills, and values. The current study measured students' academic performance based on high grades in the KCSE, reduced KCSE examination malpractices, a high student transition rate, and an exhibition of positive attitudes and values.

Maslow's theory, Skinner's theory, and Walberg's theory identify all students' potential to perform well academically. In contrast, TL theories create a conducive environment for learning, in which the followers are motivated to pursue the laid-down goals. Path-goal learning theory was used to support the learning and transformational leadership theories concerning how students interact with the faculty in their learning process in and out of the classroom. Path-goal theory suggests that faculty interactions largely influence academic success or performance. To find to what extent the transformational leadership practices of teachers affect students' academic performance, all other factors that moderate the students' academic success were held constant.

The Conceptual Framework of the Study

The conceptual framework is as presented in Figure 2.7 below:

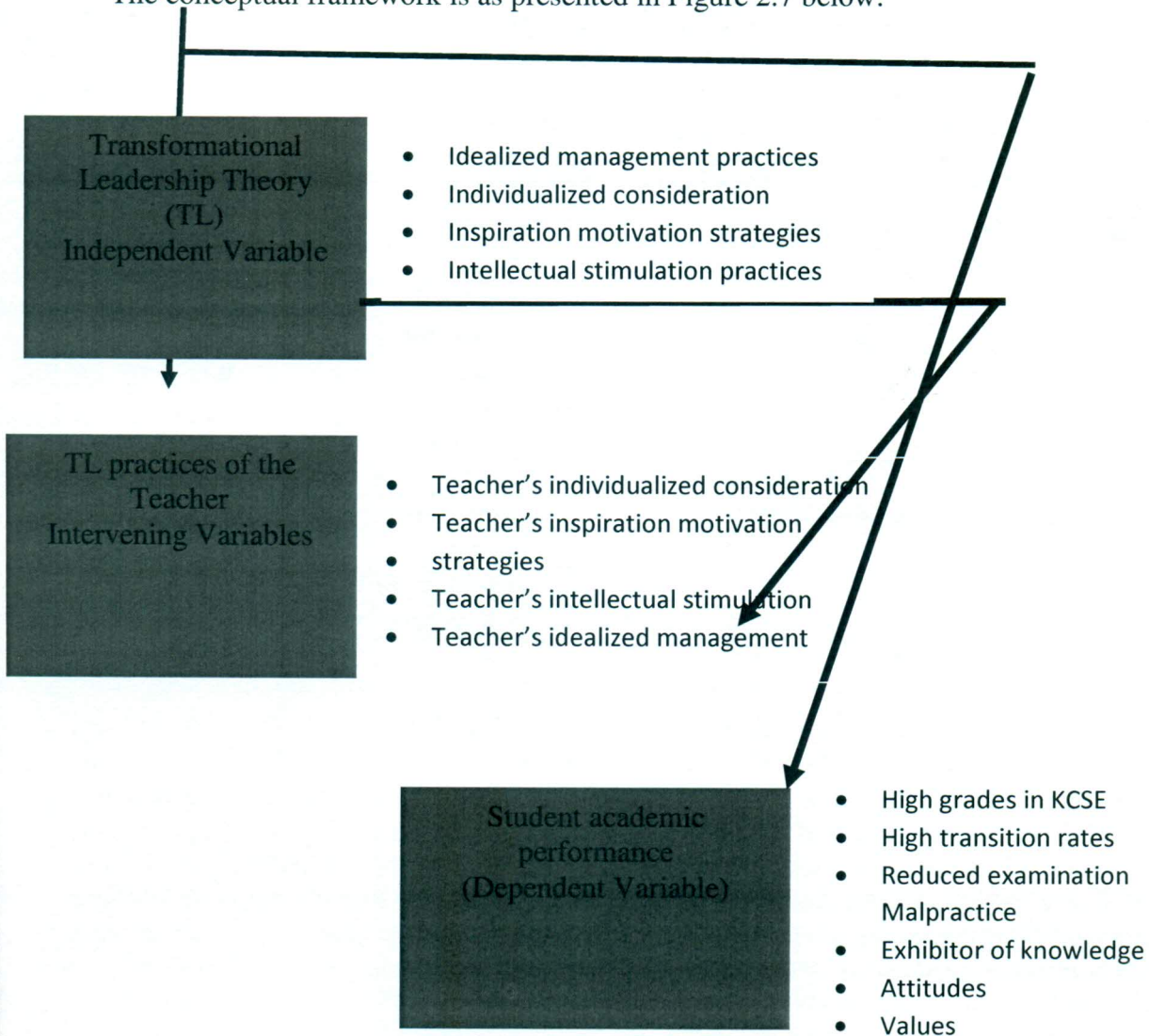


Figure 2.7: Conceptual framework
Source: Research data

Methodology

This study followed the transformative epistemology to explain the relationship between Transformational Leadership teacher practices and pedagogical approaches in crises. The research design adopted a quantitative method to successfully answer the research question of this study, which comprised searching for literature to determine the research questions, gather scientific data, and then carry out the data analysis of the resultant data using the existing scientific methods. The required data was obtained by distributing the online electronic questionnaire using Google forms to high school teachers from schools based in Kirinyaga County, Kenya. Kirinyaga County was chosen because it has recently witnessed lockdown, which the Kenyan president imposed to stop the spread of the

Covid-19 Pandemic in public places, such as schools (BBC, 2021). The designed questionnaire consisted of closed questions except in the cases of a semi-open questionnaire for declarations or questions about the respondent's identity. Essentially, five different answers are used for all the closed statement items or questions: Score 1, score 2 (disagreement), score 3 (distinguish KS), score 4, and score 5 (strongly agree). In this study, the population was high school teachers in Kirinyaga County, and all the questions were transmitted electronically using a random sample. It is crucial to note that 130 people were recruited to participate in the study and given the questionnaire.

Table 6: Profile of Respondents

		Total
Education	Attained bachelor's degree	75
	Attained master's degree	65
Working as a teacher	< 5 years	35
	5 – 10 years	55
	>10 years	50
Age	<30 years	45
	30-40 years	55
	>40 years	40

Source: (Research data)

In this study, the respondents who had attained at least a bachelor's degree were 75, and those with a master's degree were just 65. It is crucial to note that some respondents had less than five years of experience, some had experience ranging between 5 and 10 years, and some had taught high schools for more than 10 years. In particular, there were 35 teachers with less than 5-year teaching experience, 55 had taught for more than five years but less than ten years and 50 of them had more than ten years of teaching experience. Furthermore, 45 respondents were aged below 35 years, 55 of them were aged between 30 and 40 years, and 40 teachers were aged over 40 years.

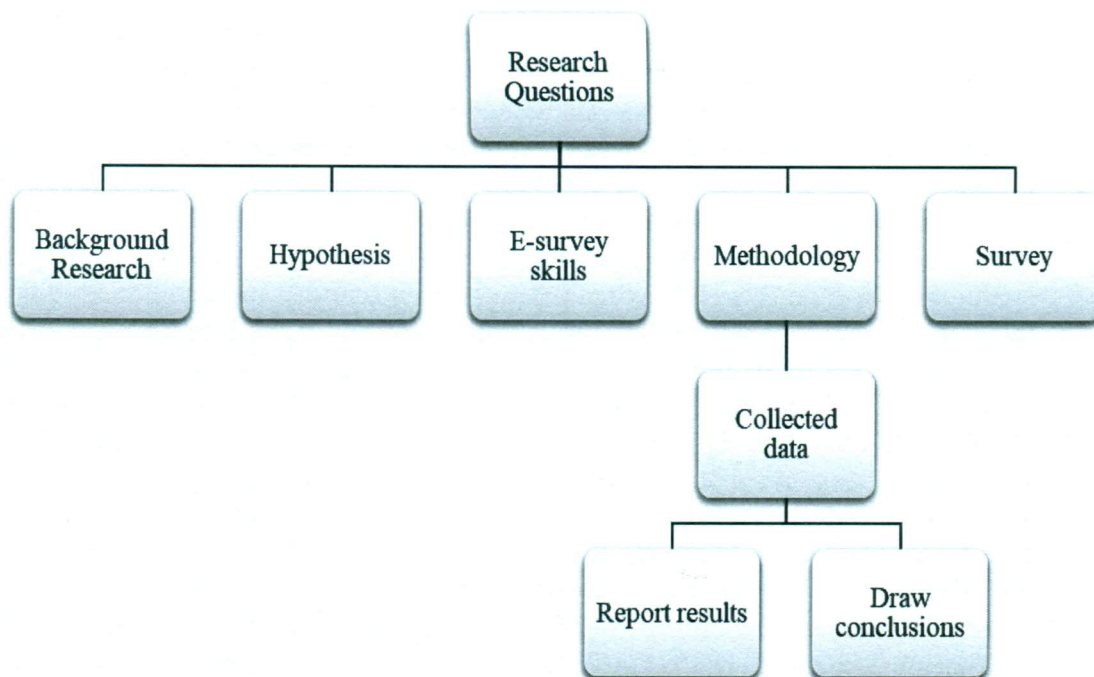


Fig 1: Flow Chart of the Research Methodology
Source (Research Data)

1. Research question 1: What is the link between a teacher's idealized practices and academic performance in Kirinyaga County's high schools?
2. What effect do teachers' inspirational methods have on students' academic performance in Kirinyaga County schools?

Data Collection Method

Electronic questionnaires were administered to the high school teachers in Kirinyaga County. The multifactor leadership questionnaire and the e-skills questions were distributed to assess the skills for innovation and competitiveness. A specific focus was the high-tech leadership skills for pedagogy, transforming a teacher into a digital leader. Such e-leaders are both digitally savvy and have the propensity to lead strategically. In most cases, such people work as ICT leaders and business leaders and business-savvy (Afroz & Pandey, 2017). E-leadership involves the process of managing and leading e-skilled professionals and other professionals.

In the study, the respondents were required to rate the degree to which they portrayed some unique behaviors on a Likert-type scale from the specifications of 1 (not at all) to 5 (almost always) by giving answers to 45 of the provided questions. At the same time, the protocol also measured digital leadership by utilizing five different related questions on a questionnaire. For all the respondents, the average of all the answers given was calculated for each type of leadership, with an individual average score ranging from 1-6. It was deduced that the higher the score give, the higher the chances that the respondent exercises that particular leadership style. Then, the application of the questionnaires to the principals of the high schools chosen for the study in Kirinyaga County was enacted using a unique completion link using their Google forms. The

collected information was coded and evaluated using the application on the excel worksheet and SPSS software. In particular, the comparison of the descriptive demographic data was carried out using Pearson's X^2 analysis. Then, the correlation between the existing variables was computed using the regression analysis technique.

Reliability, Validity, and Research Ethics

This study aimed to investigate the link between a teacher's idealized practices and students' performance in Kirinyaga County's high schools. In that context, the selection of the study's participants was an essential factor in examining external validity. It is possible that some of the participants (teachers) chose to engage in the study because they wanted to learn more about transformational leadership and so wanted to have a say in the research. Their desire to be a part of the study may have influenced the results, which could pose a substantial issue when these findings are applied to other scenarios. The featured descriptions utilized in the data analysis are evidence of high-quality qualitative research, which should help avoid bias. This precise explanation would have also eliminated any chance for selection-effect bias.

The reliability of this quantitative research was then assessed using a more internal metric, ensuring that the conclusions were deemed plausible based on the data. The question was not whether the same results can be replicated but rather whether the products are compatible with the data acquired. Therefore, the researcher's expectation to provide a thorough account of how the research study was done to give critically valuable information would help guide future investigations in comparative contexts. The participants were regularly informed and reminded by the researcher that there would be no monetary or other incentives for their involvement in the study. The respondents were also told that not participating in the survey would have no negative implications. The goal was that the possible intrinsic satisfaction they would acquire would inspire them to engage in a project like this one. This optimism stemmed from the fact that the project's goal was to improve educators' awareness of excellent educational methods.

Ethical considerations were also taken into account throughout the research process. For the empirical studies that were utilized, proper citations were provided. Data collecting, interviewing participants, presenting the research findings, and ensuring that the research information was reported accurately were covered by ethical norms. NACOSTI granted the researcher an authorization permit. Before the study, a copy was given to the County Director of Education in Kirinyaga County. The researcher also received a letter from Pan Africa Christian University's Faculty of Postgraduate Studies, which was attached to the questionnaire. Before gathering the data, the researcher obtained permission from several county schools in Kirinyaga County.

Furthermore, the researcher obtained informed consent from the respondents before interviewing them by explaining the study's goal. Throughout the research and afterward, confidentiality was maintained. The participants were advised that if they did not wish to continue with the task, they had the option to do so. The respondents were informed that the study was strictly academic. This was done to ensure that they were at ease when answering the questions and not under any duress.

Methods of Data Analysis

When doing the data analysis, the data gathered from the questionnaire were pre-coded and pre-processed and then entered into the database for computation. Existing evidence demonstrates that a questionnaire is an essential tool for data collection because it offers the respondent's time to think about their responses without interference (Ikart, 2019). In that context, coding was necessary to protect the respondents' privacy and data breach. The database was thus password-protected, and only authorized personnel was allowed access to the data. The protocol used different statistical analysis techniques, both inductive and descriptive, for all the categories of the stated variables.

- (a) Descriptive methods: pie charts, percentage bar charts, and percentages
- (b) Inductive methods: Tests carried out to determine the possible relationship that exists between two categorical variables.

To determine the operative variables, aspects, such as the number of Information Communication Technology (ICT) skills, leadership outcomes, and leadership types were used. At the same time, the researchers utilized techniques, such as Pearson Linear Regression, to determine the possible relationship between the variables. Possible dependence between different operative variables was examined using the linear technique regression. The reliability of the different types of questions related to transformational leadership and leadership outcomes was also measured. Simultaneously, using multiple regression analysis and a model, the association between the predicted and predictor variables was assessed. The coefficient of determination (R^2) was used to analyze the measurement findings to determine how much of the dependent variable was explained by the specific independent variable. The regression coefficients were used to determine which predictor variables had a more significant impact on the dependent variable. The regression model was utilized to evaluate all hypotheses using the T-test and F-statistic coefficients of variables and primary levels.

Results and Discussion

The purpose of this study was to investigate whether the transformational leadership style adopted by high teachers has affected students' academic performance during COVID 19 global pandemic. In particular, the researcher endeavored to answer the research questions:

1. What is the link between a teachers' idealized practice students' academic performance in Kirinyaga County's high schools?
2. What impact do teachers' individualized leadership skills have on students' academic performance in Kirinyaga County schools?
3. What effect do teachers' inspirational practices have on students' academic performance in Kirinyaga County schools?

Demographic Statistics

The demographic data of respondents who participated in this study, as shown in Table 1 in the previous section, indicate that most respondents had bachelor's degrees representing 54 percent of all teachers. However, some teachers had gone for higher education, making 46 percent of all the respondents. At the same time, it was apparent that most teachers teaching in Kirinyaga County have teaching experience ranging from 5 to 10 years. In particular, 39 percent of the teachers have been teaching for more than five years. On the other hand, only 25 percent of the teachers in this region have less than five years of teaching experience, with 36 percent of them have taught for more than ten years. At the same time, the resultant data indicated that the majority of teachers (39%) are aged between 30 and 40 years, 32 percent of them being less than 35 years of age, while 29 percent of all the teachers are over 40 years. Figure1 below indicates the educational levels of teachers who participated in the study.

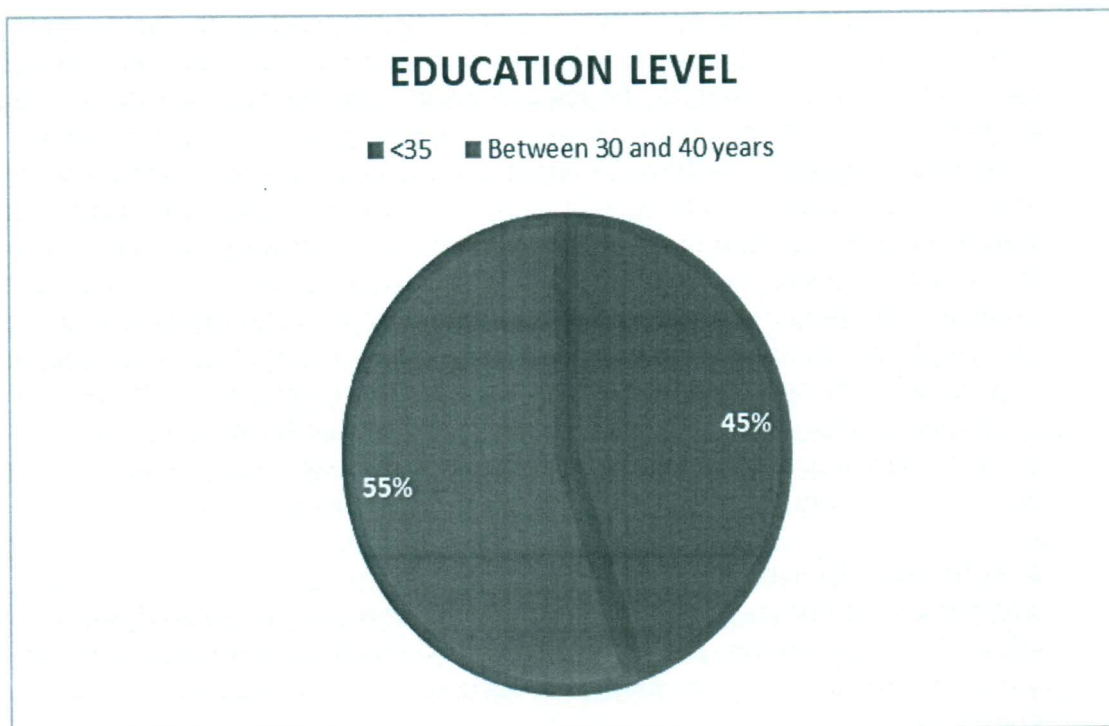


Figure 2: Age of Teachers

Source: (Research data)

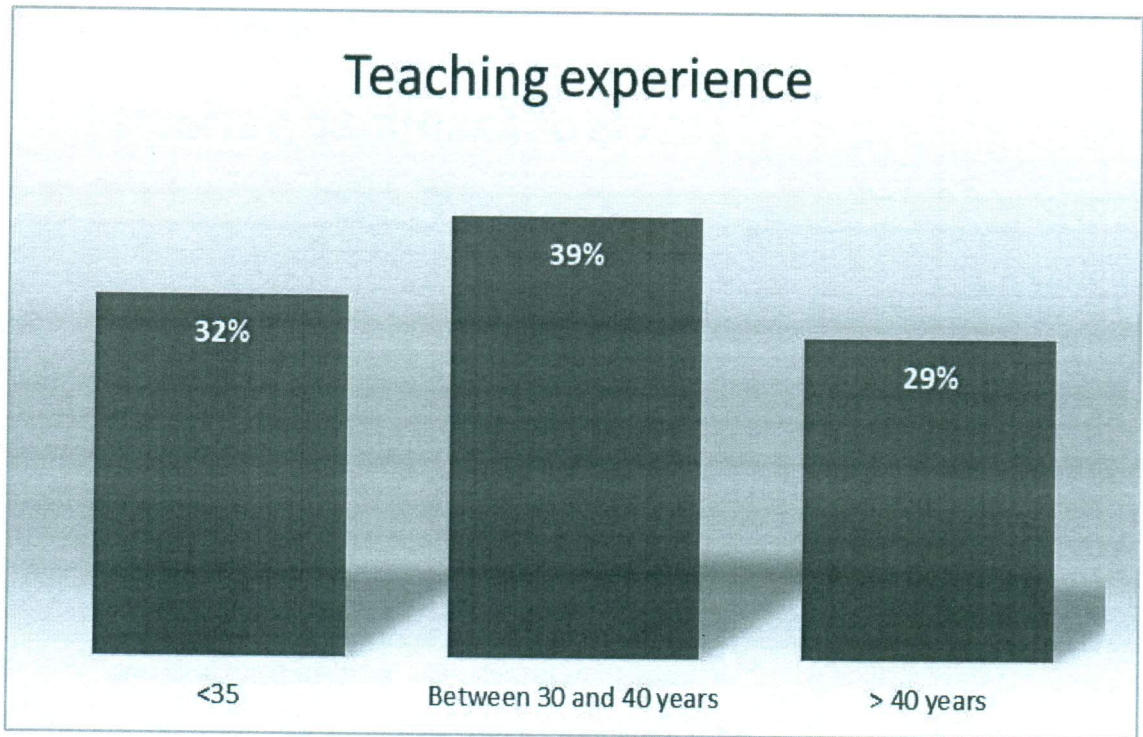


Figure 3: Teaching Experience

Source: (Research data)

Leadership Types

The questionnaire established that the scales' reliability was satisfactory because it was apparent that Cronbach's questionnaire had values ranging from 0.522 to about 0.856. In particular, in the cases of digital leadership, Cronbach's alpha was established to be 0.731. This factor allowed the researcher to consider that the five questions used in measuring this unique leadership style can be presented as a new variable and the average of all the five used questions.

Table 7: Evaluated Variables

Leadership types	Min	Ma	Mean	SD	Cronbach's Alpha
Digital leadership	3.2	5.0	4.18	0.5	0.73
Outcome leadership	3.5	4.6	4.02	0.2	0.52
Passive to avoid leadership	1.0	2.2	1.43	0.5	0.85
Transactional leadership	2.2	4.5	3.66	0.6	0.76
Transformational leadership	3.4	4.4	4.09	0.3	0.74

Source: (Research data)

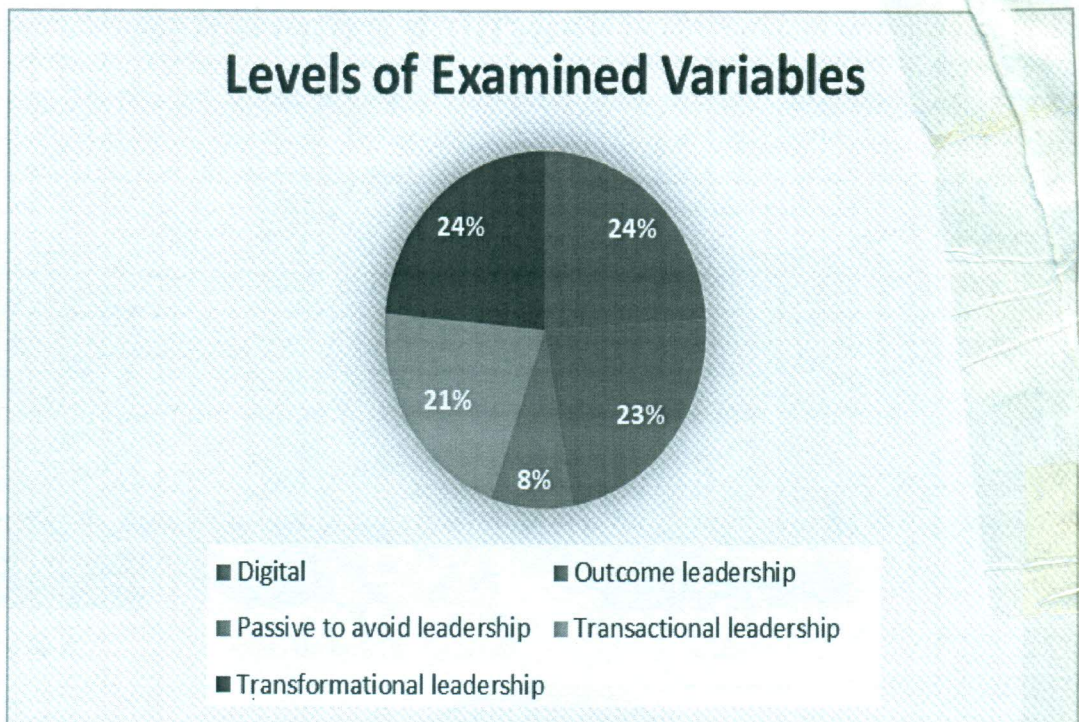


Figure4: Levels of Examined Variables

Source: (Research data)

According to the analysis, it became apparent that the respondents tended to exercise transformational leadership more than the other forms of leadership, with a mean of 4.09. The teachers tended to use transformational leadership more than they used transactional leadership, which was at 3.66. In contrast to the above observations, it was clear that the participant avoided using passive to avoid administration with a mean of 1.43. It was apparent that this type of leadership was significantly lower compared to transactional and transformational leadership.

Demographic Based Leadership Styles

To determine whether demographic factors have a statistically significant impact on the type of leadership, the researchers utilized the Mann-Whitney statistical tests to determine this relationship.

Table 8: Leadership Style per Age

Leadership style	Age	Mean	SD	Test
Digital leadership	<=40	3.85	0.53	Man-Whitney
	>40	4.40	0.40	
Outcome leadership	<=40	4.03	0.29	Man-Whitney
	>40	4.01	0.27	
Passive to avoid leadership	<=40	1.18	0.27	Man-Whitney
	>40	1.60	0.55	
Transactional leadership	<=40	3.72	0.88	Man-Whitney
	>40	3.61	0.51	
Transformational leadership	<=40	4.18	0.31	Man-Whitney
	>40	4.03	0.29	

Source: (Research data)

From these results, it is apparent that age has a statistically significant impact on digital leadership because these participants who are aged over 40 years apply it more compared to those aged below 40 years.

Concerning the level of experience as high school teachers, it was apparent that the respondents with over ten years' experience were statistically more transformational leaders, while those who had an understanding of fewer than ten years were statistically more passive leaders.

Table 9: Leadership Types per years of service

Leadership style	Years of Service	Mean	SD	Test
Digital leadership	<=20	3.99	0.53	Man-Whitney
	>20	4.04	0.40	
Outcome leadership	<=20	4.03	0.30	Man-Whitney
	>20	4.03	0.26	
Passive to avoid leadership	<=20	1.12	0.29	Man-Whitney
	>20	1.72	0.58	
Transactional leadership	<=20	3.91	0.87	Man-Whitney
	>20	3.61	0.52	
Transformational leadership	<=20	4.25	0.33	Man-Whitney
	>20	3.94	0.29	

Source: (Research data)

Required ICT Skills

At this point, the research protocol asked the participants to indicate the digital skills that they can take advantage of and would consider as being most important for leaders. The researcher was surprised that the respondents stated more than one choice.

Table 10: Digital Skills for a Leader

Digital characteristics	Digital Skills	Frequency	Percentage
	Mobile app		12
Web development and tools		10	7
Social media		25	18
Cloud computing		12	9
ERP Systems		15	11
Complex business system		10	7

Source: (Research data)

From the table, the widespread digital properties, including the mobile app, web development, and social media, are the ones that got the most responses. To determine whether the reported demographic traits had a statistically significant impact on the

existing digital properties, the exact test by Fisher was carried out to determine their usage.

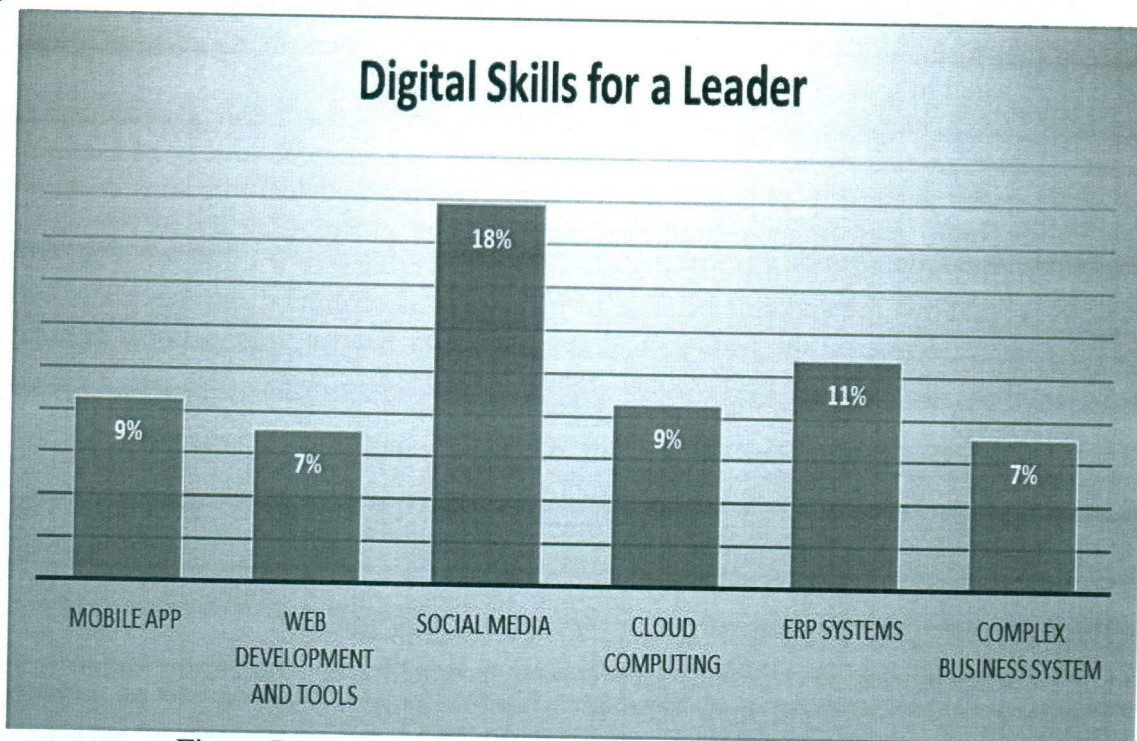


Figure 7: Teacher Use of Information Technology Skills

Source: (Research data)

Initially, the mobile application was given preference by people aged below 35 years and had been in service for more than ten years. On the other hand, social media was given priority by people who have been in service for more than ten years and were aged below 40 years, with other digital systems following the same pattern.

Conclusion and Recommendations

According to the effects of transformational teacher leadership practices on the pedagogy in high schools in Kirinyaga County during the Covid-19 Pandemic, teachers had idealistic influence traits (pedagogical approach) in their schools. The findings reveal a significant relationship between instructors' transformational leadership styles (pedagogy) and students' academic performance in high schools in Kirinyaga County. This suggests that using transformational tactics by secondary school teachers may be a practical pedagogical approach in high schools in Kirinyaga County. Therefore, according to this study, it is apparent that students love teachers who lead by example, mark examinations swiftly, finish the course on time, counsel them on which occupations to follow, challenge them to be the best they can be, and admit when they are wrong. The current study examined the transformational teacher leadership practices adopted by high school teachers in Kirinyaga County and their implication on students' academic performance. In that context, the research questions guiding the study allowed the researcher to collect data from teachers from selected schools. The study aimed to determine whether teachers had adopted transformational leadership practices and whether such approaches had any implications on pedagogy. The research established that transformational teacher

leadership practices students' academic performance in the wake of the global Pandemic. A negative correlation with passive-to avoid oversight implied that higher transformational leadership among high school teachers in Kirinyaga County in Kenya resulted in greater efficacy and satisfaction for the students.

Therefore, since ICT transformations have become crucial resources for all types of organizations irrespective of their sizes, this chapter argues that transformational teacher leadership practices approach to teaching and learning has sustainable student academic performance amid the effects of the global COVID-19 Pandemic. Notably, transformational leadership fosters innovation necessary to bridge the pedagogical gaps created by the Pandemic because of its ability to accommodate innovation. The effects of the Pandemic on the pedagogical approaches in Kenyan high schools are extraordinary. Thus, the resultant pedagogical issues warrant novel ideas that can only be generated through innovation. The teachers' description of transformational leadership demonstrated the four dimensions of transformational leadership: idealized influence, inspirational motivation, intellectual stimulation, and individual consideration. Teacher behaviors are highlighted as instrumental in implementing transformational leadership in the practices such as building trust, motivation, facilitation, and communication. The research reveals that transformational teachers impact student performance and other learning outcomes. By focusing on the degree of three specific types of leadership (leadership to be avoided, transactional leadership, and transformational leadership) by teachers in Kenyan high schools, it was established that transformational leadership presents greater satisfaction and efficiency for high school student's academic performance during the Covid-19 Pandemic.

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