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TABLE OF CONTENT

State Penetration, Legitimacy, and the Layered Security Experience in Post-independence Kenya

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Abstract

The present-day security challenges in Kenya trace their roots to its encounter with colonialism and the subsequent establishment of the nation-state framework. Since independence, northern and southern zones of the country have experienced dissimilar security dynamics, suggesting wavering levels of state penetration of the society. While the northern half is characterized by persistent banditry and cattle rustling, the southern half of the country registers periodic electoral violence fueled by ethnic militias. Explaining this dichotomous and layered security experience remains an academic challenge. This paper argues that the security challenges in Kenya are attributable to the discordant levels of state penetration and its subsequent legitimation. While the state suffers legitimacy crisis in the ungoverned spaces inhabited by pastoralists due to its incomplete penetration, it is the locus of elite and ethnic competition among the sedentary communities in the southern zone where penetration has been more thoroughgoing and successful.

Key words: Penetration, legitimacy, nation state, security, nomadic pastoralism

Introduction

Kenya is among the few countries in the Horn of Africa that has stood out as the region's beacon of peace and stability. Internally, however, the young nation-state has since independence experienced different forms of security threats which not only undermine its development potential but also threaten its stability.

The security experience in post-independence Kenya is marked by a divide between its two major geographical zones - the Northern and Southern halves. The arid north of Kenya accounts for 60%

of the total land mass of the country and includes the North Rift (northern portions of Kenya's Rift Valley) and North-Eastern regions. The counties that make up the North-include Samburu, West Pokot, Marakwet, Uasin Gishu, Turkana, Trans Nzoia, Baringo and Turkana while the North Eastern captures Marsabit, Mandera, Garissa, Isiolo, Wajir, and Moyale counties (Oxfarm GB, June 2003). The region is inhabited mainly by nomadic pastoralists spread the along the Uganda-Ethiopia-Somalia tri-national border zone.

The entire northern zone has retained its infamous identity as a hotspot of violence and instability due to persistent cattle rustling and widespread possession of illicit firearms by civilians both of which have adversely affected security in the zone. Further, resource-based conflicts over access to water and grazing areas, banditry, and rangeland clashes are common place in this zone.

The conflict dynamics in the northern zone can be attributed to the common characteristics faced by pastoralists. They dwell in harsh climatic terrain where resources are limited and dispersed, forcing them to spread themselves far and wide within and without their territories in order to access and utilize maximally the available resources. Although rudimentary consciousness may exist

about frontiers (defined by hills, rivers, valleys, forests, etc. that separate any two neighboring communities), the concept of fixed (both tribal and national) boundaries is alien among communities that inhabit this zone. Furthermore, such movements take place in spaces lacking in a centralized communal authority to regulate order.

While conflict among pastoralist groups has been a persistent cultural practice, studies indicate that gun culture has exacerbated the phenomenon. According to Small Arms Survey 2017 Report, about three-quarters of 750, 000 firearms in unofficial hands are in Kenya's northern half of the country (Small Arms Survey, 2017). These communities have been forced to acquire firearms to defend themselves, their livestock and their territory from encroachment by other livestock owning neighbors whose nomadic lifestyle can lead to depletion of water and pasture resources. Apart from being applied to those uses, bandits operating from pastoralists communities have in the recent past acquired sophisticated weapons which they use to engage in commercial cattle raids, highway robbery, and to counter government security operations aimed at bringing the zone under a modicum of civilian administration.

In sum, northern half of Kenya is a

tumultuous zone dominated by ungoverned spaces where communities still exist in their pre- nation state security form where might is right and the security management obligation is still the responsibility of individual communities. Consequently, traditional institutions and apparatuses have evolved- replete with own governance structures - to secure the communities from the ever-present danger of attack from neighbors.

The southern half accounts for about 40% of Kenyan territory. It is made up of the Coastal, Central, South Rift, Western and Lake Victoria basin (also called Nyanza) regions. Despite its diversity, this zone has experienced political violence exacerbated by electoral competition for power both at the national (presidential) as well as lower levels. The level of ethnic (and political) consciousness is comparatively high in this zone and more often than not, ethnicity is used to advance political interests especially at the national level. The determination by politicians to use violence to obtain power especially since the 1990s has made this zone politically volatile during electoral circles (Nyawalo, 2011). In particular, ethnic violence, displacement, destruction of property and general political tension caused by contested election results is a common trend in every electoral circle.

This region has also witnessed the mushrooming of organized criminal gangs and militia in both urban and rural areas (Anderson, 2002). Although these gangs are more active around election periods when they are hired to shore up support for the politicians and to intimidate opponents, some are used in land-related conflicts where they either protect private land or conduct illegal evictions against encroachers. While the ethnic character of these gangs and militia is a major security concern, none of them actively pursues insurgent or secessionist agenda except the defunct Mombasa Republican Council.

This zone has also recorded a steady rise in crime especially in its urban neighborhoods where robbery, motor vehicle theft, burglary as well as landlord-tenants conflicts have become commonplace, forcing urban residents to resort to acquisition of private security (Waragu, Kamernchu & Mwachofu, 2004). The rural sections of this zone are not peaceful either and have experienced land clashes over contested ethnic boundaries, cases of robbery, theft, burglary, and sexual violence.

Despite the manifest security challenges highlighted above, the general perception is that the southern half of Kenya - stretching from Mombasa through to Nairobi, Nakuru, Kericho, Eldoret, up to Kisumu—is relatively

stable. In addition to hosting about 70% of the country's population, key administrative, commercial, agricultural and industrial infrastructure of the country are domiciled in this zone.

While the Kenyan security divide between its two opposite geographical zones is an uncontested reality, attempts by academicians to explain this phenomenon from a theoretical perspective has been a challenge. Many scholarly works in this field attempt to explain the security divide on the account of historical 'neglect', 'marginalization' and 'biased development policies' during the colonial and post-colonial epochs. Though informative, the literature seldom delves deep into the organic processes and outcomes that have attended these zones' interface with the modern state so as to realize the present-day reality. A number of questions therefore remain unanswered and include: what did colonialism do to communities in the southern regions of Kenya which it failed to do in the northern zone? Secondly, why, and how have these trends been propagated by the post-colonial state? And lastly, what are the resultant consequences to security?

This paper sets out to fill the gap by interrogating the extant security divide from the standpoint of two closely related processes - state penetration and legitimation – and their organic interaction to yield the present –day security situation in Kenya.

Map of Kenya

Theoretical Perspectives

The evolution of the modern state traces to the West and to the Peace Treaty of

Westphalia (1648) in particular. Although states existed in some form before then, it is generally acknowledged that is after the signing of the Treaty that the nation-state emerged as a primary actor in the

international system. Indeed, pre-Westphalian period is depicted as one enshrouded in chaos and disorder. As Anderson (1998) reminds us, *"Europe was hitherto divided in numerous small political and large empires with fairly porous undefined boundaries."* Further, the central government's control over the frontier officials and rulers was weak and revolts and violence were commonplace since rulers had little power outside the city. Even if his rights were uncontested, the ruler relied on the goodwill of personal magnates to maintain power.

Europe before the Peace Treaty of Westphalia was, therefore, a political system in which no central leader had monopoly over the use of violence. The Kings had to rely on the support of the local nobles in order to engage in warfare and the latter retained their own armed forces which they used to defend their property and the people who lived under their care. Thus, the use of violence, administrative authority, and internal control over domestic violence in pre-modern Europe was decentralized and dispersed (Thomson, 1994). It is the 1648 Westphalian settlement that inaugurated the formation of new political units with distinctively essential characteristics from the predecessor. The Treaty of Westphalia stipulated that a ruler of a state had overarching power over all elements within the state, including religion.

The Post-Westphalia period witnessed the consolidation of the nation state's hold on society through centralization. Central power of the nascent European nation-states would now fall under a central authority which made laws and ensured that practices were uniform across the entire country. A single centralized authority emerged to replace disjointed local authorities previously dominated by the feudal barons and the nation-state gained ascendancy over the feudal state thereby becoming stronger militarily than pre-existing political units. Consequently, national armies emerged independent of the nobility and the newly emergent nation-states overpowered the older political units and either subsumed or replaced them.

Today, a nation-state is acclaimed an independent political entity enjoying sovereignty within a demarcated territorial sphere, controlling military power, and many of whose citizens have positive feelings of national identity. Unlike its predecessor, the modern-nation state has a well-defined territory over which it exercises monopoly over legitimate violence. Further, it is presumed that the modern state enjoys full control of the domestic sphere (Hassan, 2006). The word 'monopoly'

can be broken down to imply that no other entity can resort to violence legitimately other than the state. Further, the power to make law and policy are centrally located so that all sub-national groups are subservient to the state irrespective of their geographic location. Colonialism led to the emergence of the nation-state formulation outside Western Europe. Through this historical process, the newly independent states inherited colonial borders, subjects (citizens) and rudimentary governmental authority, which justified their claim to sovereignty. Thus, the post-colonial state enjoys the *acquired* attributes of the western nation-state even though they may be at different levels of accomplishment. Although it is still evolving, the nation state formulation is already a dominant form of political organization. Endowed with sovereignty and territoriality, the state has for the last few hundred years been the foundation to domestic and global political order: they provide necessary conditions for existence especially the regulation of social aspects of life which are still distinctively territorially centered (Mann, 1997). Further, the nation-state framework is also recognized globally as the essence of modern-statehood as evidenced by the fact that the contemporary international system has some 194 nation-states.

The modern-state engages in a number of activities and policy programs in order to increase their capacity to create order within the domestic sphere. However, the degree of state *penetration* of society and its ability to address practical conditions that threaten human security attest to its capability. Penetration is "an ensemble of processes by which the political-administrative-juridical center of a new state establishes an effective and authoritative central presence throughout its geographical and sectoral peripheries" (Coleman & Doornbors, 2010). Though widely associated with initial stages of state formation, state penetration is continuous process which today assumes a number of multifaceted strategies including development projects, grassroots mobilization of communities; extension of legal and institutional frameworks at the local levels, bureaucratization; incorporation, co-optation, etc.

Scholars tend to agree that effective state penetration creates conditions conducive to legitimization and legitimacy is prerequisite to internal stability. Bruce Gilley has, for instance, observed that states that are weak on this score *"devote more resources to maintaining their rule and less to effective governance, which reduces citizens support and makes them vulnerable to overthrow or collapse"* (Gilley, 2006).

Methodological Approach

This article was inspired by the authors' interest to analyze the relationship between the level of state penetration of society and security outcomes within states. The study was conducted between June 2022 (just before Kenya's August 2022 elections) and April 2023. It relied on both primary and secondary data in respect of different security threats in Kenya's southern and northern zones and the perception of respective communities. The study also relied on archival material to obtain critical information about the history of the foundation Kenya as a nation state and in particular, its extension from the coast into the interior. Archival data was essential for the purpose of establishing how the colonial administrative infrastructure was set up in different parts of the country and for capturing the experience of the colonial agents at the initial stages of state formation especially their troubled efforts to subdue different communities with which they came into direct.

Oral interviews were held with key informants who include senior government officials, church leaders and representatives of non-government organizations. The main information sought from government security officials was security policies and activities related to the establishment civil order and control. For this purpose, the study targeted different institutions and departments within the Ministry of Interior and Coordination of Government Programmes such as the police, area chiefs as well as County and Sub-County Commissioners. On the other hand, community-based security management institutions such as kraal leaders, village elders, diviners, youth organizations as well as militia leaders were targeted for information about their perception of the role of the modern state in either advancing or curtailing their security interests. Ordinary households were also interviewed. The main information sought from this category of respondents was their perception of security, self-fulfillment and more importantly, whether they regarded the state as partner or obstacles in their quest to realize their security needs.

Focus group discussions (FGDs) were also used to solicit data. Each FGD comprised between 10 and 13 people who represented different groups of respondents. They included church leaders, NGOs officials, youth, elders, women, kraal leaders, selected government security personnel and informal local organizations such as Kenya Police Reservists and militia establishments. This method helped to verify information obtained from different

sources and to clarify issues raised during interviews. Further, it helped the researchers to obtain additional information about the fluid security dynamics in the two distinct geographical zones under study.

Participant observation was used in an endeavor to assess the security experiences that might have escaped respondents' expressions during oral interviews. Through this method, the researchers were able to see, feel and appreciate extent of state presence in the community and evaluate how this yielded different security challenges confounding the nomadic pastoralist in the north and their settled agrarian counterparts in the south.

Owing to financial, time and security concerns, it was not possible to visit all parts of the country which makes up the northern and southern halves. Consequently, the study was confined to the north rift region (Turkana, West Pokot, Samburu, Baringo, and Isiolo) and urban and peri-urban areas in the southern Kenya including the coast, Nairobi, South Rift, and western Kenya. A total of 325 respondents were interviewed during the study.

Secondary data was used to complement primary data. The researchers conducted extensive literature review on theories of the nation-state, how the nation state

emerged and organically evolved in Europe, the establishment of nation-state project in Kenya and the wider African content, and finally, post-colonial state penetration of society and the challenges of state-society relations in post-independence Africa.

Tracing the Colonial Roots of Kenya's North-South Security Divide

The British had no desire to acquire territories in East Africa until the turn of the 20th century. Much of the activities in the region during the 19th century is attributed to private and non-governmental associations. In 1888, the Imperial British East African Company (IBEACO) secured a charter from the Crown to develop the British Sphere of Influence between Mombasa and Lake Victoria (southern zone) as spelt in the Anglo-German Agreement of 1886 (East African Protectorate, 1931). It is this company that laid the foundation for the colonization of Kenya. During its half decade tenure, it had established administrative and trading centres along the routes of the caravan trade stretching from Mombasa through Voi, Machakos, Kikuyu down to Ravine and Mumias of present-day western Kenya. The Company also established nucleus administrative departments at the headquarters in Mombasa to offer

customs, transport, telegraph services. A system of field administration based on districts was thereafter established along trade routes. However, the Company proved unequal to the task of keeping order in the territory thus it collapsed and was taken over by the British Administration in 1895.

The British inherited the IBEAC administrative apparatus based at the coast including personnel, functional departments, and field administration. Between 1895 and 1905, the main preoccupation of the administration was to maintain peace and order in the protectorate by preventing inter-tribal raiding and facilitating transport to Uganda along the 1000km footpath (present-day Mombasa-Nairobi-Kisumu Road) left behind by IBEACO. To achieve this ambitious goal, the protectorate government engaged in a number of punitive expeditions as a means of pacifying and exerting control over the natives in the newly acquired territory. First, the British crushed a rebellion by the Mazrui Arabs at the coast in 1895, thereby laying a firm base for penetration into the interior. However, they chose to ignore the irritation caused by Ogaden Somalis who roamed through the hinterland north of Mombasa in order to consolidate their administrative control upcountry (Mungeam, 1966). A series of punitive expeditions were mounted in 1905 against the Kamba, Kipsigis, Kisii and the Nandi tribes. Other communities such as the Luo drew appropriate conclusions from the fate of others and made peace to avoid the risk of war (Berman, Lonsdale & Berman, 1979).

Besides pacification, the sustenance of colonial administration depended upon the establishment of law and order over the native communities. This was achieved through policing and the establishment of rudimentary administrative structures among the native communities. The Provincial Administration was established and legislation conferred upon it exceptionally high degree of control over the African rural population in the reserves and their movement outside to find work. The registration system called *Kipande* was designed to ensure steady supply of labour to the colonial enterprise. All male African adults were brought under strict administrative control and deserters could be traced back to reserves and subjected to arrest.

The colonial state also established a judicial system that comprised the High Court, the Magistrates' Courts and the African Native Courts. The High Courts were staffed by judges who were members of the Colonial Legal Service and who possessed the normal

qualifications of their profession. The Magistrates' Court, were for the most part presided over by officials who were at the same time administrative officers. The native courts administered the native law and custom of the area of the courts' jurisdiction (Manoru, 1973). Later, the colonial administration created Local Native Councils especially in the advanced and politically sensitive districts to counteract any mischievous activities which might develop into native political societies. The objective of the Councils was to provide local forums in which Africans could harmlessly let off steam and gain tutelary experience in responsible conduct of their own affairs.

Although the formal establishment of a police service in the territory was initiated in the 1896, it took ten years to complete the exercise under the Police Ordinance of 1906. The initial duties of the nascent police unit between 1887 and 1902 were to secure IBEAC stores along the coast. Subsequently, police presence was extended inland after the completion of the Kenya-Uganda Railway and the emergent need to secure railway property and installations. Police presence intensified with the arrival of European settler farmers, mostly between 1914 and 1920, who required protection (Berman, 1990).

The IBEAC had established a nascent army composed of troops mostly of Indian origin with a few African staff. It is from these early troops that the colonial officials developed an army called King's African Riffle (KAR) which it used to impose their rule on the local population. The primary mission of KAR was to force Africans to submit to colonial authority. Between 1902 and 1914, the KAR was deployed to carry out "punitive" expeditions and pacification campaigns against the local communities including the Turkana, Kisii, Embu, and Kikuyu. The colonial administration also used the army to enforce tax compliance among the natives (Parsons, 1999).

By 1929, the Kenya Colony and Protectorate had been divided into ten provinces each under a Provincial Commissioner and several districts, divisions, locations, sub-locations, and villages, each headed by a District Commissioner, District Officer, Chief, Sub-Chief, and Village Headman respectively. Known as the *Provincial Administration* the primary objective of this hierarchy of the field administration was to establish political control over the natives and to facilitate the local containment of African political activity. In particular, the Provincial Administration set out to enforce colonial laws and policies, including collection of revenue, pacification of the natives,

arbitration of disputes, and prevention or suppression of revolt against colonial authority.

Since the British colonial state had a relatively small number of European administrative officials, the administration was compelled to incorporate African officials to be able to penetrate deeper and govern the local communities effectively under the policy of indirect rule. The Village Headmen Ordinance of 1902 made the headman responsible for the maintenance of law and order within a village or a group of villages by determining petty cases involving natives (Mbluba & Mugambi, 2011). The Chief was the prime agency for the disposal of colonial government business. The primary duty of the Chief or Assistant Chief was to maintain order in in their areas of jurisdiction, including issuance of directives to restrict carrying of arms and any other conduct that could provoke a riot, disturbance, or breach of the peace. A special police unit attached to the Provincial Administration, namely Tribal Police was also established. This unit was composed of local (African) men trained to preserve public order by pursuing criminals and bringing offenders to justice. The colonial government recognized use of existing dispute resolution mechanisms consisting of local traditional authorities – Chiefs, sub-

chiefs, elders, diviners - insofar as they applied customary law in deciding disputes relating to their subjects.

Having subdued the subordinate local societies in the administered zone making up the present-day southern half of Kenya, the colonial state now converted its superior force into legitimate authority based on tacit consent from subject population. This was achieved by encouraging the native communities to invest in peasant agriculture as a source of tax revenue and a material basis of their acquiescence to British domination (Kitching, 1982). The colonial administration emphasized cash crops farming among the natives and the enactment of policies that would ensure constant supply of labor. Between 19430-1940, all the districts of central Kenya, Embu, Meru, Central Nyanza, Kericho, Machakos, Kipsigis, Nandi and Taita come under intensive commercial agriculture and a plan was rolled out to extend credit, research, and extension services into these areas.

While the above-mentioned colonial policies, activities, and programs were enforced in the southern agriculturally productive regions of Kenya, very little was done to replicate them in the north. Indeed, the boundary of the protectorate lay in its southern parts for some time. This move was in sync with the position

adopted by the Foreign Office which was firmly against expansion. It had been decided that the protectorate should concentrate security within areas already under administration to prevent rebellion. Although pressure mounted in 1908 to extend administration northwards, this zone formed "no man's land" inhabited by the nomadic tribes and frequently traversed by Somali caravans and European adventurers. While the Somalis constantly pressed south and southwest from their traditional grazing grounds, the administration chose to leave them to their devices provided they did not attack other tribes within the administered districts. The administration stressed the extreme isolation of the area and dwelt on its poverty of communication. What is more, the administration saw the north as a side issue, a problem which arose from time to time to divert them from what they thought were their major task, the relations of the protectorate with southern societies. The administration recognized the necessity of protecting the borders of quasi-civilized areas in the southern zone lest they contract due to southward movement by the pastoralists (Berbar, 1956).

Between1910 and 1911 the protectorate government entered the north-east primarily to contain Abyssinian intrusion. This was triggered by the realization of the danger that Ethiopian raiding could easily spread to the richer, administered districts. In other words, the north had to be controlled not because it afforded a source of revenue or offered any prospects for development but because lawless traders had to be driven out and Ethiopian threat be countered. Later in 1918 the British launched an expedition called the Lapur patrol to pacify and subdue the Turkana warriors who were notorious for raiding their neighbors. A military station was thereafter opened in Kakuma and Lodwar (Turkana) in 1919, followed by a rudimentary civil administration based at Todenyang in 1929 (Kenya Human Rights Commission, 2000). However, the British for the most part ignored the pastoralist tribes because they were not powerful enough to pose a threat to colonial interest or to be useful allies in extending British authority.

Different levels of state penetration initiated by the colonial administration as described above were maintained and continued by Kenyan independence regimes. Consequently, the organic process that accompanies the formation of a modern nation state was more deeply entrenched in the southern half of Kenya and less so in the north. The next section will now show how varying level of state penetration have yield disaggregated

security outcomes in the Kenya's post-colonial history.

State legitimacy and rivalry over state-power in the Kenyan Southern Zone

The southern half of Kenya inherited its relative stability from the colonial government and successive regimes have since independence employed firm, paternalistic rule to establish a substantial degree of order in the zone. However, this zone has entertained intensive political activity accompanied by intermittent violence. The main security challenge in this zone revolves around presidential elections and ethnicity which is the main ideology that fans the militant struggle to capture this highly coveted office.

Between 1966 and 1969, the ruling party led by Jomo Kenyatta (Kikuyu) employed oppressive machinery to stifle the opposition. In particular, Kenyatta imposed difficulties on the only active opposition party by then – Kenya People's Union (KPU) - led by Oginga Odinga (a Luo ethnic) – to operate. The Kikuyu-Luo ethnic hostility began to foment at this time so that when Tom Mboya (another Luo politician) was assassinated in July 1969, rowdy Luo youths thronged Nairobi and Kisumu streets chanting anti-government slogans. Later, in October, 1969 unruly youths attempted to overturn President Kenyatta's car during his visit to Kisumu leading to a ruthless response by the state security. Several people were killed during the incident and KPU was banned and its leader (Oginga Odinga) placed under house arrest.

The reintroduction of multi-party politics in 1991 made presidential elections competition more abrasive with ethnicity being a salient factor in skewing the results and elections outcome (Kwatemba, 2008). The 1992 elections were accompanied by ethnic clashes. During this period, Daniel Moi's regime sponsored *Kalenjin warriors* (an ethnic militia outfit based in Rift-Valley) to cause displacement of non-ethnic Kalenjins -especially the Luo and the Luhyia - from the Rift Valley province because they were believed to be sympathetic to the opposition. According to the Human Rights Watch, some 1,500 people died and 300,000 were displaced as a result of state instigated ethnic clashes (Human Rights Watch, 1994).

Tribal clashes recurred during the 1997 general elections in coastal areas of Kenya pitting the local community against non-locals (*watu wa bara*). The attackers targeted Luo, Kikuyu, and Kamba who were believed to be supporting the opposition. The attackers were well-armed, highly trained soldiers

suspected to be active-duty members of the armed forces deployed by the KANU government. More than a hundred people killed in the 1997 ethnic clashes and some 100,000 people were displaced.

The 2002 election was the only exercise in Kenya's multiparty history when the country did not experience political violence attributed to contested presidential elections result. This was partly so because the opposition presidential candidate conceded defeat thus ushering in a peaceful transfer of power from the incumbent president - Daniel Moi (KANU)- to Mwai Kibaki of the National Rainbow Coalition (NARC). However, Mwai Kibaki contested win in the subsequent presidential polls held in December 2007 was met with spontaneous mass protest in parts of the country where his opposition opponent - Mr. Raila Odinga - enjoys fanatic following. In response, the police responded with excessive violence and more than one thousand people lost their lives.   Massive displacement and civilian-to- civilian violence pitting the Luo and Kalenjin against the Kikuyu was recorded in the western parts of Kenya, Rift Valley and urban areas of Nairobi, Kisumu, Naivasha, Nakuru and Eldoret (Murunga, 2011). However, negotiated power sharing agreement between Odinga and Kibaki saved the country

from imminent collapse and the lessons learnt from 2007 post poll violence led to the drafting of an all-inclusive people-driven constitution which has helped to keep the nation stable.

Notwithstanding its new constitutional foundation, the problem of election fraud in Kenya in respect of presidential polls and the attendant political/ethnic tensions has persisted. In 2013, the opposition presidential front runner – Mr. Raila Odinga – once again disputed the presidential poll results which declared Mr. Uhuru Kenyatta the winner. However, the Supreme Court upheld Mr. Kenyatta's win.   An uneasy stand-off between the government and the opposition prevailed up to the 2017 general elections when the Supreme Court nullified the presidential election results on grounds of massive electoral fraud and ordered fresh polls. Mr. Odinga- the leading opposition contender - boycotted the elections on the grounds that his party's demands for a complete overhaul of the IEBC had not been met. In the presidential repeat polls held a few months after the Supreme Court verdict, half of the country where Mr. Odinga and his ODM party was popular prevented the IEBC from organizing elections, thus allowing Mr. Uhuru Kenyatta an easy victory is his bid for the second term presidency. Tension gripped the country

for months after the Supreme Court confirmed Mr. Kenyatta's victory but it soon eased when Mr. Odinga publicly announced that he would work with Mr. Kenyatta's administration under what has been dubbed 'Handshake'.

The recently concluded August 2022 presidential polls were not any different. The IEBC declared Mr. William Ruto (Kenya Kwanza party) the winner against allegations by his opposition opponent - Mr. Odinga- of massive election irregularities. Whereas the Supreme Court upheld Mr. William Ruto's win in a petition filed by Mr. Odinga, the latter maintains that he won the August 2022 elections and his party (AZIMIO) has since March 2023 mobilized its supporters to take apart in peaceful protests to pressurize the government to address a series of its political demands including opening the "server" (an electronic device which stores elections data) so as to reveal the true winner of the presidential polls. Demonstrations held by AZIMIO followers between March and April 2023 has mainly affected selected towns in the southern half of Kenya particularly Mombasa, Nairobi, and western Kenya (Kisumu, Kakamega, Homa-Bay, Migori, and Siaya). Apart from fatalities, looting, destruction of property and disruption of business, these demonstrations have generated political

tension between the supporters of the Kenya Kwanza regime and the opposition.

A common thread in the four presidential elections since 1992 (except 2002) is the deployment of militias by the ruling regime and the opposition to intimidate and displace perceived political opponents (organized in ethnic units) in areas they claim to dominate. While there were about 46 such organized criminal gangs operating in the southern half of the country between 2010 and 2014, it is feared that the number has increased two-fold over the last one decade with *Mungiki, Kamjesh*, *Bagdad Boys*, *42 Brothers, Amachuma, Chinkororo* and *China Squad* being the most notorious (Sana & Okombo 2010)**.** Majority of these gangs are based in Kenyan urban centers (Nairobi, Kisumu, Mombasa, Nakuru, Eldoret, Kakamega and Kisii) and all of them exhibit ethnic affiliations of some sort and strong attachment to either a political party or a prominent politician who funds their operations. Kenyan gangs have turned political violence into a rewarding industry. In addition to influencing presidential elections, lower cadre political contenders hire them during party primaries for protection and to intimidate opponents in their bid to secure the highly competitive nominations.

The negative influence of organized gangs makes Kenyan elections periods both turbulent and chaotic. They organize killings against actual and perceived opponents as political actors fight supremacy battles. Further, the militia cause tension and displacement especially in ethnically cosmopolitan slums and farmlands as people flee ethnic violence before the announcement of presidential poll results which are more often than not disputed. These gangs have also contributed to the rise in crime. A study conducted by the KNCHR reveals that these gangs engage in all manner of crimes including extortion, illegal levies, hire for revenge, murder, expulsion of offenders, illegal detention, burglary, drug trafficking, theft, trafficking of weapons, burglary, murder, illegal connection of water and electricity, and fighting land disputes (Kenya National Commission on Human Right, 2014). The insecurity menace posed by these gangs caused the government to outlaw them in 2007. Despite the ban, a significant number are still active.

A critical point to note is that despite the turbulent nature of electoral competition in the southern zone, neither the politicians nor the myriad illicit militia outfits they fund nurse an insurgency agenda or seek to challenge the legitimacy of the state and its authority.

Instead, they both embrace the state and are actively engaged in the struggle to gain access to political power. Even where they are involved in criminal behaviour, these militia either work with or take advantage of lapses in state security surveillance to pursue their illicit activities for survival especially during non-elections periods. For politicians, their primary objective is to capture the state or seize power through legitimate means and to use it to champion their interests.

From the foregoing, it is evident that political elites in southern zone do not aspire to violently challenge the legitimacy of the state due to the aggregate effect of successful state penetration in this portion of the country which has gradually transformed it from traditional security enclave into a modern agricultural security zone where citizens' aspirations center around money economy, property rights, political stability, predictable environment for investment, access to opportunities in government, etc. The state is a key agent in the fulfilment/attainment of these new security goals hence it is an entity to be embraced, fought over and jealously safeguarded by the incumbent regime as evident by its recurrent electoral conflicts. Unlike in the northern zone, communities in southern Kenya need

17

more government, as well as the administrative and security infrastructure hence the clamour the presidency, police stations, new administrative units, etc.

Legitimacy crisis and parallel security regime in the northern half of Kenya

The security situation prevailing in the northern half of the Kenya is a stark contrast to the reality in the south. The semi-arid climatic conditions in the zone have compelled the resident communities which include the Turkana, Samburu, Pokot, Tugen, Marakwet and Illchamus to practice a predominantly nomadic pastoralism. Threats, defense, and offense still revolve around livestock hence security is primarily conceptualized in terms of safety of family herd as well as the wider community from potential raiders who dwell in the neighborhoods.

Owing to lack of state policing in this vast arid and semi-arid zone, each community maintains its own peculiar patterns of political organization to ward off insecurity threats. In each community power, is still exercised by elders who derive their authority not only from their age but also their capacity and duty to organize people into age categories to carry a chain of responsibilities aimed at protecting the community and its livestock. The elders work in close consultation with the diviners who enjoy

a rare spiritual power to foretell misfortunes and impending calamities that may pose a danger to the community and its livestock.

Youths also play a critical role in the political organization of the pastoral communities. They get initiated into adulthood through an elaborate rite of passage which symbolizes submission, sacrifice, and service to the community. It is through initiation process that boys become warriors whose primary obligation is to protect the community and its livestock. It is the prerogative of elders assign political functions to the younger generation by allocating the responsibility of grazing, defending the community and its livestock including and grazing zones. A rigorous socialization process that begins in childhood helps to prepare the youth for their challenging future role in the community Parents and adults in the community inculcate in the minds of the growing male the virtues of proving courageous under difficult circumstances. Therefore, the youth grow into adulthood conscious about highly cherished community values of heroism, endurance, *manliness*, and herding skills. Since the duty of a youth is to protect the community, those who abscond from this responsibility in pursuit of education or other economic opportunities in urban

areas are ridiculed and looked down upon by their peers.

Proliferation of firearms in the pastoral regions of northern Kenya has compelled nearly every household to acquire guns as a new weapon for both defense and offense. The spread and entrenchment of the gun-culture has, in turn, led to new shifts in the perception of security whereby a clan or community perceives itself as insecure if it is poorly armed with firearms and is unable to thwart attacks on its members and livestock. This feeling of insecurity has extended to household and individual levels where every male adult feels unsafe without a firearm and sufficient ammunition. The obsession with the gun has inspired ethnic groups in the zone to organize attacks against each other primarily to obtain guns and ammunition alongside livestock.

Although the Kenya Government criminalizes possession of unlicensed firearms, communities in this zone possess and openly display their illegally acquired guns. National government security personnel who have in the past attempted to disarm them are treated as a threat to be physically fought and subdued. Consequently, army barracks, police stations and individual law enforcement officers (particularly the police) have been targeted, attacked, and dispossessed of their guns and ammunition. Generally, the warriors undermine and openly challenge the police and the army.

In summary, lack of effective penetration of the local pastoralist areas in the northern portion of Kenya during the colonial and post-independence periods has left them in more or less pre-nation state forms. Each community or clan still functions as an independent government replete with its own security management institutions and structure. The result has been a chaotic and lawless situation in the zone marked by violence, inter-communal raids, illegal cross border movements and banditry as demonstrated by selected recent incidents described below.

The North-Eastern counties of Mandera, Wajir, Garissa, Isiolo which are predominantly inhabited by Somali community have persistently faced the problem of intermittent clan-based clashes. Clan supremacy battles abound over rivalry among clans to dominate the political arena at the expense of others and the need to control power, decision making and resources. These inter-clan conflicts are fuelled by politicians, clan elders, arms dealers and clan militias.

However, majority of the conflicts and security challenges in the northern zone is located in the North Rift sub-region and Kerio Valley in particular. The Pokot,

Turkana, Marakwet, Tugen, Illchamus, and Samburu communities who inhabit this region are historically entangled in protracted armed and cattle-raiding conflicts. The magnitude of lawlessness prevailing in this sub-region has been captured by the Kenyan Cabinet Secretary for Interior and Coordination of National Programs who has noted that "thousands of guns and ammunition change hands across the region daily, with more than 100 civilians and 16 police officers killed between September 2022 and February 2023" (Citizen Digital, February 13, 2023). Apart from cattle rustling, these communities encroach into farmlands and conservancies along the north-south border; engage in banditry along the major highways; and organize attacks targeting state security personnel.

Recent incidents of Turkana-Pokot counter-raids and revenge operations have generated hostility making their border areas extremely volatile. Since the road to Turkana (Lodwar- Kitale highway) traverses through Pokot territory, a number of incidents have been reported where Pokot militia target and launch attacks on public vehicles suspected to be carrying Turkana commuters. On Thursday, 9th February 2023, some three people were killed and one critically injured in attack at Kakong

area in Turkana south where suspected Pokot bandits ambushed a Lodwar-bound Public Service Vehicle, and sprayed it with bullets. The attackers also burnt two police vehicles. On 10 February 2023, (a day later), suspected Pokot militiamen numbering about 300 ambushed and killed at least six Turkana men and four police officers on patrol along the Kitale-Lodwar highway at Kaakong area (Turkana County).

Cattle raids between the Turkana and Samburu have also exacerbated insecurity in Kerio Valley. On October 10, 2012 Turkana raiders from Lomerok village of Turkana South constituency raided the Samburu of Nachola location and successfully drove away 501 heads of cattle from one family. Security personnel from Baragoi district headquarters tracked the stolen animals, and they managed to catch up with the alleged raiders after a brief chase. But following a fierce exchange of gunfire the police were overpowered by the raiders and forced retreat. An operation named '*Rudisha Ngombe'* (Return the Livestock) targeting the Turkana was subsequently launched on 29 October 2012 now involving hundreds of Kenya Police Reservists from Samburu community (mainly the warriors/morans) and reinforcement of 132 paramilitary personnel. On their last day of preparations for the operation, the

force was ambushed by Turkana morans and about 105 people were killed, among them 42 police officers. Several people were injured in the incident and some 29 firearms were seized by the Turkana warriors.

In May 2022, 50 schools - among them 37 primary and 13 secondary – had been shut down in Kerio Valley due to banditry (The Nation May 31, 2022). The affected areas include Pokot East, Samburu West, Marakwet East, Baringo South, and Baringo North. Teachers in the region stayed away from work as bandits increase their attacks on school-aged children and teachers thus making the entire region dangerous for learning. In one incident, the attackers shot and fatally injured an innocent standard four pupil who was in class.

The pastoralists are a menace to the farmers in counties along the north-southern border areas of Rift Valley especially in Laikipia County. In September 2021, clashes between the Pokot, Samburu, and Turkana pastoralists and farmers in Laikipia led to the killing of 35 people and three police officers. These recurrent clashes are caused by unregulated movement by herders onto private ranches, conservancies and cultivated land which are replete with water and forage during dry seasons. The Pastoralists claims that

these farmlands were their traditional grazing areas before the advent of British colonial rule which pushed them northwards (Crisis Group, 2022).

Recent incidents of lawlessness and attacks by bandits targeting state security personnel have inspired renewed attempts by the Kenya government to establish a modicums of order and civility in the zone. On 13 February, 2023, the government launched a security operation aimed at disarming the cattle rustlers and bringing the entire northern zone under a modicum or law and order. First, the government declared a three-day amnesty period to allow the communities targeted for the operation - to surrender illegal firearms in their possession. However, only five were surrendered to the police by the expiry of amnesty period**.** The government has consequently deployed a multi-agency force composed of the police, paramilitary, KPRs, and a newly established anti-banditry unit whose aim is to locate and flush out the militias from their hideouts.

While it is now over two-months since the operation was launched, very little success has been realized. Cattle rustling has persisted and even intensified, the presence of the multi-agency force notwithstanding. Also, more instances of banditry, attacks on schools and teachers,

21

killing of innocent people, and loss of livestock through cattle rustling has been reported with very few recoveries or arrest of perpetrators. In a dramatic incident on April 10, 2023, 10 suspected bandits from Elgeyo Marakwet County armed with AK 47 attacked Iten County Referral hospital and freed one of their colleagues who had been hospitalized under police watch after an arrest (The Star April 10, 2023).

During his appearance in Senate for question-and-answer session on April 16, 2023, the Cabinet Secretary for Interior and Coordination of National Programs said that government security personnel have made little success in recovering stolen livestock because the bandits are spread out all over the vast Kerio Valley. He also admitted that two chiefs have been killed by bandits since the operation began, but the government is planning to train and supply them with firearms so that they can protect themselves against raiders. The Cabinet Sectary further noted that the (economic future) of Kenya lies in the North and the use of force is merely an immediate short-term measure. Once it stops, the government will embark on a more holistic socio-economic re-construction of the North through a Marshall Plan to be announced later.

The ongoing security operation in the North Rift has been launched against the backdrop of widespread skepticism by politicians and security analysts as to whether it may achieve long lasting positive results. Past disarmament exercises conducted in 2016 in Turkana and Pokot counties failed because the communities are still responsible for their own security in light of the evident lack of policing. Further, porous Kenya-Uganda border facilitates unregulated movement of Turkana and Pokot warriors and criminals being pursued by the military to Uganda until the situation normalizes. Other analysts have argued that the involvement of Police Reservists and elders in security operation and management compromises its success since these traditional security institutions are non-professional.

In summary, the northern half of Kenya remains a tumultuous, lawless and conflict-prone part of Kenya notwithstanding the ongoing government-led security operation launched in February 2023. As the study demonstrates, its insecurity dynamics are attributable to perceptions about its poor economic unviability which consequently inspired weak state penetration under both the colonial and post-colonial regimes.

Conclusions

The foregoing analysis shows that colonialism established ethno-regional dichotomy between the resource rich regions of the colonial state in the southern zone that attracted the need for more effective penetration through the entrenchment of Western institutions and systems of government, and the arid and semi-arid regions in the north that made the establishment of such strong colonial institutions of government unnecessary. In the latter regions of the new territorial state, weak penetration disrupted the pre-existing social and political authorities of governance very marginally. The majority of the population remained under the traditional forms of authority while the newly established structures and institutions of colonial government remained suspended above and far removed from the daily lives and experience of local population.

The Kenyan post-colonial state adopted the institutional and functional features of the nation state as created during colonial rule with the notable addition of sovereignty. While regime after regime has attempted to overcome shortcomings in the colonial-era policy programs through establishment of governmental institutions and authority closer to the population in the northern zone, the process has been slow and largely ineffective. The result has been a discordant, layered security outcome in which the northern zone manifests unique insecurity features characterized by banditry, lawlessness and disregard to and confrontation with state security apparatuses. Conversely, the communities in the southern half of Kenya have accepted the state and made it the locus for elite-cum ethnic competition.

This study has important lessons on state penetration and legitimacy. First, effective state penetration is a precondition to state legitimation which is process by which local traditional communities encounter, recognize, accept and submit to the authority state as the unquestioned security management institution within the territory. However, effective penetration involves, as a matter of necessity, a disruptive and violent process especially during the initial stages of state formation so as to create conditions for the transformation of traditional notions of security to modern security regime. In retrospect, the laws, policies, institutions and surveillance activities adopted by the colonial administration inadvertently raptured and drastically transformed the communities they came into contact with. This process must be simultaneously accompanied by the establishment of

political and economic frameworks in which communities newly mobilized from the traditional security regime discover opportunity for self-actualization.

Second, state legitimization is a thoroughgoing process which involves the re-orientation towards socio-economic and political values in which the state is a key facilitator and agent. Therefore, societies that have legitimized the state need more state (through policing, administrative units, etc.) not only to protect property but also to deal with new challenges that arise as society evolves towards securitizing new objects. While different security challenges may arise in the effectively penetrated zones, the security actors involved are less intent on challenging the legitimacy of the state and more oriented towards exploiting gaps in security surveillance in pursuit of their socio-economic and political interests. Conversely, zones that have not been effectively penetrated, disregard, outrightly reject and perceive the state - through its security apparatus - as adversarial.

In summary, state penetration and legitimacy are poorly treated theme and analytical framework in African security and conflicts analyses, yet they both provide critical insights in the turbulent state-society relations confounding the continent as well as discordant security experiences extant in different locales within the same polity.

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The Nexus Between Levels of Education And Food Production Practices Among Farmers in South Nyanza Region, Kenya

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ABSTRACT

Actualizing food security requires a multi-faceted approach. In Kenya, revitalization of education systems, agricultural extension services and fortified seed use are supported to increase agricultural production, productivity and labour requirements. However, Nyanza region still has high food insecurity and population density amidst high gross enrolment rate and the survival rate in schools. Nexus between education levels and food production practices followed their controversial study outcomes. Using cross sectional data from 2020 to 2021, this study adopted Technology Diffusion Theory and Correlational research design. Households were stratified and 118 farmers randomly selected. Chi square test revealed that education level, cultivation, planting and agricultural inputs were statistically different. Logit regression showed that farmers are less likely to accessing new markets; employ new planting methods; adopt new cultivation methods and seek for farmer referral as they transit from diploma to postgraduate. Hence, competency based agricultural practice must be enhanced to ensure food security.

Key words: Education, Food Security, Farmers, Farm Practices

Contribution/Originality: This paper disaggregated the various levels of education within the complex food production web. Such divisions and their interactions with food production have not been fully explored especially in the less developed countries. As such, results herein provide greater insights on the levels of education and their linkage to food production. Emphasis, however, is devoted to higher education levels and their interaction with food production.

Introduction

Food security refers to a situation in which all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meets their dietary needs and food preferences for an active and healthy life (FAO; IFAD; UNICEF; WFP; WHO, 2019). Verburg, Mertz, Erb, Habert, & Wu (2013) reported that food security is determined by food utilization, availability, stability and access. Although its physical availability is a necessary condition, it is not sufficient since its affordability, quantity adequacy and nutritional contents are equally important. In most cases, food security has been regarded as a supply issue but given its determinants, it is also demand driven,

dependent on the purchasing power and income levels.

FAO, (n.d), acknowledges that food security is a complex relationship and integration which involve activities such as consumption, production and distribution of food that affect human nutrition and health. Food production practices include; land use and tenure, soil management, crop breeding and selection, crop management and harvesting. Food distribution involves a series of post-harvest activities including the processing, transportation, storage, packaging and marketing of food as well as activities related to household purchasing power, traditions of food use (including child feeding practices), food exchanges and gift giving and public food distribution. Most households are economically constrained; as a result, they may not afford healthy diet in terms of quality and quantity. However, there is considerable diversity in food consumption among many households.

Gitu, (2006) observed that Kenya faces poverty, hunger and chronic undermulnutrition. Reasons for these are sectorial underinvestment and misallocation, lack of adequate government support, inadequate access to credit, agricultural research and extension. Similarly, the report observed that the densely populated areas such as Western and Nyanza (Homabay and Migori), possess the highest poverty levels due to low agricultural productivity and lack of information among other factors. However, (Government of Kenya[GoK], 2007) in their vision 2030, depicted a positive relationship between education and the labour, and therefore made efforts to strengthen the adult literacy to 80% by 2012, (Ministry of Education[MoE], 2002).   Based on this assumption, this study believes that with increasing education levels, food production are bound to increase should farmers inculcate good practices in food production and distribution channels.

Gini coefficient in Nyanza is 0.586 and such poverty level rose sharply between 1992- 1997 (63.1%) and dropped to 47.6% by 2005-2006. The region is also characterised by low entry level of women into primary schools. The transition rates for girls into secondary schools, tertiary colleges as well as into universities, is also lower (Rao, et al., 2015). Although this is true, (JICA&IDCJ,2012) report indicated that the gross enrolment rate(GER) and the survival rate (SR) of students in Nyanza, exceeded 100% and 80% respectively. Other challenges includes low life expectancy of 44.9 years and high population density (Crowley & Carter, 2000). Given that the counties of Homabay and Migori occupy lower midland, maize production is highly practiced (occupies 48% of the total arable land) although sorghum, fingermillet and cassava; cattle keeping and

goat rearing can also be practiced. High population density results into land degradation and fragmentation (Manyong, et al., 2005).

It is important to increase access to education especially in the rural area in order to reduce poverty, enhance food security, build peaceful communities and sustainable development (Wassil, 2022). For these to be achieved, a multi-sectoral and interdisciplinary action plans which involves the formation of new partnerships among policy-makers and practitioners working in agriculture and rural development sectors and their counterparts in the education sector must be established (FAO, 2007). The year 2009/2010 budget showed that the spending on education sector accounted for 26.7% of the total government expenditure. Such expenditure increased from Ksh. 118.8 billion in 2006/07 to Ksh. 213.2 billion in 2011/12 with planning and administrative cost on primary education being allocated 5.4%; secondary education 9.4% and higher education consuming 26.5, the difference went to pay for salaries (Kenya National Bureau of Statistics[KNBS], 2012).

Huang & Luh (2009) observed that education enables farmers to follow some written instructions about the application of adequate and recommended doses of chemical and other inputs. Although this is may be the case, the relevance of education on agricultural productivity is still controversial. Abdulai & Huffman, (2014) observed that farmers' education determined field ridging adoption, a technology that increased significantly the rice yields and net returns. Similarly, Asadullah & Rahman(2009) observed that education significantly raises rice productivity, boosts potential output and reduces production inefficiencies. Oduro-Ofori, Aboagye, & Acquaye (2014) observed that agricultural output increases with secondary school education. Similarly, extension service has a greater impact on agricultural productivity than formal education. Furthermore, Reimersa & Klasena (2011) observed that only primary and secondary education had a significant positive impact on agricultural productivity while tertiary education was insignificant.

Statement of the Problem

In Kenya, one of the big four agendas of the national government is to provide 100% food and nutrition security by ensuring smallholder production & value addition. In order to ensure that this happens, the government has initiated and supported programs in the education systems that lay emphasis on agricultural productivity through enhanced agricultural extension services, improved crop varieties and training of farmers to increase the value of the agricultural output. The national and county governments of Kenya have funded agricultural activities and enacted policies in a bid to reducing food

insecurity.   Despite these concerted efforts, food insecurity is still a major concern to both the Kenya's national government as well as the county governments of Homabay and Migori (former South Nyanza region). This study sought to investigate the nexus between the levels of education and good food production practices; a proxy for food security, since controversies exists on the effect of education on the best agricultural practices that enhances food security.

Literature Review

The importance of the agricultural sector in Kenya is undoubted. According to Ochieng, Nyongesa, & Odhiambo, (2020), the sector directly and indirectly contributes 24% and 27% of the GDP via other inter-sectorial connections such as the manufacturing, distribution and other service-related sectors, which is in line with the national development blueprint, Vision 2030 and the "big four" agenda. About 45% of the total government revenue is generated by the agricultural sector.

Similarly, the importance of education in economic development cannot be underscored. Food production and acquisition are critical in alleviating poverty and hunger, and operations promoting education and the eradication of hunger must continue and expand in the future to ensure stable food supply. Ozturk (2001) observed that without substantial investment in the human resource, no country can achieve sustainable economic

development. This is because education improves people's understanding of their immediate surrounding and that of the rest of the world besides raising productivity, creativity, securing economic and social progress as well as improving their income distribution.

Oduro-Ofori, Aboagye, & Acquaye (2014) contended that education possesses two effects on agriculture namely "worker effect" and "allocative effect". Worker effect creates a better use of current resources. For instance, if an educated farmer is allocated the same number of input, he or she can produce a greater output, ceteris paribus. Secondly, allocative effect refers to the ability to acquire information about cost and characteristics of inputs and interpret such information to make decisions that enhances output. These decisions may lead to changing inputs or adopting new methods.

Moreover, IBID (2014) categorised the effect of education of agricultural productivity into two main groups namely the cognitive and non-cognitive effects. Cognitive effects are concerned with the basic literacy and numeracy levels that farmers achieve from education. The literacy effect enables a farmer to read and understand instructions on input use such as chemical fertilizers and pesticides applications while numeracy effect allows for calculation of the right proportion of inputs to

be combined to get the desired output. Non-cognitive effect refers to a change in the attitude of farmers who are educated. They involve issues of punctuality, teamwork, timeliness, adhering to schedules among others. There is little evidence with reference to the relationship between non-cognitive effect and agricultural production in Kenya.

De Muro & Burchi (2007) investigated the relationship between education for rural people and food security using household-level data for 48 low-income countries. The sample used consisted of 30 countries from Africa, 10 from Asia, and 8 from Latin America. The survey was carried out in different years, from the late 1980s to 2004. From the results, there was a strong correlation between hunger and educational deprivation i.e. hunger seemed to decrease in strength with higher levels of education. As a result of this, they recommended that in order to suppress food insecurity, governments, international organizations and civil society should invest more in the education sector, more so in primary education for rural people. Although their study investigated the demand side of food security, this study focused on the supply side.

Paltasingh & Goyari (2018) investigated the effects of education on farm paddy farmers in Odisha, Eastern India. Using an endogenous switching regression model, the study found that a minimum threshold level of education significantly influences the adoption of modern varieties of paddy and thereby the farm productivity of adopters only. The study was based on the primary data collected at the household from two districts of Odisha, Cuttack, and Khordha during 2012 to 2013 cropping season. From the analysis, education had a strong effect in the successful adoption of modern varieties of paddy. In this study, not only is maize the subject of investigation but all the processes involved in maize production and how education levels affect the adoption of these processes was given a focus.

Reimersa & Klasena (2011) conducted a study on the role of education for agricultural productivity using a panel of 95 developing and middle-income countries from 1961 to 2002. By using a Cobb Douglas production function of a linear form, results showed that education had a highly significant and positive effect on agricultural productivity. From their analysis, an additional year of schooling would raise agricultural productivity by approximately 3.2 %. Disaggregated country-wise, their results indicated that the effect of education on agricultural productivity is generally smaller for the less developed countries.

In a study conducted in Winam Division in Nyanza Province, Emuhaya and Sabatia

Divisions in the Western Province of Kenya, Walingo (2006) targeted female heads of households with literacy education in the dairy sub sector. The study was conducted using a cross-sectional survey design targeting a total of 100 participants of which 50 households were beneficiaries from the dairy project while the other 50 households were non-beneficiaries of the projects. Selection was randomly done. Using mean, standard deviations of scores and Z test to calculate the differences between the groups, results showed that the knowledge scores on aspects of nutrition and dairy farming were not significantly different between beneficiaries and non-beneficiaries. In this study, maize production was investigated in the counties of Homabay and Migori maximum likelihood together with chi-square tests was used to draw results.

Njura, Kubai, Taaliu, & Khakame (2020) studied the relationship between agricultural teaching approaches and food security in Kenya particularly in Embu County. Their study adopted a descriptive survey design and applied both quantitative and qualitative data. Through the adoption of heterogeneous purposive sampling, the authors employed both random and non-random sampling designs. Inferential statistics, particularly the regression analysis was used to draw the relationship between agricultural teaching approaches and food security. Results indicated a negative and statistically insignificant relationship between the agricultural teaching approaches and food security. The conclusion was that there is little food security agenda in the teaching process since it appeared that teaching is more examination oriented than competence based as demanded by the competence-based curriculum.

Mutisya, Ngware, Kabiru, & Kandala (2016) conducted a study on the effect of education on household food security in two informal urban settlements in Korogocho and Viwandani wards in Kenya through a longitudinal analysis on data collected between 2007 and 2012. The level of education was based on the average years of schooling for individuals aged 18 years and above in every household. Results showed that households with low educational attainment were more likely to be food insecure than those with at least some basic education. The study recommended that in order to address the vulnerability of the slum residents to food insecurity, investments in education is necessary since it may have long-term dividends in reducing food insecurity. In this study, emphasis was devoted to the rural areas of Homabay and Migori counties where actual food production is taking place. Besides, analysis was based on the levels of education as opposed to the number of years in education.

Methodology

This study used a correlational research design to investigate the nexus between levels of education and food production practices among farmers in South Nyanza region, Kenya.

Stratified random sampling method was used. Stratas were based on two counties of Homabay and Migori given their favourable climatic condition necessary for food production. The target population was maize crop farmers above 25 years. A random sample of 118 farmers were randomly selected following the total number of food crop farmers from the two regions. Primary data was collected through questionnaires after testing for their reliability and validity. The data was estimated using Multinomial Logit model. Diagnostic tests were performed to confirm the adequacy of the model. Heteroscedasticy was tested using the Levene's test.

The econometric model estimated is as summarized below;

$$Y_i = \alpha_0 + \alpha_{1i}x_1 + \alpha_{2i}x_2 + \alpha_{3i}x_3 + \alpha_{4i}x_4 + \alpha_{5i}x_5 \text{-}$$

Where;

Y_i = Food Production Practices

x_1 = Primary Level of Education

x_2 = Secondary Level of Education

x_3 = Diploma Level of Education

x_4 = Graduate Level of Education

x_5 = Post Graduate Level of Education

α_0 = The constant

$\alpha_1, \alpha_2, ...\alpha_5$ = The random coefficients of the levels of education

i = Cross sectional individual farmer subscript.

$\varepsilon_i \sim N(0, \sigma^2)$

Results and Discussion

This section presents the results and discussion of this study.

Table 1: Levels of education within the agro ecological zones

| | | Highest level of education | | | | | Total |
		Primary	Secondary	Diploma	Graduate	Postgraduate	
Agro-ecological	Awendo	12(14.6)	38(46.3)	29(35.4)	3(3.7)	0	82(69.5)
zone	Ndhiwa	16(44.4)	13(36.1)	4(11.1)	1(2.8)	2(5.6)	36(30.5)
Total		28(23.7)	51(43.2)	33(28.0)	4(3.4)	2(1.4)	118

Source: Survey Data. Frequencies in percentages. Awendo (in Migori County) Ndhiwa (in Homabay County)

From Table 1, there were 82(69.5%) respondents from Awendo and 36 (30.5%) respondents from Ndhiwa. Out of the respondents from Awendo, 14.6% had primary level of education, 46.3% had secondary level of education, 35.4% had diploma level of education while 3.7% had graduate level of education. In Ndhiwa, there were 44.4% respondents with primary level of education, 36.1% had secondary level of education, 11.1% had diploma level of education, 2.8% had graduate level of education while 5.6% had post graduate level of education. In overall, 23.7% had primary level of education, 43.2% had secondary level of education, 28.0% had diploma level of education, 3.4% had graduate level of education while 1.4% had post graduate level of education.

This study conducted a statistical test of independence between the various levels of education and good farming practices against the following;

H_0 : There is no relationship between the levels of education and good farming practices;

H_1 : There is a relationship between the levels of education and good farming practices.

Results are shown in Table 2.

Table 2: Statistical Independence between Levels of Education and Good Farming Practices

Education	Primary	Secondary	Diploma	Graduate	Post graduate	Totals	Chi square
Cultivation	14(50)	13(46.4)	0(0)	1(3.6)	0(0)	28(23.7)	0.002
Planting	14(51.9)	12(44.4)	0(0)	0(0)	1(3.7)	27(22.9)	0.003
Markets	5(41.7)	5(41.7)	0(0)	1(8.3)	1(8.3)	12(10.2)	0.098
Fertilizers	5(62.5)	3(37.5)	0(0)	0(0)	0(0)	8(6.8)	0.046
Referrals	7(53.8)	4(30.8)	1(7.7)	1(7.7)	0(0)	13(11.0)	0.217
Weather	6(40)	8(53.3)	1(6.7)	0(0)	0(0)	15(12.7)	0.51
Other inputs	3(27.3)	5(45.5)	2(18.2)	1(9.1)	0(0)	11(9.3)	0.685

Source: Survey Data; ( ) Frequencies in percentages

From Table 2, those who adopted new methods of cultivation were 28(23.7%) of the overall respondents. Out of this, 50% had primary level of education, 46.4% had secondary level of education while 3.6% had graduate level of education. Based on the probability of the chi square (0.002), this study accepted the alternative hypothesis that there is a relationship between the level of education and adoption of good cultivation practices.

On planting, 51.9% of those with primary education, 44.4% of those with secondary level of education, and 3.7% of those with post graduate education adopted the new methods of planting. Given the significant probability of the chi square (0.003), the alternative hypothesis that there is a relationship between the level of education and adoption of good cultivation practices was accepted.

On fertilizers, 62.5% of those with primary education and 37.5% of those with secondary level of education adopted the new fertilizer use. Given the significant probability of the chi square (0.046), the alternative hypothesis that there is a relationship between the level of education and adoption of fertilizer use was accepted. Otherwise, this study found no relationship between the levels of education and finding new markets, seeking for referrals, checking for weather updates and sourcing for farm inputs.

The multinomial regression results on the likelihood effect of the levels of education on good farming practices among farmers in South Nyanza region are present in Table 3.

Table 3: Likelihood Effect of the Levels of Education on Good Farming Practices

	Education	Primary	Secondary	Diploma	Graduate	Post graduate	Chi square
Cultivation	coeff	Base	0.095	-0.393	-0.834	-1.306	14.54
	prob		0.829	0.275	0.03	0.004	0.0058
Planting	coeff	Base	0.255	-0.027	-1.276	-0.976	18.51
	prob		0.364	0.939	0.008	0.044	0.001
Markets	coeff	Base	-0.014	-1.299	-0.194	-0.932	8.950
	prob		0.953	0.015	0.649	0.265	0.0624
Materials	coeff	Base	0.527	-5.46E-15	-1.159	-14.15	14.530
	prob		0.079	1	0.095	0.990	0.0058
Referrals	coeff	Base	-0.009	-0.741	-0.848		5.930
	prob		0.970	0.286	0.045		0.1153
Soil	coeff	Base	-0.967	-0.17	-1.277	-1.05	5.690
	prob		0.670	0.7	0.114	0.122	0.2238
Weather	coeff	Base	0.248	-0.32	-0.82	-0.82	9.600
	prob		0.381	0.389	0.194	0.126	0.0478
Inputs	coeff	Base	-0.320	-0.116	-0.129	-0.358	1.870
	prob		0.201	0.712	0.792	0.524	0.760

From Table 3, graduate farmers are significantly less likely to adopt good/new cultivation methods. Similarly, post graduate farmers are also less likely to adopt new cultivation methods than those who have attained primary education. This implies that for every 10 farmers with primary level education and who adopts new cultivation methods, there are 8.34 farmers with graduate level of education who will not adopt the new cultivation methods.

On new planting methods, given the probabilities, graduate as well as post graduate farmers are significantly less likely to adopt new planting methods. This implies that for every 10 farmers with primary level education who adopts new planting methods, there are 12.76 and 9.76 farmers with graduate as well as post graduate level of education who will not adopt the new planting methods.

Given the significant probabilities, graduate farmers are significantly less likely to adopt client referrals than those with primary level of education. For every 10 farmers with primary level education who adopts client referrals, there are 8.48 farmers with graduate as well as post graduate level of education who will not adopt the new planting methods.

Conclusions

This paper investigated the nexus between levels of education and food production practices among farmers in South Nyanza region, Kenya. From the perspective of statistical independence using the Chi square, the results indicated that there was

relationship between the levels of education and adoption of new cultivation, planting and the use of fertilizers in food production. Otherwise, there was no relationship between the level of education and other food production practices such as finding out of new markets, seeking for referrals, checking for weather updates and seeking for other farm inputs.

With regard to the likelihood of adoption of the food production practices, this study observed that those with degree level of education together with those possessing post graduate level of education are less likely to adopt new methods of cultivation, planting and seeking for referrals.

It is therefore important for the higher level of education providers to provide a competence-based curriculum which focuses on improving food production. The essence of providing the book knowledge alone is counterproductive in the fight against food insecurity given that food security is an integrated system whereby food production is part of the system.

Acknowledgments

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Role Of Street-Level Bureaucrats in The Implementation of the 100% Transition Policy for Deaf Students in Kenya

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Abstract

Designing and passing a good education policy does not guarantee the intended success if the execution at the end of the policy's chain is not oriented towards the proposed objective. The success or failure of an education policy can be attributed to the modus operandi employed during the implementation of the policy. This study sought to find out how principals in Deaf schools have influenced the 100% transition policy implementation in their schools. The study adopted a mixed-method approach by simultaneously using both quantitative and qualitative instruments to collect data from thirty-seven teachers, twenty-five parents, two principals, two Sub-County Ministry of Education officials, and ten students. Findings showed that multiple interpretations of the policy have made the principals to adopted divergent strategies during the implementation of the policy. However, the principals with training in educating the Deaf are better suited to implement the policy in Deaf schools in Kenya.

Keywords: *Special Needs Education, specialization, educating the Deaf, discretion, autonomy.*

INTRODUCTION

Education is viewed as a tool for equipping all children with competencies that enable them to exploit their full potential in life for healthy and productive adult lives, including participation in social, political, and economic spheres. The education of learners with deafness in Kenya for a long time has dawdled compared to that of their hearing counterparts. However, numerous international conventions in new the millennium increased education stakeholders' focus on Special Needs Education (SNE). These include; the 1994 Salamanca Statement and Framework for Action on Special Needs Education, the Dakar, Senegal 2000 World Education Forum, the Millennium Development Goals (MDGs), and Sustainable Development

Goal – 4 (Government of Kenya, 2014). All the above conventions advocated for the right to education for all children including learners living with disabilities such as learners with deafness.

To actualize the envisioned change, it was necessary to adapt tools that made the anticipated changes a legal mandate, support the change with necessary resources, and adapt processes that win the hearts and minds of education stakeholders in Kenya. While many tools are adapted to initiate educational reform, none has received much attention as education policy (Alma, 2002) citing (Hopkins 1996:32). The Kenyan Ministry of Education (MOE), therefore, has formulated suitable policy provisions to ensure that all learners regardless of their disabilities have access to 12 years of compulsory basic education (Ministry of Education, 2009 & The National Council for Law Reporting, 2010b). However, designing and passing good policies does not guarantee the intended success if the execution at the end of the policy's chain is not oriented towards the proposed objective. Miller (2002) as cited by Kyai (2019) posits that less than 30% of education policy objectives succeed in delivering the proposed education reform because of implementation challenges.

The policy situation in Kenya has not been exceptional to the above reality as many studies have attested that Kenya is far from achieving the "education for all" as far as educating deaf learners is concerned despite the availability of very well-designed education policies that address the needs of learners with special needs - which includes the Deaf (Kiru, 2019; Mwangi, 2013). This suggests that practices in schools for the deaf in Kenya do not conform to the available policy provision on Special Needs Education in the country. Notwithstanding that the government has always availed more resources for the education of the deaf, based on the knowledge that the Deaf are a minority and are most likely to be excluded from the mainstream education system (Ochieng & Murungi, 2019). Succinctly we can argue that there are gaps in the implementation of education policy in schools for the Deaf in Kenya. According to Festus (2017) and the Teachers Service Commission (2018) the principals are charged with the responsibility of reading the policy document, interpreting it, and overseeing its implementation at the school level.

This position where the principal acts as the interface between the policy and its target audience (the students) make principals qualify for the title of "Street-Level Bureaucrats (SLB)." According to Lipsky (2010), Street-Level Bureaucrats are public servants such as school principals who have direct and regular interaction with the recipients of government services. Lipsky argues that due to the significant discretion and autonomy that this cadre of public servants enjoy it is their daily actions that determine policy implementation's

outcome.

Principals as Street-level bureaucrats are strategically placed between the school community and the government who are the policy masters. Hence, this makes the principals an important intermediary when it comes to education policy implementation. It can be argued no other intermediary has the combined effect on education policy implementation as a principal, given their legal mandate and their proximity to educational stakeholders including parents, teachers, and students. Consequently, the success or failure of education policy can therefore be attributed to the modus operandi preferred by the principals who are charged with the responsibility of the implementation task at the end of the policy chain. Yet most studies on challenges to deaf education in Kenya have focused more on the area of policy formulation but less on the implementation process.

The 100% transition policy is the most recent education policy in Kenya focusing on access to basic education. The policy contains guidelines to ensure that all children including Deaf learners get access to free and compulsory secondary education by warranting that all primary school pupils transit to secondary schools, under the doctrine of "leaving no child behind." Nevertheless, a previous empirical inquiry by Ochieng and Murungi (2019) points out that the future of the 100% policy on SNE learners may not be guaranteed as a result of

the potential barriers within the social, economic, and political context of the school.

DeMatthews, Kotok, and Serafini (2020) posit that the successful implementation of the education policy in special schools depends on principals' beliefs, values, experience, and leadership approach. These are qualities that are acquired through training (Taylor, 2005). However, in Kenya despite the principals of special schools operating in a very complex implementation context studies shows that there is no specialized training for principals of the schools for the Deaf in Kenya (Chitiyo, Odongo, Itimu-Phiri, Muwana & Lipemba, 2015; Onguko, Abdalla, & Webber, 2008). This study, therefore, seeks to explore whether a principal's lack of specialization in educating the Deaf influence how they implement the 100% transition policy in schools for the Deaf in Kenya.

This study was based on the assumption that principals as Street-Level Bureaucrats are in a strategic position to influence the success or failure of educational policy. The goal of the study was to investigate the considerations and strategies put in place by principals of schools for the Deaf in Kenya, to ensure that learners with deafness transit to secondary schools in the spirit of "leaving no child behind," secondly the study sought to find out whether a principal's training in educating the Deaf influence how they

implement the 100% transition policy in a school for the Deaf. Lastly, the study explored the contextual realities that hindered principals of schools for the Deaf in implementing the 100% transition policy. The study was guided by the following research questions:

- What are the requirements of the 100% transition policy in a school for the Deaf?
- What discretion do principals have in the implementation of the 100% transition policy in a school for the Deaf?
- How does the policy management context influence the principals' implementation of the 100% transition policy in a school for the Deaf?

Literature Review

Education has a direct effect on the social, economic, and political development of a country. For this reason, governments take special interest in the designing and implementation of education policy. Education policy is the recommended government guidelines and actions that govern the formal schooling system in the production and delivery of educational services to the citizen (Viennet & Pont, 2017). Fan and Popkewitz (2020) further posit that education policy belongs to the category of "public policy" and is used by the government to manage education as it contains regulations and guidelines that

resolve conflict in education and realign educational relationships.

At the heart of all education policies, are change initiatives to ignite school improvement. A policy-driven change is very dynamic involving: educating and re-tooling stakeholders, changing existing structures, providing resources, aligning with other existing policies and practices, and advocating for the change. This variety of things needed makes the implementation of policy complex and difficult to achieve if not thought through carefully. At the school level, the principals are the actual caretakers of education reform, as they are the ones who supervise the implementation at the end of a policy's life cycle. If the principal misinterprets a given education policy automatically that policy is bound to fail during its implementation.

The 100% transition policy is to ensure that all pupils that graduate from primary school transit to secondary school because of the government's commitment to its constitutional mandate on the right to education and in line with the recommendation of numerous international settlements that advocate for free education in the elementary and fundamental stages (The National Council for Law Reporting, 2010a). However, the objectives of this ambitious policy have not been met a decade after its initiation (Ministry of Education, 2019). On the other hand, the enactment of the 100% transition policy was expected to be a big boost in SNE however a

document review study by (Ochieng & Murungi, 2019) stated that the policy is good and also attainable but cites pitfalls in the implementation of education policy and inadequate accountability as some of the backlash towards its achievement, leading to a disturbing low enrolment of learners living with disabilities in learning institutions despite there being legal provision to ensure that all learners transit from primary to secondary education.

The concept "street-level bureaucrats" was coined by Michael Lipsky in 1980 referring to "public service workers who interact directly with citizens in the course of their jobs, and who have substantial discretion and autonomy in the execution of their work" (Akosa & Asare 2017). Owuor (2018) used the concept of SBL to explore the experiences of the educational leader in the implementation of policies involving access to education by learners living with disabilities in western Kenya. However, the study was too wide and dealt mainly with the leader's understanding of the policies and the coping behavior rather than the extent to which educational leaders interpret and influence the implementation of education policies.

Ombita (2020) citing Mpaata and Mpaata's (2018) qualitative study in Uganda of 165 experienced teachers drawn from 11 government schools that had been in existence for more than 30 years, indicated that headteachers' performance a vital role in the implementation of education policy.

Succinctly, in Kenya, principals are the actual SLBs in the schools because they act as agents of TSC and the MOE at the school level during the implementation of government policy. This study, therefore, used Lipsky's SLB conceptual model to explore how principals have influenced the implementation of the 100% transition policy in schools for the Deaf in Kenya. Because principals are charged with the responsibility of interpreting and supervising the implementation of the policy at the school level.

Methodology

The study adopted the convergent research design to gain a non-biased insight into all the participants' conceptions of the research problem. According to Creswell (2012) the convergent or parallel, or concurrent mixed methods design involves the simultaneous collection of both qualitative and quantitative data, corroborating the data, and using the results to comprehend the research problem. Johnson and Christensen (2012) postulate that the use of both qualitative and quantitative data is an excellent way to do a high-quality study because the two methods have complementary strengths and non-overlapping weaknesses. In this study therefore both qualitative and quantitative data were collected and analyzed simultaneously.

The study was done in Kakamega county, Kenya. Kakamega county was

considered suitable for the study because it is one of the few counties in Kenya with more than one secondary school for the Deaf. This made the location suitable for conducting a comparative study. Two secondary schools for the Deaf were purposively selected in the county. One school had a principal with a specialization in teaching the Deaf and the other had a principal without a specialization in teaching the Deaf. The schools' pseudonyms were Amba and Pahati secondary schools for the Deaf.

The study's population involved 2 principals, 2 MOE officials, 37 teachers, 25 parents, and 10 students. Participants were chosen using the convenience sampling technique based on the participant's ease of access and closeness to researchers. Quantitative data were obtained from the 37 teachers and 25 parents using self-administered structured questionnaires. This was done through a list of that 15 close-ended written questions and a few open-ended questions for seeking clarification where necessary. The questionnaires required the respondent to read the questions, interpret what is expected, and then write down the answers (Kumar, 2019). The questions focused on the principals' exercise of discretion and autonomy during the implementation of the 100% transition policy.

Qualitative data was collected from the 2 principals, the 2 MOE officials, and the 10 students. Semi-structured, face-to-face interviews were used to collect data for the principals and the MOE officials. According to Johnson and Christensen (2012) semi-structured interviews not only gives the informant the opportunity for self-expression but it does also give room for the researcher to ask probing questions whenever clarity is needed. To obtain data from the student a Focus Group Discussion guide was used to investigate their perceptions, experiences, and understanding of a principal's actions that have an impact on the implementation of the 100% transition policy.

Results

Principals' conceptualization of the 100% transition policy influences the implementation of policy in schools for the deaf.

The principals understanding of the policy influence how they make logical sense concerning the numerous factors contained in the policy text to achieve the envisioned educational reforms and educational interventions. In the introduction section of this study, it was stated that education policies entail the strategy for educational change that enhances student outcomes as well as strengthening the school's capacity to manage change." (Hopkins 1996:32) as cited by (Alma, 2002). The evidence below shows how principals in Kenyan schools for the Deaf perceive the 100% transition policy. From the data, it is evidenced that there is no policy document referred to as "The

100% transition policy document" although there are numerous legal provisions for this policy. The principal of Pahati secondary school for the deaf explained that:

> *Extract 1*
> *This policy demands that when children... when class 8 learners are exposed to*
> *KCPE, the entire cohort transit to form one, in secondary school… we are always informed regularly that should we get learners who may wish to join form one we should not bar them whether they are having school fees or not.*
> *Whether they have uniforms or not, we have been instructed strictly to admit them.* (Interview, Principal Pahati, 3/9/2021)

The above data suggest that the 100% transition policy is building on the education for all initiative whose focus was to give all children access to 12 years of basic education as is envisioned in the Constitution Kenya (2010) as a key to Kenya's Sustainable Development. Therefore, to actualize the achievement of the objective of the 100% transition policy in the Schools for the Deaf the government had to intervene by removing all the extra school levies and the minimum KCPE grades as a prerequisite for form one admission for the Deaf learners, these were the major access impediments as was pointed out by earlier studies (Kirera, 2013;

Ochieng & Murungi, 2019). However, the principal of Amba provides a contradicting notion about the policy.

> *Extract 2*
> *There shouldn't be a minimum KCSE grade before form admission… but "in-house" we usually take from those who can cope with academics…. in the beginning, we can take all of them to academics, but it reaches a time the girls themselves can't cope with the academics. So those who will not cope land in the vocational section. So in the vocation section… we give them different skills; dressmaking, signwriter… we have also introduced hairdressing and food and beverage.* (Interview, Principal Amba, 6/9/2021)

The above execution of discretion conforms to Lipsky's (2010) notion that discretion and autonomy can lead to street-level bureaucrats' misinterpretation of the policy text. Their actions and decisions may not always adhere to policy directives, and as a result, the implementation may be performed in ways that contradict the stated policy's intentions, or goals.

From the data, conceptions of the 100% transition policy are varied across principals. Those who support it argue that the policy ensures that all children notwithstanding their disability access similar educational opportunities. The policy also holds primary schools accountable for ensuring all children

transitioning to secondary have the necessary competencies to allow them to effectively engage in the secondary curriculum. Those who are against it argue that children coming to secondary school have not necessarily attained the minimum competencies needed to effectively engage in the secondary school curriculum hence the transfer of learners to vocational training. The opponents further argue that secondary schools for the deaf are not ready to receive all deaf children who seek admission in special schools because the schools neither have the resources nor adequate expertise to match up to the demand.

The principal's expertise in SNE affects the implementation of the 100% transition policy for deaf students

A principal's expertise-knowledge is crucial in the implementation of the 100% policy because in addition to their administrative role they are the uppermost instructional leader in the school. The expertise knowledge mainly comes from training in educating the Deaf and it equips a principal with the ideologies underpinning the adoption of the 100% transition policy. However, in this study, there is evidence of the employment of non-specialized principals to head schools for the Deaf. The principal of Amba for instance state:

Extract 3.
I trained as a teacher in regular schools...
I didn't really train to come in teaching
special schools... it doesn't normally

happen, but in circumstances like myself,
it happened, because of the need at that
particular time… it is important that
when you are in a special school, it is
better you go for these (training) at least
for Kenyan Sign Language to help you
communicate with the Deaf effectively
(Interview, Principal Amba,
6/9/2021)

Principalship being promotional grade longevity in service is given more consideration than training in educating the deaf before one is deployed as a principal in a school for the deaf. The MOE officer for the Amba sub-county advises that appointment of principals without specialization to head special schools should just be a stop-gap measure but it should not go for a long time. he stated that:

Extract 4
If the principal is specialized, he
understands the needs of the learners.
with that specialization, he will even
know… which type or kind of facilities is
supposed to
concentrate on in the school… and he
knows the needs of the learners and
because he understands the needs of the
learners, then he interacts with the
learners and the learners cannot drop out
of such a school (Interview, MOE
officer Amba 1/10/2021)

The study finds that specialization

not only enables a principal to initiate programs that are in the best interest of the Deaf learners but also allows and gives them the confidence to lead specialized teachers who are currently the majority in schools for the deaf in Kenya. In this study, 92% of the teacher are SNE trained with 82% of them specializing in educating the deaf. The principal's specialization plays a vital role in ensuring that the Deaf students receive quality education as they are the curriculum supervisor in the school. This notion was validated by the result of the teachers' survey where 78% of teachers stated that specializations enable a principal to understand the deaf culture and 83% of the teacher agreed that a principal's training in educating Deaf learners enhance how they support teachers to deal with challenges related to the implementation of the 100% transition policy. Furthermore, the principal of Pahati argues that training in SNE helps a principal to make informed decisions when implementing the 100% policy when he posited that:

> *Extract 5*
> *I got into the university, and I went straight for SNE as a degree, and from then… I have been working with children with special needs specifically those with hearing impairments… It affects positively because, during the training, we interacted with so many conventions, international conventions that talked about Education for All,*

> *Children's Rights, and basic rights. So, when we look at those conventions that we used to study in college, they go well with 100% transition.* (Interview, Principal Pahati, 3/9/2021)

The above evidence suggests that training in deaf education indeed equips a principal with the ideologies underpinning the adoption of the 100% transition policy. This is important because of the strategic position the principals hold given their autonomy and discretion in policy implementation as discussed in the introduction section above. A tremendous degree of discretion based on the principal's training is manifested in the admission of the non-deaf learner in schools for the deaf. Data findings reveal that despite the two schools being strictly meant for deaf learners, each principal acknowledged that under some special circumstances, they may admit non-deaf learners into their institution. However, it was evident that there were fewer non-deaf learners in Pahati where the principal specialized in educating the deaf than in Amba school for the Deaf where the principal was not trained in educating the Deaf. *Extract 6* depicts the principle of Amba confirming that admission of non-deaf learners in the school is disadvantaging the Deaf learners from getting quality education as teachers tend to give more attention to the hearing learners.

Extract 6

… we have at least two in each stream who are hearing (non-Deaf) *… they hear,*

and they normally request to come and be in this school… initially, we had an experience… whereby this school was made to be one of those schools, which absorbed girls who had been displaced because of the effect the post violence in 2007/2008 and then it brought a problem… The deaf felt the teachers give more

priority to the hearing… it was a rift
(Interview, Principal Amba, 6/9/2021)

The principal of Amba admitted that each class has at least two non-deaf learners even after the 2007/2008 cohort had graduated from secondary school. It can thus be seen that a principal without specialization in educating the Deaf uses their own discretion to admit non-deaf students into the school a situation that will deny some deaf learners the opportunity to access secondary education. Data reveals that the principal of Pahati on the other hand does a lot of mobilization to ensure that the school admits as many deaf learners as possible.

In conclusion, this sub-section suggests that principals with training in SNE have more confidence when dealing with the needs and interests of the deaf and are therefore better suited to implementing the

100% transition in schools with deaf students because their decisions/discretion is rooted in reliable knowledge they acquired in their training.

The principal's official appointment to the office affects their implementation of the 100% transition policy

The evidence of this study reveals that despite the principal of Pahati Secondary School for the Deaf having trained in educating the deaf. The principal had not received an official appointment to the office because of his job group hence he can only hold the position in an acting capacity. It was evidenced from the data that while working in an acting capacity the principal occasionally faces resistance from both the teaching and non-teaching staff as the principal lacks the authority that comes with the official appointment to the office. The MOE officer in the Amba sub-county states that the lack of the principal's official appointment is working against their effort to fully implement the 100% transition policy as seen in *Extract 7* below.

Extract 7

The headteacher there… has not received an appointment "yani hayuko" with status. TSC "walimwambia kwamba saidia tu." So, I think that is also working against us… for him is a normal teacher, but now he's charged with the responsibility of managing a school… "hajapewa barua ya

51

kumuweka kwa" that position of a headteacher... "unajua" he was acting deputy "yani" job group "yake ata si ya" deputy. So then when the other principal retired now, he is acting head acting principal "si unaona hizo" gaps. (Interview, MOE officer Amba 1/10/2021)

The above finding reveals that the principal has not been officially appointed to the office because he has not attained the job group of principalship. The principal, therefore, exhibits low working morale because of the resistance from some of the staff, and also while working in an acting capacity a leader is not entitled to the financial benefits that come with the position (Interview, MOE officer Amba 1/10/2021). On the other hand, the principal of Amba School who had no specialization in educating the Deaf has been officially appointed to the office and therefore enjoys more autonomy. Therefore, despite being specialized in educating the deaf if a principal is working in an acting capacity it is a challenge to their service delivery and eventually how they implement the 100% transition policy in a school for the Deaf.

Managerial oversight of the school impacts the principals' implementation of the 100% transition policy in schools for the deaf

The study depicts sub-county MOE officers as the immediate supervisors to the school principal. They also provide technical assistance to schools as the education service providers to deliver high-quality education by making sure the interpretation of the education policy is closely aligned to the policy's intended objective. The MOE officer for the Pahati sub-county stated that.

> *Extract 8*
> *I'm charged with the responsibility of ensuring that academic programs are done as per the laydown guidelines from the Ministry of Education. Particularly on the enhancement of access, our learners are supposed to access schools access education, and once they are in school, it is my responsibility to ensure that they transit from one level to the other and we expect it to have 100% completion rates.* (Interview, MOE officer, 3/9/2021)

Findings reveal that the sub-county MOE official plays a vital role in the implementation of the 100% transition policy. Evidence shows that during the form one admission period. Principals must send daily admission reports with photographic evidence to the MOE Sub-County Director of Education's office. The MOE field officials follow up with the primary school headteachers on pupils' transition to secondary schools and they also take part in mop-up exercises during community gatherings. The MOE officer for

the Pahati sub-county stated that.

> *Extract 9*
> *When the class eights have done their*
> *exams, and selection has been done. We*
> *do make a follow-up with our primary*
> *headed teachers, and they do give me a*
> *report on how many they are sure of, that*
> *have transited to form one, and those*
> *that have not… like yesterday we had a*
> *meeting with the DCs, the chiefs, and all*
> *the assistant chiefs to mop out all those*
> *that have not gone to form one. Just to…*
> *to ensure that that is done. I'll also be*
> *joining them today.* (Interview, MOE
> officer Pahati, 3/9/2021)

Thus, the study finds supervision plays an important role in increasing the number of learners in secondary school for the deaf. The credit for the increased enrolment is accorded to the government mop-up exercise. Furthermore, evidence from the survey question demonstrates that it is because of the Ministry of Education officials' supervisory role that the 100% transition policy is easily implemented in the school for the deaf to a greater proportion. When responding to the question of whether the principal can reduce the MOE official's influence on the form one admission process, 70% of the teachers disagreed while only 30% agreed.

The documents analyzed acknowledge Kakamega county where this study was conducted as one of the counties that have exceeded the 100% mark in terms

of the 2021 form one admission exercise. This is because secondary schools such as Pahati do not have a feeder school in the sub-county hence they fish learners from other counties during the form one admission. This was made possible through a multi-agency mop-up exercise where MOE field officers partnered with officials from the Ministry of Interior and Coordination of National Government, and officers from the TSC. The study, therefore, finds the MOE officials as one of the important stakeholders in the policy management context who have a great influence on the principals' implementation of the 100% transition policy in a school for the Deaf. However, from the finding this positive impact is only felt on access to education opportunities while the quality of that education is compromised as none of the MOE officials interviewed have SNE expertise knowledge. The MOE officer for Pahati confirmed that.

> *Extract 10*
> *we do not have an officer around here,*
> *the officers in charge of SNE are found in*
> Amba *sub-county. So, I want to say*
> *that we have not really linked up well,*
> *because our only officer in charge of SNE*
> *was transferred from* Pahati *sub-county*
> (Interview, MOE officer, 3/9/2021)

The absence of an officer with expert knowledge in special needs enables the principals to enjoy a considerable degree of

autonomy and discretion on the issues that directly deal with the education of the Deaf. The principal at Amba for instance has the freedom to set up a minimum KCSE grade for form one admission and to allow a student to continue with secondary studies or transfer the student to vocational skills training. This is because the school offers both secondary education as well as vocational training to Deaf learners. The transfer of students initially enrolled in the secondary curriculum to vocational studies is done based on a principal's belief that some deaf students could not cope with the general curriculum and so they needed a pathway to a career. While this may seem noble, the very belief that the deaf cannot cope with the general curriculum can be challenged as some studies suggest that it is only through secondary education that the deaf can improve their cognitive ability contributing to their growth as productive and self-reliant adults (The National Association of the Deaf, 2021), Through the co-curricular activities, the leadership responsibilities, and the mentoring opportunities those deaf learners received in secondary school, they can develop emotional, social, and cognitive competencies that are essential for them to accomplish their full potential and identity in life.

The findings suggest that the autonomy enjoyed by the principals is derived from the lack of SNE expert knowledge on the part of their supervisors to make decisions regarding deaf students. However, the principal's autonomy in the schools has far-reaching consequences for the students as they decide who goes to vocational training and who remains in the general curriculum. One can argue that the principals who have not specialized in educating the deaf have developed coping mechanisms on how to deal with deaf students whom they believe cannot achieve the necessary secondary school curriculum competencies by introducing vocational education. Autonomy has therefore made principals powerful policy implementers with opportunities to completely alter the intended outcomes of the 100% transition policy.

Discussion

This study found that the contextual reality is the source of the multiple interpretations of the 100% transition policy. However, at the heart of these interpretations is the need to increase educational access for deaf children. The principal as an agent of the government in the school must manage the different interpretations of the policy and ensure that deaf students' educational opportunities are not compromised. The Ministry of Education (2018) states that many education policies are available to ensure increased access to education opportunities by learners with special educational needs yet stakeholders' misunderstanding of the meaning of 'Special Needs Education and

disability is still an impediment for such learners accessing education opportunities. Tummers and Bekkers (2014) posit that discretion makes it possible to adapt the policy to meet the local needs of the clientele. Hence principals with expertise-knowledge of SNE should be given some discretion space to make informed decisions while implementing the 100% transition policy.

This study's findings depict that the principal has a lot of latitude in deciding how to implement the policy. That latitude to decide is what we refer to as discretion and autonomy and it is to a great extent determined by the principles, interests, beliefs, and knowledge. Taylor's (2005) recommendation of special schools' principals having some SNE training for effective SNE policies implementation in special schools, confirms that the interests, beliefs, and knowledge that dictate a principal's discretion and autonomy are obtained from training. The idea is validated by this study's finding whereby there is a discrepancy in the implementation of the 100% transition policy between Pahati and Amba secondary schools for the Deaf, despite the policy text being the same. The principal at Pahati who is trained in educating the deaf is implementing the policy with the best interest of the deaf learner in mind. Hence, this study has found that principals' expertise in educating the deaf gives them the advantage in implementing the 100% transition policy in

schools for the Deaf. However, even with training if a principal is not officially appointed to the office their level of service delivery is affected.

The principal's freedom to implement policy as they wish is to a great extent significantly influenced by the level of supervision they receive. In a study by Mwinyipembe and Orodho (2014), it was noticed that the Quality Assurance and Standards office's supervisory roles are critical in providing quality assurance in education and yielding positive results by improving students' performance in national examinations. This is an indication that students are acquiring the necessary skills. A study by Onzere (2015) further contended that in addition to improving student performance, many teachers agreed that the Department of Quality Assurance and Standards ensures quality by collaborating closely with other education sector participants for easier student monitoring progression and retention in the school system. This study's finding however depicts a contradicting picture concerning the role of supervision as a tool for improving student performance in schools for the Deaf. This is because the Ministry of Education officials interviewed in this study admitted that they lack expert knowledge in the field of deaf education hence this gives the principal a high latitude of exercising autonomy. However, the findings revealed that it is because of tight supervision that the avenues for access to secondary schools

have been increased for deaf learners. The two principals involved in this study also gave credit to the role of government in the increased numbers of learners in their schools.

Conclusion

As stated in the introduction section. This study sought to find out how principals as street-level bureaucrats have influenced the 100% transition policy implementation in schools for the Deaf in Kenya. The data were collected through a mixed-method approach. The study found out that principals have a great impact on how the policy is implemented in the schools for the Deaf. The study found that contextual reality influences the principles' use of discretion and autonomy more than what is contained in the policy text. The key influences are the principal expertise-knowledge in educating the deaf, the principal's official appointment to the office, and the managerial oversight of the school by the government. However, principals with expertise-knowledge in educating the deaf are better suited to implement the 100% transition in schools in schools for the Deaf. Therefore, the Teachers Service Commission (TSC) should give special consideration to SNE training in educating the Deaf while appointing and deploying principals in the schools for the Deaf. This would ensure that learners living with deafness receive a quality education.

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Community Perspectives on Paediatric HIV Status Disclosure among Trained and Untrained Caregivers During 2016-2018 in Homabay County, Kenya.

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ABSTRACT

Purpose: To explore the community perspectives on paediatric HIV status disclosure among trained and untrained caregivers in Homa Bay County.

Results: We conducted 4 FGDs with 24 caregivers and KIIs with 6 clinicians. The major themes generated were; reasons for disclosure, disclosure effect on ART adherence, facilitators of disclosure, barriers to disclosure and caregivers' experiences on paediatric HIV disclosure. Major reasons for disclosure were to promote adherence to ART and good health. Disclosure was found to enhance adherence/VL. Training caregivers on disclosure, child's poor health and support groups were facilitators of disclosure, while barriers to disclosure were; child's young age, lack of disclosure knowledge, stigma and discrimination. Trained caregivers experienced easier time disclosing child's status than untrained caregivers.

Key words: *Caregivers, paediatric, HIV Disclosure, ART Adherence, HIV disclosure Training*

Introduction

One of the challenges for children living with HIV and are on antiretroviral drugs in any context is the disclosure process during which they learn about their HIV status. Disclosure can happen at any time – some children may learn that they are HIV positive at the moment of testing, others may accidentally learn of their status from their peers, whereas others may not be told until they have been on ARV treatment for many years (Sumbsi et al. 2021).

Approximately 1.4 million people were reported to be living with HIV infection in Kenya by the year 2021 with adults(15-64) HIV prevalence of 4.9% while children below <15years accounted for 0.7% (UNAIDS 2021). The burden of HIV is not uniformly distributed in the country, for example, Homa Bay County in Nyanza has been, and is currently ranked the county with the highest

HIV burden in Kenya with a prevalence of 19.6% which is 4 times the national prevalence. Up to 83% of children living with HIV in Homa Bay County were not on ART by the end of 2014, partly because they were not aware of their HIV status, which could only be made possible through a disclosure process facilitated by their caregivers. Other factors to non-disclosure such as fear of stigma, caregiver identified as a source of HIV infection and therefore feeling guilty, being blamed, or rejected, caregiver's feelings about child's conditions such as; child too young or not emotionally mature for disclosure, child may accidentally disclose status to other peers or child may react to the news in a negative manner, have been cited in several studies; (Bulali, Kibusi, and Mpondo 2018a; David et al. 2021; Melis Berhe et al. 2020; Yu et al. 2018).

According to WHO (WHO 2011), the lack of HIV status disclosure adversely affects the well-being of the child, including access to paediatric HIV treatment, care and adherence to treatment. The WHO recommends that the decision on who to disclose to the child be guided by the intent to improve/promote the child's welfare and minimize the risk to his or her well-being and to the quality of the relationship between child and parent/caregiver. In addition, children from ages 6-12 should be disclosed to their HIV status, younger children should be informed incrementally to accommodate their cognitive skills and emotional maturity, in preparation for full disclosure at an older age, as a way of enhancing their adherence to ART.

The process of HIV status disclosure is complex emotionally and socially (Glaser 2018; NASCOP 2022). However, studies have demonstrated that children who know their HIV status have better health outcomes due to improved adherence to medication. (Butler et al. 2019; Doat, Negarandeh, and Hasanpour 2019a).In Kenya, HIV status disclosure follows a confirmed laboratory HIV positive diagnosis using NASCOP's HTS 2015 guideline (NASCOP 2015). Test results for children upto14 years are given to the caregiver whose consent is needed before testing the child.

Pre-disclosure of person's HIV status at testing facilities is often preceded with counselling in order to prepare the client psychologically for the outcome of the HIV test (NASCOP 2015).However, such pre-disclosure activities have been practiced with adults but seldom with children. Recently, the Kenyan Ministry of Health released a guideline (NASCOP 2022) on use of ARV drugs for treating and preventing HIV infection. The guidelines recommends that adolescents should be counselled about the potential benefits and risks of disclosure of their own HIV status and that youths should also be empowered and   supported to

determine when, how and to whom to disclose.

It is recommended that paediatric HIV status disclosure should be done by caregivers facilitated by the healthcare workers (HCWs). WHO also recommends strategies that health service providers can use to support caregivers to disclose to their children by the age of 12 years. Thus HCWs are central to the disclosure process. Despite the benefits of HIV status disclosure, many countries report low rates of paediatric status disclosure (Amankwah-Poku, Klutsey, and Asante 2021; Doat, Negarandeh, and Hasanpour 2019a, 2019b; Guta et al. 2020; Melis Berhe et al. 2020). The low rate of disclosure training potentially negatively impacts HIV/AIDs interventions

In this study, we explored community perspectives on HIV status disclosure to children in a highly HIV burden region in Kenya.

Methodology

Study Design

We conducted a comparative qualitative study in which caregivers of HIV positive children aged 6-10 years on ART were grouped into trained and untrained groups. The trained caregivers received a three-day disclosure training while the untrained group received the routine adherence literacy. Thereafter,

both groups of caregivers conducted HIV status disclosure to their children. We selected 24 caregivers from among the study caregivers and 6 clinicians who provide care and treatment to ART patients at the study sites to explore their perspectives on HIV status disclosure.

Sampling Procedure

A group of 24 caregivers, who had disclosed to their children the HIV status, were selected to participate in focus group discussions. The caregivers were selected randomly from the list of children aged 6-10 years already enrolled in a larger study. Similarly, 6 clinicians comprising of 3 nurses and 3 clinical officers who provide care and treatment to ART patients at the study sites were selected randomly from their duty roster to participate in key informant interviews.

Study Population

We randomly selected 24 caregivers of HIV positive disclosed children already enrolled in the study to participate in the focused group discussions. The caregivers were both trained (12) and untrained (12) on the pediatric HIV status disclosure process. Similarly, 6 clinicians working at the study comprehensive care centers were also selected to participate in the key informant interviews. The clinicians comprised of 3 nurses and 3 clinical officers.

Description of Study Sites

The study was conducted with caregivers from 10 comprehensive care centres in six sub-counties of Homa Bay county namely; Ndhiwa sub-county, Homa Bay township sub-county, Rachuonyo north sub-county, Kasipul Kabondo sub-county, Rangwe sub-county and Kabondo Kasipul sub county. The county is located in the South Western part of Kenya along the shores of Lake Victoria.

Data Collection Process

The guide for both focus group discussions and key informant interviews used open ended questions on the community's perspectives about pediatric HIV status disclosure. The data collectors comprised of a moderator who asked questions and taped responses using a recorder and a notes taker. Data collectors were trained on the study concept, ethics, methodology and analysis plan. They were also briefed on the FGDs and KII guides. The selected note taker was briefed on how to take the notes and how to write key quotes from FGDs.

Focused Group Discussions

The participants for FGDs were both trained and untrained caregivers of children on ART aged 6-10 years already enrolled in the study and were selected from the 10 health facilities which were the study sites. The caregivers were also members of the local communities who were representatives from people living with HIV support groups, community health volunteers, peer counselors, church and mosque leaders, members of faith –based Organizations and local area administrative officers. The discussants were mixed by gender that comprised of both biological (83%) and non biological (13%) caregivers.The aim of this community focused group discussion was to explore the community perspectives on pediatric HIV status disclosure. The FGDs were designed to provide in-depth understanding on reasons for children's HIV disclosure, effect of disclosure on ART adherence, facilitators of disclosure, barriers to disclosure and caregivers experiences on pediatric HIV disclosure. We conducted four FGDs, 2 of which with untrained caregivers and 2 with trained caregivers, comprising of 12 males, 12 female caregivers. The focus group meetings were audio-taped. The groups were facilitated by the principal investigator who was asking the questions while the trained counsellor was taping the responses and research assistant taking notes. The notes were then typed up.

Key Informant Interviews

We interviewed 6 clinicians (3 females, 3 males) who manage ART clients on a daily basis using semi-structured open-ended questions. Key Informant Interviews focused on reasons for children's HIV disclosure, effect of disclosure on ART adherence, facilitators of disclosure, barriers to disclosure

and caregivers' experiences on pediatric HIV disclosure. The key informants were clinicians at the comprehensive care centres who provide care and treatment to HIV positive clients on a daily basis; they also provide upgrade training (refresher training) to peer counsellors, community health volunteers and psychosocial counsellors. The clinicians also conduct post disclosure assessments to disclosed children; provide post disclosure management and referrals.

Data Analysis

Qualitative data were analyzed with a view of understanding the community's perspectives on paediatric HIV status disclosure. The analysis involved use of Nvivo software and results were presented as themes with narrations or quotes.

Ethical considerations

Research Approval

The University of Maseno Ethics Review Committee, granted ethical approval (Ref: MSU/DRPI/MUERC/00386/17) for the study before commencement. Permission was also obtained from the Ministry of Health County department to access and conduct research in the 10 health facilities.

Informed consent

The informed consent process involved giving a verbal explanation to each eligible study participant on the nature of the study, its

purpose, the procedures involved, the expected duration, the benefits and risks involved. The study participants were also informed that participation in the study was voluntary and that they could withdraw from the study at will and that withdrawal from the study would not affect their future treatment or relationship with the link facility. Confidentiality was ensured at all stages of the process. Data collection was preceded by an informed consent/ascent obtained from the study participants.

Results

Participant's Demographic Information
Both trained and untrained caregivers had same number of participants and gender i.e 12(50%) females and 12(50%) males. The caregivers were representatives of peer counsellors (25%), member of support group (25%), Local administrative officer (8.4%), religious leaders (16.6%), members of faith based Organizations (8.4%) and CHVs (16.6%). Majority of the caregivers were married 9(37.6%), widowed were7 (29.2%), single/never married were 3(12.5%), separated 3(12.5%) and divorced 2(8.3%). The clinicians were 6 in number, 3(50%) females and 3(50%) males. 4(66.7%) of them were married, while 2(33.3%) were single.
Themes
This study generated 5 themes; reasons for disclosure, disclosure effect on ART

adherence, facilitators of disclosure, barriers to HIV disclosure and disclosure experience by caregivers, and 12 sub-themes; ART adherence, good health, suppressed viral load, poor health due to high viral load, training caregivers on disclosure, support groups, young age, lack of disclosure knowledge, stigma and discrimination, disclosure in stages, disclosure in consultation with healthcare workers and disclosure following disclosure training. The themes and sub-themes depicted community's perspectives on Paediatric HIV status disclosure as summarized in Table 1 below;

Table 1: Themes and Sub-themes

Themes	Sub- themes
	ART adherence
Reasons for Disclosure	Good Health
Disclosure Effect on ART adherence	Suppressed viral load
	Disclosure training
	Child's poor health
	Child asking questions
Facilitators of Disclosure	Support groups
	Young age
	Lack of disclosure knowledge
Barriers to HIV status disclosure	Stigma and discrimination
	In stages
	In consultation with clinicians
Disclosure Experiences by caregivers	Following disclosure training

Theme 1: Reasons for Disclosure

Both caregivers and clinicians narrated that paediatric disclosure is key to paediatric HIV continuum of care. The sub-themes that emerged here include ART adherence and good health.

ART adherence

Optimum adherence of >95% is key to suppressed viral load, both group caregivers and clinicians for key informant interviews expressed their feelings that disclosure promotes adherence.

"Not all adhere to prescription, like before, I could give the child medicines by myself and if I am away, the child could miss medicines. After disclosure, the child takes medicines even without supervision" (FGD3, R4).

"Before disclosure, adherence was not good because the child didn't have understanding why he had to take medicines even when he was seeing himself healthy and no feeling of sickness in his body. After disclosure, he perceived that even if sometimes he may not have the feeling of sickness in his body, but because his blood has a virus, he has just to take his medicines daily to continue suppressing the virus." – FGD2, R5

"After disclosure, I felt relieved, the child takes his medicines in time, on Saturdays, older child sometimes goes to pick the medicines even alone, it has made our work easier" (FGD1, R2).

"After disclosure, adherence improved no stigma, no fear, they keep good clinic appointment, they take medicines well" (FGD1, R1).

"Children who know their HIV status, tend to own their treatment and therefore it is easier for them to suppress" (KII, 1).

Good Health

There was a consensus by both caregivers and clinicians that HIV disclosure promotes good health.

"Viral load before disclosure was very bad, child could get sick quite oftenly, this was because even my spouse and other children in the house didn't know that I and my youngest child were sick and on medication. After disclosing to the child, it also compelled me to disclose to the entire family for support. It was now everybody's responsibility to ensure child took his medicines. This improved the viral load and even the general health of the child." (FGD4,R6).

"Disclosure enhances adherence to ART translating into good outcome in terms of viral load suppression and good health"(KII4).

Theme 2: Disclosure effect on viral load/ART adherence

Suppressed viral load

Suppressed viral load emerged as the main sub-theme in both groups. The significant reduction in viral load after disclosure was an outcome that a number of participants were

aware of as demonstrated by their responses during FGDs and KIIs:-

"Before disclosure, viral load was high, after disclosure, the viral load went down" (FGD1 R1).

"When the viral load rises, the child becomes weak. Now the child is doing well because he takes medicines well" (FGD2 R2).

"Viral load improves when the child knows his/her HIV status" (FGD1 R4).

The same sentiments were reported by KIIs;

"Children who know their HIV status, tend to own their treatment and therefore it is easier for them to suppress" (KII 1).

"Children who understand their status and know why they are taking drugs have their viral load suppressed" (KII 2).

"With disclosure, viral load improves" (KII 3).

Further, a participant also highlighted the resulting suppressed viral load after disclosure:

"After disclosure I got relief. Before, we could come to the clinic quite oftenly because viral load was worse, virus level increased so much, after we had the reasons why the viral load was high, we rectified the problem, the child now takes the medicine well and we were given longer return date period to the clinic because the viral load was good. This also reduced burden on transport costs to the clinic. The viral load is good, the child is very healthy"(FGD1,R5).

Theme 3: Facilitators of Disclosure

From the discussions and interviews held, caregivers reiterated that disclosure training

has made them understand the disclosure process and that child's disclosure was now manageable. Some participants were also of the opinion that child's poor health compelled them to tell their children status so as to promote medicines taking by the children, and yet others, because of lots of questions from children on why they were on routine medication made them disclose to their children status so as to make children have right information concerning their health and the taking of routine medicines.

Disclosure training

"Most of these children start treatment at an early age, so if you will have captured caregivers training at an early age as they continue with treatment then disclosure becomes easier"(KII,1).

"Caregivers' training help them understand the relationship between viral load and adherence, this makes them deliver right information to the child and the child will adhere to the medication (KII,2).

Disclosure is easy following the disclosure training we had received (FGD1, R2)

Child's poor health (Increased viral load)

In both groups, caregivers and clinicians informed that child's poor health due to increased viral load as a result of poor adherence to the medication by the child, could compel them to disclose to the child HIV status, so as to make the child understand his/her sickness and routine medicines.

"I started from the point of his hospitalization which came as a result of increased red germs in the body. I told the child that the red germs increased because

sometimes he fails to swallow medicines when he throws them away. I told him that throwing medicines away means giving red germs room to grow and to overpower him and that was why he was hospitalized. The red germs I have been mentioning to you are what we call HIV, and so you have HIV and must make sure you take your medicines well to lower the virus levels" (FGD1, R2).

"On the day of discharge, and following child's past history of intermittent adherence to ARVs, I asked the child whether he would like to know why he takes medicines every day, then the child said yes. Then I said to the child "it is important you take your medicines well in-order to live. This is because you have a chronic condition called HIV that is silenced only with medicines"(KII6).

Child asking questions
Some disclosures come as a way of stopping children's many questions pertaining to daily medicines. Some however, disclosed in-order to make the children understand their health situations.

The child asked me why only him takes medicines among the children in our house. Then I said to him "it is because you are sick. Remember you are just from being hospitalized because you were sick and that is why you have to continue with your medicines. Then the child asked again, "mama will I be taking these medicines every day?"Yes, you also see me take my medicines everyday because both of us are sick with HIV "(FGD1,R5).

Support groups
Children joining support groups impact HIV status disclosure. At the support groups, they interact and even ask each other whether or why he/she takes medicines. They receive accidental disclosures from their peers even before taken through the disclosure process by their caregivers.

"Teachings in the Psychosocial Support groups made my child to know his HIV

status, so the child just confirmed with me" – FGD1, R3

"It took me a long time before disclosing. Due to the teachings in the PSSG, the children were receiving and having gained some understanding, I sat him down then I told him that we take these drugs because we are HIV positive." – FGD 1

Theme 4: Barriers to HIV status Disclosure:

A number of issues emerged as challenges to pediatric disclosure. The following Sub-themes emerged from the responses given by the study participants; age of the child, knowledge of disclosure process, stigma and discrimination.

Age

Age surfaced as a major sub-theme in both groups as to why it was difficult to tell children their HIV status. This was supported by the responses below;

"It depends with child's age to understand things. When the child is old enough with good understanding, can then be told his status" (FGD4,R1).

"A child of age 4 may not understand the implication of an HIV disease. So as the child grows, you provide age-appropriate information until the child understands. If you just tell the child without proper understanding, the child can even commit suicide" (FGD 2, R5).

Knowledge of disclosure process

Parents' lack of or untimely training of caregivers on disclosure process, featured among the untrained FGD and KII participants as a reason why it is difficult to

tell children their HIV status

"It was really difficult and uncomfortable because I didn't know what to tell the child. I consulted with the clinician what to tell the child then the clinician told me what to do" (FGD2, R5).

"Insufficient disclosure knowledge, as a parent, you don't know what to tell the child, you lack words" (FGD3, R6).

"Healthcare workers lacking knowledge on disclosure, and just telling the caregiver to go and disclose"(KII1).

Stigma and discrimination

Some participants mentioned that fear of stigma and discrimination is one of the main reasons as to why it can be difficult to tell children their HIV status.

This sub-theme was supported by the following views from the participants;

"The discordant parent who is HIV negative sometimes tend to discriminate against the spouse and child who is HIV positive, and this usually delays disclosure" (KII2).

"Discrimination that the child may get from peers makes us fearful to disclose to the children their HIV status" (FGD2,R4).

Other factors that impede disclosure were also cited among KIIs:

"You find a child being taken care of by another child making disclosure difficult. The parents are there but are absent parents because they are busy in business" (KII,1).

"Cultural beliefs that we should not talk about sex to young children, can hinder

disclosure" (KII,2),

"Fear from parents on how to explain to the children how they got the HIV unless they are given good disclosure literacy" (KII2).

Theme 5: Disclosure Experience between Trained and Untrained group caregivers

The caregivers expressed that disclosure requires adequate time because it is a process and not a once-off occurrence. They engaged children in sessions to discuss the disease, taking into account their cognitive, emotional, and sexual maturity to ensure that the children received appropriate information. They also assessed the child's HIV knowledge before the actual disclosure event. They used simple language that suited the age of the child to provide incremental information before using the term HIV. Most untrained caregivers however, experienced difficulties disclosing to their children status and requested assistance from peer counsellors. The reasons that they gave were lack of disclosure skills, fear of guilt of infecting the child, child not keen and cannot keep status confidential. The sub themes generated in regards to both parties experiences included; disclosure done in stages, in consultation with a clinician and after PSSG training on disclosure process.

In stages

Trained caregivers however, mentioned that they did the disclosure process in stages as opposed to untrained caregivers. Their views

regarding this are as highlighted below;

"The disclosure process started when the child was 6 years. Initially, I could only mention some germs in the body that compete for health. This made my child takes her medicines well. The child had started gaining understanding as to why she needs medicines every day. With the insight received in the disclosure training, in the presence of a peer counsellor, I managed to disclose to the child her HIV status. And the peer counsellor reassured her" (FGD 1,R2).

"Disclosure is a process. When my child displayed some form of maturity at age seven, I started telling her about some germs in her body which were making her to swallow medicines every day. I called the germs red and green. In the process of the partial disclosure, I explained to her that when she takes her medicines well, the green germs which protect her body from getting diseases increase in number and provide for her maximum body protection. But if she doesn't take her medicines as prescribed, the red germs increase and her body is prone to many diseases like TB, pneumonia etc. In connection to the partial disclosure, she was encouraged to take her medicines, but what I observed was worrying her was the fact that other siblings were not taking medicines. This very fact, led to full disclosure whereby I had to explain to her how she contracted the HIV and reasons why she must adhere to her daily medicines." (FGD 2, R5).

In consultation with a clinician

Untrained participant highlighted that she did the disclosure after consultation with a clinician. A view in support of this statement is as below;

"I disclosed when 10 years. I consulted with the clinician what to tell the child then the clinician told me what to do. Then I told the child that he was HIV positive." – FGD1, R3

Other experiences by the untrained caregivers include;

> *I sat my child down after attending clinic and told him "You can see we were given medicines, we are taking them because we are HIV positive. I also cheated the child that a time is coming when we will stop taking the drugs (FGD3, R1)*

> *"Insufficient disclosure knowledge, as a parent, you don't know what to tell the child, you lack words" (FGD3, R6).*

After PSSG training on Disclosure

Some participants indicated that they did the disclosure after a training they received at the PSSG. The following views are in support of this;

> *"It took me a long time before disclosing. Due to the teachings in the PSSG we received and having gained some understanding, I sat him down then I told him that we take these drugs because we are HIV positive" (FGD4, R2).*

Discussion

We explored community perspectives on paediatric HIV status disclosure among trained and untrained caregivers. The major themes that emerged from the study were; reasons for disclosure, disclosure effect on ART adherence, facilitators of disclosure, barriers to disclosure and disclosure experiences between trained and untrained group caregivers. Both trained and untrained caregivers informed that children need to be told their HIV status in-order to adhere to

their medications and to promote good health. In their study on disclosure and health related outcomes among children living with HIV and their caregivers, Amankwah and colleagues (Amankwah-Poku, Klutsey, and Asante 2021), found out that disclosure of HIV status was significantly related to medication adherence. This was also consistent with Wandude et al. study (Wadunde et al. 2018) that found a relationship between HIV disclosure and ART adherence.

ART adherence by school-aged children is highly dependent on them knowing their HIV status, which can only be done through a disclosure process facilitated by their caregivers. Previous findings on HIV status disclosure (Ayuttacorn et al. 2019; Beima-Sofie et al. 2017; Budhwani et al. 2020; Finnegan et al. 2019),showed association between HIV disclosure and ART adherence. Similarly, in their study in Eastern Europe Guta and colleagues 2020 (Guta et al. 2020) informed that children responsible for anti-retroviral therapy were significantly associated with HIV positive status disclosure compared to their counterparts. The Haberer and Mellins study (Haberer and Mellins 2009) on adherence to antiretroviral therapy among children living with HIV in South India revealed that 20 children who had full HIV disclosure had optimized Art adherence. Other similar studies (Amankwah-Poku, Klutsey, and Asante 2021; Bulali, Kibusi, and

Mpondo 2018a, Haberer and Odiachi 2017) also revealed association between HIV status disclosure and ART adherence.

Facilitators of HIV status disclosure also emerged as one of the themes in this study, with support groups, child's poor health due to increased viral load and disclosure training as sub-themes of facilitators to HIV status disclosure. Seeing and interacting with fellow children with same diagnosis and taking medicines encourage the children on ART to take their medicines, and so support groups have been very supportive in promoting health education and positive living a mong HIV positive persons. In their studies, Galea et al. (Galea et al. 2018) and Mphego et al.(Mphego et al. 2023), reported that HIV status disclosure process would evolve when children were able to ask questions about their sicknesses, with detailed questioning about their HIV status facilitated by the knowledge they acquire through health education at support groups. Disclosure skills have been cited in a number of studies (Bulali, Kibusi, and Mpondo 2018b; Dessie et al. 2019; Madiba and Diko 2021) to facilitate HIV status disclosure. Our larger study (Opiyo, Ndunyu, and Onyango 2022) revealed that caregivers trained on disclosure process, were two 2 times (OR-2.369) likely to disclose children's HIV status.

Non-disclosure of HIV status has been identified as one of the potential barriers to optimum adherence especially in children and adolescents. Non-disclosure leads to non-adherence and consequently poor treatment out comes such as treatment failures, increased drug resistance strains, increased viral load and associated risk of HIV transmission to the general population. The caregiver may choose to delay or postpone the disclosure process out of fear of stigma, being identified as a source of HIV infection and therefore feeling guilty, being blamed, or rejected, or due to caregiver's feelings about the child's conditions to include; child is too young or not emotionally ready for disclosure. In our study, caregivers reported child's young age, lack of disclosure knowledge, stigma and discrimination as sub-themes of barriers to HIV. A study by Hayfron-Benjamin et al on HIV diagnosis disclosure to infected children and adolescents; challenges of family caregivers in the Central Region of Ghana (Hayfron-Benjamin et al. 2018), identified the strongest factor for non-disclosure as lack of knowledge on the disclosure process, which were cited in a number of expressions among children's primary caregivers as follows; "I do not know what and how to tell", "I do not know how child will react and how to handle any negative reaction", "I do not know the exact age at which to tell the child.", and "I do not know how to explain sex to child if asked how he/she got infected. Similarly, Madiha and collegues (Madiba and Diko 2021)found out that healthcare workers were reluctant to disclose to HIV positive children

their status due to lack of disclosure skills and training and so lacked confidence to tell children their status. Age of a child has also been associated with disclosure. In many studies (Beima-Sofie et al. 2017)(Beima-Sofie et al. 2017)(Namukwaya et al. 2017) parents were of the opinion that the child would not understand the consequences of an HIV diagnosis in their lives.

Our study revealed that trained caregivers were able to tackle child's disclosure in stages unlike the untrained caregivers. The trained caregivers were also able to disclose to their children status with ease unlike the untrained caregivers, some of whom, consulted with healthcare workers on what to tell the children during the disclosure process. Several studies as cited above on non disclosure, cited disclosure training of caregivers as a very key factor in the paediatric disclosure process.

Conclusion

This study concluded that HIV disclosure is central to pediatric ART adherence and promotion of good health.

Acknowledgement:

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Quality Assurance and Blended Learning: Policies, Principles and Practice - A Case Study of Kenya

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Abstract

Regulatory environments in manyHigher Education Institutions (HEIs) in Africa are not designed to support quality in online delivery. This project analysed gaps in quality assurance frameworks nationally and within institutions with the aim of identifying elements of Quality Assurance (QA) frameworks that support quality digital education in Kenya. The project used the mixed methods approach guided by three key pillars: Development of analytical framework focused on the literature review and identification of policy frameworks and engagement with stakeholders; Data validation and analysis informed by the surveys and case studies; and making recommendations based on national QA frameworks and institutional policies surveyed. The key results indicated that Kenya lacks a national policy framework to guide its quality assurance of online and blended learning practices but different institutions have best practice case study examples that other HEIs can use for bench marking and integration into their own practices.

Introduction and Background Information

Much of the body of research into the digitisation of universities in Africa (and beyond) has focused on the challenges and gaps in connectivity and accessibility in the short term as a result of the ongoing Covid-19 pandemic (Kommers et al., 2021; Zeleza & Okanda, 2021; Awah 2020; Ngcamu, 2019; Van Niekerk, 2018). There has been less focus on the policies that are needed to ensure the sector is able to deliver quality education now and into the future. This reflects the necessary focus from the sector to pivot to digital teaching quickly to ensure continuity of teaching during the Covid-19 shut-downs earlier in 2020. However, there is need to urgently address the need for a medium-long term transition to a much higher proportion of blended and online teaching delivery going forward.

The recent World Bank report 'Covid-19 Crisis Response Supporting Tertiary Education for Continuity, Adaptation and Innovation' (World Bank Education, 2020), highlighted that regulatory environments in many countries are not designed to support improvement in online delivery. With the shift to digital learning now becoming a long-term strategy for many, universities and policy makers must ensure that regulatory frameworks and institutional policies to match them are fit for purpose and designed to support quality digital teaching. By pointing to what has worked well and where gaps may exist in current frameworks, the output from this research project will support Higher Education Commission to adapt their frameworks to ensure they are encouraging best practice in online education in the universities. By providing case study examples of where universities have adapted to digital provision, the project output will support those institutions still making the transition to quality digital provision by pointing them to the institutional policies and practices that will ensure success.

In this project, the research team analysed current gaps in policy by compiling a comprehensive list of documents for review and drawing on this literature throughout the research project. Focus was given to issues relating to digital access, learning design, content, and pedagogy. Additionally, significant preliminary capacity and infrastructural barriers were identified. There review also highlighted where recent changes and adaptations have been made. Paying particular attention to where digital provision has been addressed. As part of the review of quality assurance frameworks within institutions, the research team examined how a sample of universities developed, modified polices and guidelines in specific areas, focusing on; online teaching and learning, the development and approval of alternative assessments, learner experiences, access challenges and internal verification. During the inception phase, the research team will created standardized tools framed by analysis of the available literature. These then guided stakeholder consultations and were used in a standardized manner across the universities, whilst still allowing for sufficient flexibility to enable each research team to explore country specific policy and operational contexts.

The output from this project highlights gaps and opportunities for universities and national policy makers to address as well as providing exemplar case studies of institutions which have successfully managed to pivot towards digitally based teaching solutions. Due to the significant emphasis of QA on self-assessment and self-improvement, findings are presented alongside appropriately designed tools and methodologies for HEIs to undertake and implement their own digital education policy reviews. Of critical importance during this project was the engagement of key stakeholders during the qualitative data collection phase. Alongside their own networks, the researchers drew upon the Association of Commonwealth Universities' (ACU)network of 36 universities in the region and the ACU's strong links with the relevant Higher Education Commissions and Ministries.

Purpose, Aim, Objectives, Outcomes and Output of the Project

The scope of the project covered both Kenya and Nigeria. Its main purpose was to address 'National and institution digital related policy and strategy for university leaders and policy makers'. This purpose was built upon the ACU's recently published Digital Divide survey and policy brief which gathered 258 responses from 33 countries and provided guidelines for governments and institutions to support digital access and engagement in Higher Education (Shackleton & Mann, 2021). This research project was further built on the learning taken from the ACU's SPHEIR funded Partnership for Enhanced and Blended Learning (PEBL) project which worked closely with the Commission for University Education (CUE) in Kenya and other bodies across the Commonwealth to develop a QA rubric for partner universities to assess the quality of their blended courses. Partner universities are currently using this QA tool to review their courses and develop action plans to improve the quality of their blended teaching offer.

The aim of this project was to identify elements of QA frameworks that support quality digital education alongside traditional teaching methods to inform policy making at national and institutional levels in Kenya and Nigeria. By adopting a multi-country approach, the findings have wider applicability to sub-Saharan Africa. However, the current report mainly covers only the outcome and outputs from the Kenyan context.

The long-term objective of the project was to support the sustainability of online and blended teaching by ensuring that they are adequately addressed in national and institutional QA frameworks. Specifically, the objectives of the project were to:
  i.   Provide policy makers in Kenya an analysis of the regulatory frameworks that have been put in place across the Higher Education Institutions (HEIs)

by pointing out examples of where these have resulted in the adoption of good practice at institutional level or that have created unintended barriers.

ii. Provide universities with case study examples of where universities have transitioned to digital delivery effectively by addressing the pre-existing practices and policies that facilitated an easy transition.

iii. Develop a set of recommendations for national policy makers on how to integrate QA for digital teaching into their national frameworks.

iv. Develop a set of principles to guide the development and offer of online programmes in HEIs.

The project set out to attain the following outcomes in the Kenyan context:

i. Kenyan policy makers to use the outputs to refine their regulatory frameworks to ensure support for and improvement in online delivery in HEIs.

ii. HEIs in Kenya to put in place digital delivery policies that support quality teaching because clearer and more refined policies increase the adoption of technology-enhanced learning.

iii. Kenyan HEIs to make a quicker transition to online learning because of clarity in policy expectations.

iv. Recommend a set of principles that HEIs can use in developing and offering their online programmes

The key output from this project was a report with recommendations for policy makers and HEIs on the QA framework to adopt in blended and online learning. It further recommended a set of principles that HEIs can use in developing institutional online learning projects.

Methodology

The project used the mixed method research design (Johnson et al,2007) supported by the following three pillars: The development of an analytical framework focused on the literature review and identification of policy frameworks and engagement with stakeholders; Data validation and initial analysis informed by the surveys and case studies and lastly reporting and recommendations based on national QA frameworks and institutional policies. These stages are presented for clarity in figure 1 below:

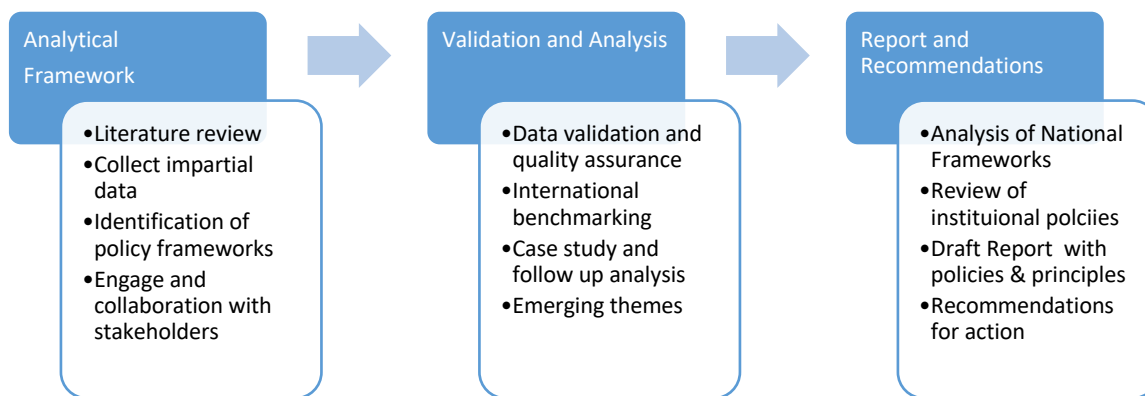| Analytical Framework	Validation and Analysis	Report and Recommendations
• Literature review • Collect impartial data • Identification of policy frameworks • Engage and collaboration with stakeholders	• Data validation and quality assurance • International benchmarking • Case study and follow up analysis • Emerging themes	• Analysis of National Frameworks • Review of instituional polciies • Draft Report with policies & principles • Recommendations for action

Figure 1: Project Analytical Framework

The Project Analytical Framework is a model which is aligned with international best practice and supported by the World Bank's Global Evaluation group. It provides a

globally acceptable outcomes-harvesting strategy to provide a system-wide policy analysis that should lead to recommendations that merit international acceptance.

Research instruments

The methodology featured complementary quantitative (QA) and qualitative (QR) research instruments to realize the project objectives and lead to effective recommendations. The quantitative and qualitative instruments were co-developed by the ACU research team in collaboration with researchers from both Kenya and Nigeria. A key strength of the mixed methods design is the adaptability and responsiveness of the research methodology. It enables key questions to be seeded across data collection tools at short notice, ensuring an agile and tailored research strategy. The triangulation of responses to these key questions facilitated checks of consistency and helped to evaluate the quality of the data collected. The instruments used in this project included: Document analysis guide; Survey-based enquiry on international and national policies and principles; Interview-based enquiry using focus groups discussion guides and interviews guides; Quality Assurance Review guides; Case studies; Secondary data analysis of policies and principles; and Stakeholder mapping guide.

Population and Sampling

The maximum variations sampling scheme was used in this project to maximize the range of perspectives being investigated (Onwuegbuzie & Collins, 2007). In this project, a representative sample of 20% of all HEis was identified to be included in the analysis to form part of the stakeholder map and was therefore considered adequate given the mixed methods design used (Tegan, 2021).

Kenya had a total of 31 public chartered universities, 20 private chartered universities and 13 private universities with letters of interim authority. Out of these, 10 public, 10 private and 2 universities with letters of interim authority were sampled for the survey and interview which was approximately 33% of the population. Table 1 below gives the distribution of universities that were sampled.

Table 1: Distribution of Sampled Universities

Type of HEI	Old	New	Urban	Rural	Technical Orientation	Social Science orientation
Public	3	6	5	4	4	5
Private	3	6	3	3	3	6
interim	-	2	2	-	1	1

In this project old refers to HEIs established between 1960 and the year 2000 while new refers to all HEIs established after the year 2000. The sample HEIs had 6 established and 14 new universities with the majority of the HEIs based in an urban setting (13) while 7 are in a rural setting. Eight of the sampled HEIs had an orientation to technical courses while 12 had a higher orientation to social science courses. The sample also had 2 universities with international presence as their head offices are outside Kenya with branches in several countries. This means that the HEIs were considered based on location, age since establishment, geographical location and subjects on offer.

Data Collection and Analysis

Data analysis used the 'mixed methods' design model aligned with an outcome harvesting strategy for the qualitative and quantitative research (Tegan, 2021). The quantitative strategy consisted of three elements, a sampling strategy, baseline data collection and criteria for the identification of case studies for use in qualitative review. The qualitative strategy consisted of formulation of structured of questions and the format of

interviews for institutions and policy makers, the methodology for analysis and the quality assurance process to support this.

The baseline data was collected to inform emerging propositions and to validate the scale of usage. The data collected was standardized for use. The baseline data included the following for institutions:

- Number of HE departments in the sample
- Number of staff per department
- Number of undergraduate and post graduate students per department
- Number of staff identified as having responsibility for digital teaching per HEI/department.

The project adopted a three-level case-studies approach and the baseline data was used to identify the HEIs and departments that meet the criteria for case study review.

i. Level 1 National Case Study criteria – This consisted of a case study of the national agency responsible for policy delivery and an analysis of impact. Review of liaison with HEI on policy, relevant policy documents and impact.

ii. Level 2 HEI Case Study criteria – This consisted of three detailed case studies from Kenyan HEIs were carried out. These provide insight into issues affecting digital teaching. The expectation was for a case study of an HEI that has effectively used digital teaching with successful policies in place across a range of departments, another case study of an HEI with limited use and a final case study of an HEI with poor digital engagement.

iii. Level 3 HEI Light Case Study criteria – This consisted of three short profiles of departments or HEIs that illustrate dimensions of the issues surrounding digital engagement and policy frameworks in Kenya. The aim of these light touch case studies was to highlight what works, what hasn't and how individual departments have responded.

Once the institutions had been identified for the case studies, the researchers sought consent of the national agency and Vice Chancellor to conduct the follow-up interviews in order to develop the case studies. The outcome from this allowed researcher to identify institutions meeting the set criteria for Level 2 case studies and only once these have been completed did the researchers identify the Level 3 light touch case studies.

Data collected from surveys, interviews and case studies were organized and summarized using descriptive statistics. This was necessary for researchers to identify trends, patterns and relationships which were then investigated further using qualitative methods involving content analysis, discourse analysis and thematic analysis making it easy to generate reports.

The analysis and reporting strategy was therefore iterative and dependent upon the quality of the data and the interviews undertaken. Researchers were free to undertake further analysis if not satisfied that evidence is sufficiently robust or representative. The key elements of reporting included:

- Interim updates from data analysis
- Emerging findings from interviews and case studies
- Quality Assurance analysis of processes

These were then reviewed and incorporated into outcomes for the draft report.

Literature Review
The literature review was undertaken at three levels: International, National and Institutional Levels. The International level looked at analysis of current global practices with evidence being sought from studies by Association of Commonwealth Universities (ACU), World Bank, UNESCO and Commonwealth of Learning. The national level literature analyzed existing national policies and frameworks from by looking at the efficacy and existing gaps. The institutional analysis was done to determine

whether there were institutional or departmental policies, whether these were quality-assured and the decision-making process for the switch to digital learning. It would also examine the existing quality assurance mechanisms and how well they audit or review digital teaching.

International Quality Assurance Policies and Frameworks on Digital Learning

Given the scale of investment in digital education in HEIs, three elements are striking: first, the unregulated nature of the market; second, the absence of consistent or agreed national or international standards for quality assurance and third, the absence of extensive literature on digital education and quality assurance relative to the size of the market. Whilst there are good examples of policies and institutional frameworks such as the EU-Africa HAQAA project there are no agreed international standards (The European Commission, 2022).

The global digital education market is likely to reach $319 billion and Covid is likely to accelerate the current demand for immersive digital engagement in HEIs whilst increasing digital inequality in developing countries, with a focus on USA, Europe and Asia. The requirement for national standards, institutional policies, quality assurance structures and professional development to support the transition to high-quality and sustainable online learning and digital engagement is evident (Mawazo Institute, 2020).

According to Sherman (2020), the African Virtual University (AVU) and Pan-African University (PAU) were precursors to networked online Higher Education communities modelling and developing technological solutions to meet the demands for access to advanced learning. Their work continues but has been constrained by funding and political challenges. She further explains that with 48 countries and a population of over 1 billion, Sub Saharan Africa (SSA) is one of the largest regions in the world. With a gross tertiary enrolment ratio of 9.4%compared to 38% globally and a total of 9 million students enrolled in Higher Education, Higher Education infrastructure cannot meet current demands and is likely to be further outpaced by the demographic boom. This is likely to lead to increased hybridisation of Higher Education delivery based around virtual engagement and changes to the business model. The African Virtual University first trialled this in 2000but with the Covid pandemic, cuts to education budgets are likely to speed demands for more digital engagement.

World Bank (2020) further explains that there are approximately 1,650 HEIs across Africa with an average 5% participation rate from 18-23 age cohorts. UNESCO noted that 89% of students in SSA lack access to home computing and internet. There is evidence that innovations such as content management, learning management systems and digital engagement have become normalised and are disrupting the traditional model of teaching and learning and revising pedagogy. The move to blended and modular learning, a customised student experience and a wider digital learning environment are visible but uneven with significant barriers still in evidence. It is further recorded that the Sub-Saharan Africa is the region with the lowest research capacity and outputs but has attracted vast funding from international organisations dealing with digital education and distance learning through projects like Partnership for Enhanced and Blended Learning (PEBL), The Lending for Education in Africa Partnership (LEAP), Pedagogical Leadership in Africa (PEDAL)and Centres of Excellence (World Bank, 2020; SPEIR, 2021). These endeavours on expansion of Pan-African digital solutions and quality standards have however been restricted by the following factors

according to European Commission (2022), SPHEIR (2021), Sherman (2020), World Bank Education (2020), Ngcamu (2019), and Van Niekert (2018).

i. Standards – the absence of consistent global standards, regulations and policies on quality assurance frameworks and digital services.

ii. Bureaucracy – Higher Education structures remain process-driven with limited devolution restricting collaboration and knowledge sharing.

iii. Demographics – by 2050, SSA will be the only continent with an expanding population, raising issues concerning access to Higher Education, the student experience and the capacity of the system to meet demand.

iv. Quality – the massification and privatisation of Higher Education to meet demographic demands has also created issues of quality and standards of provision which have been reflected in some of the challenges on learning infrastructure and digital standards.

v. Competition - there are layers of competition for influence that limit Pan-African solutions, knowledge sharing and regional policy frameworks. These include rivalries between Francophone, Lusitanian and English spheres of influence and tradition, regional rivalries and economic competition.

vi. Monetisation – there is increasing evidence of monetising free online content to supplement institutional or individual needs.

vii. Infrastructure – the cost of data, the investment required for digital structure and access for students continues to be challenging.

viii. Professional development - the absence of effective national or best practice models of professional development for blended learning, content development and digital engagement means that this is an open space without agreed frameworks.

ix. Content development - the absence of institutional frameworks or national policies means that the student experience of digital engagement is varied. This can range from YouTube lectures to posting lecture notes online.

x. Capacity – there is limited institutional or national capacity to implement digital policies, quality assurance and compliance systems or to monitor them. Where policy frameworks do exist, these are not updated to meet changing demands.

The same team identifies opportunities that have led to positive development in digital solutions and dealing with existing barriers.

i. Innovative delivery models – the African Virtual University has a 20-year history of developing online and digital education and the PAU provides a model of collaboration that transcends traditional regional rivalries. These are established models of good practice.

ii. Free or reduced cost data packages for students - both Kenya and South Africa have developed low cost or free data packages for students, increasing access to online learning. There are opportunities to liberalise the telecoms market for education.

iii. Sustainable financing – the current business model for many HEIs, both state and private, has proved vulnerable pushing some to the brink of closure. Re-balancing the business model through performance funding, enhanced equity and other indicators could develop a sustainable financial framework.

iv. Connectivity – enhancing connectivity, using zero-rated access to education websites and courses, sharing online content between HEIs and strengthening National Research and Education networks provide pathways for enhanced connectivity.

v. International collaboration - there are extensive international networks that

are being mobilised to share best practice, to support knowledge transfer and build networks for digital engagement secured by quality frameworks.

vi. Open-source textbooks – the provision of open-source textbooks is opening up the textbooks market, creating opportunities for lecturers and students to develop customised learning materials

vii. Inward investment – there is evidence of significant inward investment in digital infrastructure and customised learning that has the potential to challenge the existing Higher Education business model and accelerate wider access.

viii. Covid response - Covid is altering the Higher Education landscape and provides a policy framework to reshape digital delivery in HE.

With campus closures, the move to digital learning and online platforms exposed the digital divide between HEIs where many lacked the infrastructure to deliver programmes online. The exceptions to this included the African Virtual University, Maseno eCampus, Kenyatta University Digital School of Learning, the University of Rwanda's e-learning platform and some HEIs who had invested in digital capacity (World Bank, 2021). Research by the Mawazo Institute (2020) further indicated that only 38% of students were based at institutions that offered e-learning with higher rates in East and Southern Africa compared to West Africa. It further indicated that amongst tertiary students, 30% had access to internet and 42% owned a personal computer, indicating that access was restricted to privileged groups, further strengthening digital divides. However, 97% of students had access to a mobile phone which could be used for digital engagement.

The Covid pandemic is expected to be a feature for the Sub-Saharan Africa HEIs for the next few years, further pressurising national education services. The positive side is that it provides an opportunity to reframe

access to Higher Education, to erode the digital divide, to re-align provision for future needs and to widen access and participation. The International Literature Review demonstrates the significance of digital learning as a means to meeting Higher Education demand in Sub-Saharan Africa. The barriers, constraints and opportunities identified in the review were considered in the analysis of the Kenya context.

National Quality Assurance Policies and Frameworks on Digital Learning

Digital learning is gaining momentum in Kenya, one of Africa's leading technological hubs, where the mobile internet penetration rate stands at 83% in comparison to 23% for the rest of sub-Saharan Africa. Despite Kenya's regional technological dominance, not all learners in the country have access to digital learning tools. This is due to a wide range of factors such as income inequality, limited access to electricity, limited infrastructure support in rural areas, a significant refugee population, as well as other social and cultural factors. Digital penetration is not the same as digital adoption or digital literacy and these characteristics are reflected across HEIs (Khandri, 2020).

In March 2020, the Kenyan government closed all learning institutions countrywide to contain the spread of the Corona virus. The COVID-19 pandemic laid bare how education in Kenya could evolve and the urgent need to accelerate the Kenyan government's digital learning programme especially in HEIs. Not all learning institutions were adequately prepared to integrate digital learning tools such as cloud-based e-learning platforms, teleconferencing software, tablets and smart phones into their teaching models or assessment systems (Morales, 2020).

According to Kamer (2022), Kenya has 31 public chartered universities, 20 private chartered universities and 13 universities with interim letters of authority. Over 509,000 students were enrolled in universities during 20/21 a decrease of 1.9% on the previous year. The majority of these students in Kenyan universities were males, 303,000 compared to 206,000 females. Most students

enrolled in higher education attended public universities, a total of 442,000 compared to 96,000 in the private sector.

Commission for University Education (CUE)is an agency of the Government of Kenya mandated to plan, monitor, regulate, modify, improve, and communicate policy to stakeholders, regarding university education. To realize this, it developed the University Standards and Guidelines (2014) within which guidelines on operating Open, Distance and e-Learning *(ODEL).* The ministry of Education (MOE) in Kenya does not have any policy for blended and online learning in place as this role was delegated to CUE but has a vibrant national policy that provides a firm foundation for digital learning to thrive in HEIs.

The national policy to regulate online teaching for quality assurance is contained specifically in the Fourth schedule on standards and guidelines for Open, Distance and eLearning within the Universities Standards and Guidelines 2014 (CUE, 2014). Besides the fourth schedule of the same guidelines, there are separate sections of the standards and guidelines that provide guidance to the Universities on how and the need for such internal regulatory frameworks such as Internal Quality Assurance policy (Inst/std/03 and Inst/Std/09) which states that a University shall promote highest standards of teaching and learning and that there shall be a variety of delivery modes and methods which shall be employed while promoting creativity and critical thinking in learning. These two provisions of the CUE standards and guidelines provide a framework for individual universities in Kenya to engage in activities that ensure the highest standards of learning while at the same time giving the Universities space to explore a variety of modes of delivery including online teaching.

In addition to these CUE standards and guidelines for Open, Distance and eLearning (ODEL), the Commission for University Education in August 2020 issued format for preparing a Self Assessment Report for ODEL programmes for institutions in Kenya (CUE, 2020). These guidelines were issued at a time when Universities were switching to online learning due to the government regulations to address the spread of Covid-19 pandemic. The self assessment tool was to ensure that the Universities maintain high quality of online teaching that guarantees inclusivity and equitable with the right policy framework and technological infrastructure that allows easy access and effective support services to students and staff. This tool was enhanced from lessons learned from the Partnership for Enhanced and Blended Learning (PEBL) project.

Young et al (2021) indicates that there is strong qualitative evidence that PEBL contributed greatly to strengthened QA systems for blended learning across the HEIs in the Eastern Africa region. They further indicated that the Common wealth of Learning (CoL) trainings, workshops and QA tools greatly enhanced the capacity of staff and institutions in the PEBL network on QA for blended learning. PEBL designed QA approaches met most criteria of recognized standards of good practice, though there was little evidence that users, i.e. students, have been involved in the design – one of the key standards. PEBL designed QA approaches have been institutionalized in some universities. However, there was no doubt that the COVID-19 pandemic accelerated the adoption of blended learning and the development of related QA systems within the HEIs in Kenya and the East Africa region.

The above literature shows that while there are several gaps in quality assurance for online and blended learning in Kenya, there exist foundational QA policy instruments at national level that can offer guidance to HEIs on assuring quality of their online programmes. It was also clear from the literature that there is high growth in blended and online learning fuelled by the COVID pandemic but insufficient skill for QA personnel in the HEIs to quality assure learning practices in Kenyan HEIs. This gap is however being reduced through targeted

training by various international bodies like CoL and the Association of Commonwealth Universities among others.

Institutional Quality Assurance Policies and Frameworks on Digital Learning in Kenya
The purpose of the institutional analysis was to determine whether there were institutional or departmental policies, whether these were quality-assured and the decision-making process for the switch to digital learning. The institutions covered in the study were both private and public chartered institutions.
The Commission for University Education self-evaluation questionnaire for chartered universities in Kenya (CUE 2020) remains the key tool used by HEIs in Kenya in measuring quality of their blended and online programmes. The Commonwealth of Learning Quality Assurance Toolkit for Distance Higher Education Institutions and Programmes was also used for benchmarking among the HEIs in Kenya (CoL, 2009, Mohee & Peris, 2021).

The following were some of the relevant indicators from institutional reviews (CoL, 2009; Kihwelo, 2013; Kondapalliet al, 2009; Mohee & Peris, 2020): Existence of vision and mission statements for online or blended learning; management, organizational culture and leadership. There were also indicators focusing on learners, human resource development, program design and development, course design and development, learner support and progression, learner assessment and evaluation, learning infrastructure and resources. The dimensions used in the review had various parts: criteria statement, performance indicators, source of evidence and the measure used.

Kihwelo (2013) and Mohee &Peris (2020) both highlight several challenges facing open and distance learning in Kenya and the East African region such as lack of National ODL policy, lack of home grown quality assurance framework, lack of proper and reliable ICT infrastructure to support the open and distance learning system and absence of adequate experts in open and distance learning. Despite all these challenges, CUE (2020), Nzuki & Wanyama (2020), World Bank (2019) all agree that HEIs in Kenya have policy guides or frameworks that help in development of infrastructure, guide online content development, online teaching and online facilitation. CUE (2019) further observed that the institutional policies were drawn from the national policy guidelines set out by the Commission for University Education. However, they all point out that most of the HEIs depended on QA frameworks that were developed for face-to-face teaching and learning.

In comparing decision-making centres however, CUE (2019) and Republic of Kenya (2016) observes that user departments within the HEIs may not be aware of the actual stipulations of national policies as most of the HEIs except one vested decision making on online learning with the ODEL Centre manager, the Deputy Vice Chancellor Academic Affairs or the Vice chancellor. This clearly shows that decision making has not been decentralized and as such the user departments fail to take ownership of the policy guidelines or frameworks.

Institutional Principles that Guide the Development and offer of Online Learning Programmes
Holland (2019) identifies two effective principles of informal online learning design that HEIs can utilize when developing online education programmes for adult audiences as interaction opportunities that support knowledge construction and learner empowerment and segmented, titled, and tagged learning objects that facilitate personalized learning. Tanis (2020) together with Sorensen & Bayer (2009) on the other hand talk about seven principles of effective online learning which are: Student-faculty contact; Cooperation among students; Active learning; Prompt feedback; Time on task; Communicating high expectations; and

Respect diverse talents and ways of learning. Anderson & MacCormick (2005) further expanded these seven to 10 pedagogic principles that education institutions can leverage technology to achieve greater reliability, in a scalable model for online instructional delivery as: Aligning pedagogy to curriculum; Support for inclusivity in learning; Leveraging technology for learner engagement; Use of affordance of technology to engage in innovative approaches; Effective learning that is accommodative of different learning styles; Use of formative assessment with immediate feedback; Use of reliable & valid summative assessment; Coherence, consistency and transparency in course development; Ease of use as a course development strategy; and Cost effectiveness in online courses.

From the literature reviewed on principles that guide the development and offer of online learning programmes, none of the universities were found to have within their policy documents, a set of principles that guided the development and offer of online or blended programmes. However, in practice, most of the universities followed the said principles in part. For example, Kenyatta, Maseno and Masinde Muliro Universities were found to have developed content based on these principles without explicitly mentioning them in any of their policy documents. CUE (2019), further confirmed during the interviews that most universities that offer online and blended learning in Kenya as monitored by their QA teams adhered to the key principles of online and blended learning.

Results and Discussion
As mentioned earlier, this project was guided by three key pillars: The development of an analytical framework focused on the literature review and identification of policy frameworks and engagement with stakeholders; Data validation and initial analysis informed by the surveys and case studies; and lastly reporting and recommendations based on national QA frameworks and institutional policies. This

was done as a means of responding to the research objectives which were to:

i. Provide policy makers in Kenya an analysis of the regulatory frameworks digital learning that have been put in place across the Higher Education Institutions.

ii. Provide universities with case study examples of where universities have transitioned to digital delivery effectively.

iii. Develop a set of recommendations for national policy makers on how to integrate QA for digital teaching into their national frameworks.

The results being presented in this section is organized based on these three areas from the objectives.

Analysis of Regulatory Frameworks for Digital Learning in Kenya HEIs
In analyzing the regulatory frameworks for digital learning in Kenya, the key question was *"What is the evidence that there are active and effective national or institutional quality assurance frameworks for digital teaching in Higher Education in Nigeria and Kenya?"*
To further analyze the frameworks, the following components needed to be responded to:

i. Is there a national policy, or agreed framework, for quality assurance of digital teaching?

ii. Are there institutional policies to quality assure digital teaching?

iii. Are there any established audit mechanisms to validate the quality and efficacy of digital teaching across Higher Education or an individual HEI basis?

iv. What is the evidence that policies have been implemented either at national or institutional level?

v. Do institutions have a digital strategy for effective online and blended learning with requisite policy documents?

vi. Is there any evidence of benchmarking with international best practice?

vii. Who owns the digital teaching policy and where does decision-making lie?

The project took note of the symbiotic role of Ministry of Education (MOE) and Commission for University Education (CUE) in management of quality in University Education in Kenya. The Ministry of Education's role in higher education was best captured in its mission statement which states that its aim is to provide, promote and coordinate quality education, training and research; and enhance integration of Science, Technology and Innovation into national production systems for sustainable development. The role of the CUE on the other hand is to regulate and assure quality university education through setting standards & guidelines and monitoring compliance to achieve global competitiveness. CUE further aims at regulating and accrediting universities and their programmes. The MOE therefore prepares policies that guide quality at universities while CUE ensures that universities act in compliance to the policies set by MOE.

The key policy documents guiding QA in blended learning indirectly were mainly:

i. The National ICT Policies 2006 and 2019

ii. The University Act 2012 (revised in 2018) which harmonises the university standards and guidelines and the parameters in which the university sector is managed. It further gives CUE the mandate to assure quality of university education in Kenya.

iii. Sessional Paper No 1 of 2019 (Education)which aims at enhancing access and equity, the government will harmonise policies on alternative pathways to university education.

iv. National ICT Strategy for Education and Training which act as a guide for investors, partners, implementers and all beneficiaries in curriculum delivery and learning.

v. The University Standards and Guidelines (2014) that regulates online teaching for quality assurance as contained specifically in the Fourth schedule for Open, Distance and eLearning within the Universities

vi. The CUE Format for Preparing a Self-Assessment Report for Open, Distance and E-Learning (ODEL) Programmes and Institutions in Kenya

Therefore, the project noted from theliterature reviews, surveys, case studies and interviews' from Kenya that the overall absence of National Policies for blended learning and operational frameworks for quality assurance and digital deliverywas a key issue needing urgent attention from the two regulatory authorities. This observation is in line with literature reviewed which pointed to absence of not only national regulatory QA frameworks for online and blended learning in Kenya but also the absence of these QA standard guidelines on online and blended learning at international levels (World Bank, 2020; Zeleza & Okinda, 2021). At international level however, there appears to be emergence of QA frameworks that have been developed for standardising online and blended learning (Mohee & Peris, 2021; Spheir, 2021; Young et al, 2021). It is these international developing models that appear to be giving impetus to CUE on the direction to take in developing a QA tool to guide quality in blended and online learning in Kenya HEIs.

To identify existing institutional frameworks and QA practices, 20 universities were sampled and surveyed. The response rate was at 80% as only four universities failed to respond to the survey. The results are presented in table 2 that follows:

Table 2: Institutional Frameworks

Criteria	Occurrence (%)
Existence of policy or framework guiding online teaching and learning	100
Availability of audit mechanisms to validate quality and efficacy	6
Evidence of implementation of policies	44
Evidence of benchmarking with international best practice	25
Ownership and decision for digital teaching policy	25

The results show clearly that all the institutions surveyed had a policy or framework offering guidance on online teaching and learning. However only 6% had an audit mechanism to validate quality for the online programme yet all (100%) had existing QA frameworks for the face-to-face programmes. Again, less than half the institutions (44%) had evidence of actual implementation of the online programmes and only a quarter (25%) had evidence of benchmarking or taking ownership of the online programmes.

The CUE on the other hand has provided the guidelines for audit mechanisms on course development, course delivery, learner support, assessment, monitoring and management and administration of the system in order to validate the quality. Institutions of higher education are therefore encouraged to develop institutional frameworks that clearly indicate the metrics and audit mechanism which is periodically monitored by CUE through internal audit and submission of evidence to CUE through the "Self Assessment Report".

Best Practice Case Study Examples from Kenya HEIs
Research teams used the evidence from the surveys, institutional profiles and case studies to identify a series of thematic areas that impacted the efficacy of digital learning and the quality of the learner journey. The emerging thematic areas were:
  i. Higher Education quality assurance architecture
  ii. Institutional frameworks for quality assurance
  iii. Quality assurance, digital delivery and governance
  iv. Assessment and impact of online learning
  v. Competencies, professional development and skills
  vi. Knowledge management and best practice
  vii. The learner journey and quality assurance

These thematic areas were then used as criteria for identifying best practice areas for showcasing as case studies among the Kenya HEIs. The following sections discuss a series of case studies that could serve as examples to other HEIs in Kenya for benchmarking and showcasing international best practice.

"Kenyatta University is now in its second cycle of vision and strategic planning (2016-2026) and a key feature of this was to address issues of access, technology and equity for the student community. This aimed to address both student reluctance and staff resistance. They built into the fee structure the provision of low-cost learning tablets supported by internet connectivity to ensure that all students would have online access. Through a dedicated procurement model, they were able to provide targeted specifications for the tablets that provided a low-cost alternative for students. KU has further integrated online learning, content development, quality assurance and assessment within its strategic plan and this has been operationalized across all faculties and departments. In 2015, the University created the digital school to support open learning. This is supported by an integrated digital platform that underpins their service delivery. The current delivery model uses Moodle Learning and has over 1,000 interactive modules supporting synchronous learning. KU further acted as the best case in University Management buy in and support for online and blended learning."

From interviews, it emerged that KU had

benefited tremendously from training and benchmarking at national and international level (Spheir, 2021& Young et al,2021). It was the lead training institution in the Spheir funded PEBL project in Kenya and from its engagement in the project, it was able to lead online content development sessions which helped them in training their own staff in content development. Besides content development, KU were able to develop a QA framework guided by the Commonwealth of Learning team that was part of the PEBL project (Mohee & Peris, 2020).

"Strathmore University adopted a different approach for support for students' needs, creating flexible learner spaces supported by strong Wi-Fi, ensuring that all students had access to learning portals, providing access to subsidized tablets and laptops for students, creating a laptop loan scheme and ensuring connectivity as a right."

Most universities in Kenya closed down in the height of the pandemic (Awah, 2020; Mawazo Institute, 2020; & Morales, 2020) and Strathmore was among the few universities that were able to transition successfully to the online learning platform (Nzuki & Wanyama, 2020). This transition was possible because the university already had the infrastructure, a policy for students' laptop provision and had been one of the PEBL project member universities and as a result benefited from all the PEBL training and engagements (Nzuki & Wanyama, 2020 & Spheir, 2020). Strathmore continues to be a best practice case study for other HEIs in Kenya on providing connectivity as a right to all its faculty and students.

"Maseno University has developed a strong student support model through Learner Support Assistants (LSAs) for each of its schools. The University further has a students' orientation programme on Moodle for all its undergraduate students who all take university common units online and all have a component of IT for all its courses. Therefore, the compulsory orientation to eLearning course for first year students imparts the necessary online skills to its learners. The University also has a robust Learning Management System supported by online administrative centres which serve to guide delivery of online learning services across its faculty and students."

Maseno University is one of the few public universities that have had a successful online learning platform for some time and out of the other 19 universities sampled in this project, at least half had visited the university on a benchmarking session (Morales 2020). Besides being a trail blazer in online learning systems and administration of online learning platforms, Maseno has greatly benefited from online training sessions organized in various national and international forums, both online and on the face-to-face platforms. It has benefited from engagements with Commonwealth of Learning, Open University of the UK, PEBL training forums and Partnership for African Social and Governance Research (PASGR) in its Partnership for Pedagogical Leadership in Africa (PedaL) training sessions (Spheir 2021). Maseno therefore is a good case study on mainstreaming online and blended learning in a low-income university (Ayere, 2022).

"United States International University in Africa (USIU-A) had established external benchmarking through subscription to Quality Matters (QM). This is a USA based organization that provides strategic advice, certification and advice on quality assurance and online learning. QM has surveyed and accredited over 11,000 online Higher Education courses in the USA and Internationally. It uses QM to train staff, benchmark staff against agreed standards and audit content development. It further uses QM with their internal quality assurance system to provide a fully integrated model of quality assurance, alignment and benchmarking of online learning."

USIU-A was the only university that had put in place a standard quality assurance mechanism that worked and others could look when building an integrated quality assurance policy that covers both face to face and online learning in HEI in Kenya (Kihwelo 2013). Though subscribing to an external body, it provides a best-case example on

benchmarking and operationalizing a QA system and making it applicable in a local setting.

"Masinde Muliro University of Science and Technology (MMUST) has established a comprehensive plan of support for academic staff to manage the transition to online support. This includes practical training for staff in the development of course content for online learning, support and advice from instruction designers, piloting and testing courses, using student feedback to improve course design and a quality control process including faculty authorization. Academic staff is provided with targeted training in online pedagogy and course content and regular peer reviews support this. Academic progression is also linked to the successful use of online course content. The process at MMUST provides a fully integrated model of staff development aligned with instructional design and pedagogy framed by peer review."

MMUST surprised many established public universities by remaining open in the height of the pandemic as it migrated learning to its online platform and carrying out online examinations for its undergraduate students and finally held one of the first online graduations in Kenya (Kommer et al, 2021). This was possible because it had already laid down the necessary infrastructure and trained some of its students and staff before the pandemic (Mawazo, 2020). It is universities like MMUST that give hope and concretize what the CUE QA officer said when he stated that online and blended learning has become a reality in Kenya and as moderators, they need to move with speed and put in place the necessary policies to guide its operations.

Recommendations for National Policy Makers on Integration of QA for Digital Teaching and Learning

In conclusion this project directly presented views of various HEI practitioners in Kenya, officers from the MOE and the CUE especially as captured during the interviews. They all stated that their belief was that the digital learning is definitely the way to go in HEI. They all commit to continue working hard trying to make digital learning better because they all agree that it is not perfect, given that some of HEIs were forced online by the Covid situation and are not yet really ready. But the positive side of this pandemic in their view was on getting the university sub-sector into online learning. As much as they got there with a lot of resistance, people have no options so they have to make it work. The CUE needs to move with speed to put QA, blended and online learning guiding policies in place as a way of bringing the much-needed order. The MOE on the other hand need to handle the constraints that universities are having because the fluid nature of technology and the existing infrastructural gaps.

The research team further makes the following recommendations for the attention of policy makers, academic leaders and key stakeholders:

1. Establish, implement and support a national blended learning policy. The MOE and CUE to agree and develop a national blended learning policy that builds on best practice, benchmarking and feedback from the HEIs. This should be supported through targeted staff development over a period of time.

2. Establish, support and implement quality assurance frameworks that specifically apply to digital learning, course development and the learner experience. The CUE should extend its current regulations and frameworks for quality assurance to include digital engagement and assessment. These regulations should set the operating standards for all HEIs and should be audited through normal CUE operations.

3. The CUE should spell out the core standards for governance and quality assurance for digital learning and course content for HEIs.CUE to identify and point out core principles and standards for the governance of quality assurance frameworks for all HEIs that specifically include digital learning, course content development and assessment.

4. Establish a framework guiding national benchmarking and knowledge sharing for HEIs in digital learning, quality assurance and course development. A framework be developed that puts in place national benchmarking of digital learning and quality assurance through use of cluster model for knowledge sharing and peer review between university groups.

5. CUE should set standards and principles for assessment of digital learning for all HEIs that could be integrated within existing institutional structures.CUE to set core standards and principles for the assessment of digital learning which can then be incorporated within existing HE structures. This should include alignment with internal governance structures.

6. MOE in collaboration with CUE to publish best practice advice on digital learning and quality assurance, pedagogy for digital course content and case studies of good practice and facilitate workshops on this.MOE and CUE to develop a suite of materials based on emerging themes relating to digital learning, quality assurance and assessment. These would provide support for knowledge sharing through webinars, seminars and workshops.

7. MOE and CUE to develop targeted professional development for lecturers and academic leaders focused on digital learning, quality assurance, course content, assessment and pedagogy. A programme of targeted professional development for lecturers and academic leader be developed to support skills development, knowledge exchange and to improve practice in course design, learner support needs, quality assurance and assessment. This would support significant system-wide improvements.

8. The CUE to commission an audit of HEI online course content to assess the levels of inclusivity, equity and gender to inform best practice. An online audit of all online course content be commissioned to test for gender, inclusivity and access. The outcomes of the audit should be used to inform practice, to support professional development and to agree on core standards.

9. CUE to set minimum standards of learner support and access for all HEIs governing online course content. All HEIs, through CUE, to establish minimum standards of learner support and access for digital learning. These should be agreed at institutional level and incorporated into quality assurance systems.

10. MOE to put in place a HEI task force led by CUE focused on digital learning and quality assurance as means to support strategic alignment of policy for digital learning and quality assurance.

11. Establish a professional body to regulate online learning, course content and professional standards under the Ministry of Education. Given the expansion of digital learning and course content, it is recommended that the MOE and CUE establish a professional body to regulate online courses and professional standards. This would provide the opportunity to certify and guarantee of quality in online learning.

Principles to Guiding the Development and Offer of Online Programmes

The national analysis on principles guiding quality development and offer of online learning mainly centred on recommendations from CUE. Interviews with respondents from CUE indicated that providing quality online programs is a cornerstone strategy for higher education institutions in Kenya as this is envisaged to increase access to quality education. The rest of this section reviewed cases based on the following key issues that lead to CUE suggested principles:

i. Providing an overview of how HEIs in Kenya have invested resources to build, implement, and market online programs.

ii. Highlighting key initiatives for successful program design, including provision of mentorship to online students, using open educational resources (OER), and implementing adaptive active learning.

iii.   Including examples of best practice in online education practices in Kenya

iv.   Outlining opportunities for innovative program delivery enabled through online learning, including micro-credentialing, industry-university partnerships, foundational education programs, and competency-based assessment.

The core initiatives suggested centred around five key areas and these gave rise to five core principles on development and offer of online learning.

i.   Investing in expertise in online course development, including instructional design competencies, and establishing cross-functional teams with leadership support

ii.   Developing student support structures, including investment in ongoing mentorship, while leveraging technology to improve retention and student success

iii.   Innovating in program design, through the use of OER, with more modular and personalized content

iv.   Innovating in program delivery, leveraging online learning to serve working adults with flexible options and more modular badging structures, in collaboration with industry partners

v.   Providing practical ICT and 21st century skills education, through partnerships with international education providers, hubs, and industry leaders

The outcome from this analysis came out with three key principles:

i.   Principles of online learning design

For quality online learning design, quality assurance officers are encouraged to look for evidence of defined standards at the development level; designing that acknowledges the presence of an academic staff during the offer of the course; deliberate design for flexibility in the course offer; blending of appropriate technologies within the course; alignment and coherence between content, activities and assessment.

ii.   Principle of scaffolded interaction

This principle assumes deliberate construction and designing for social interaction, in a blended or online programme with the design activities encouraging students to take an active role in the learning process. For quality assurance purposes, this principle is judged by looking for documentation that create student awareness of the type of technologies in-built within the course; facilitation of independent and inter-dependent student engagement activities; incorporation of digital best practices such as literacy for e-assessment and interaction, appropriate awareness of issues regarding plagiarism, integrity, and expected online learner behaviour.

iii.   Evidence based continuous improvement

The institutional quality assurance should be premised on evidence-based approach to continuous self improvement. For this principle to be achieved there should be evidence of continuous updating of the online course content; expectation that all courses align with strategic and institutional objectives based on pre-set design criteria and processes; viewing blended and online learning as iterative processes, capable of improvement and analysis; an existing process where Student feedback is collated, documented and where appropriate, auctioned.

Conclusion

Digital learning is gaining momentum in Kenya, one of Africa's leading technological hubs, where the mobile internet penetration rate stands at 83 percent (and rapidly growing)

in comparison to 23 percent for the rest of sub-Saharan Africa. Despite Kenya's regional technological dominance, not all learners in the country have access to digital learning tools. This is due to a wide range of underlying reasons such as income inequalities, limited or no access to electricity for some segments of the population, as well as other social and cultural factors. Not all learning institutions are adequately prepared to integrate digital learning tools like cloud-based e-learning platforms, teleconferencing software, tablets and smart phones into their teaching models. This is due to factors such as skill gaps, insufficient financial resources and the lack of a national and comprehensive digital learning policy framework. These challenges need to be addressed as they have been acknowledged both by MOE and CUE in order for learning to continue uninterrupted throughout the country in these unprecedented times. It is encouraging to see the government playing a leading role in using technology to facilitate learning. This makes the future of eLearning in Kenya very bright. The following are some recommendations on actionable areas that the government need to be put in place in order to align the momentum for the benefit of the nation:

i. A comprehensive national digital learning policy framework backed by legislation.
ii. Increasing university funding with ICT infrastructure being a target
iii. Laying in place national fibre optic and making it accessible to all learning institutions
iv. Increasing funds allocation to Higher Education Loans Board to allow them to fund laptop purchase for university students
v. CUE coming up with a framework and guidelines for role out of online education within universities
vi. The government work with local and international partners to provide support for capacity building and infrastructural support for universities
vii. CUE adopting a set of principles that all institutions developing and offering online and blended programmes need to be

aligned to for purposes of quality and standardization.

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Planning for Acquisition of Adaptive skills using Discrete Learning Method in Tharaka Nithi County, Kenya; Integrated Autistic learner support.

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Abstract

Functionality of autistic learner is anchored on adaptive skill acquisition which is sustained by a well-planned and structured discrete learning method. However poor planning in discrete learning results to unclear procedures as well as learning activities rendering autistic learner's passive in class thus diminishing acquisition of adaptive skills. Study sought to examine planning for acquisition of adaptive skills using discrete learning method in Tharaka Nithi County, Kenya; Integrated Autistic Learner support. Constructivist theory which postulates that learning is a product of interaction with environment experiences guided the study. Descriptive research design was employed in the study to acquire data which was used to describe reality regarding planning for discrete learning method. Public primary schools housing autistic learners formed target population where 17 respondents were sampled. Data was obtained from 13 teachers sampled randomly and 4 stakeholders stratified sampled using questionnaires. Descriptive statistics analyzed data where findings revealed that appropriate planning of discrete learning accelerated acquisition of adaptive skills for adaptability by autistic learner. Further, findings revealed that task identification, establishment of data collection sheet and identification of reinforcers amplified active participation in learning activities thus acquisition of adaptive skills. Still, findings revealed that challenges like inadequate finances and insufficient expertise were cited as the drawbacks in efficient planning for discrete learning method. Recommendations were; increased budgetary allocation to support planning for discrete learning, capacity building for teachers of autistic learners through in-service training and further research on effectiveness of discrete learning on acquisition of arithmetic among autistic learners.

Key words; **Autistic Learner; Discrete Learning; Monitoring; Planning; Reinforcer**

1.1 Background

Adaptive skills espouse functionality of autistic learners sanctioning co-existence in school and society seemly. Similarly appropriate acquisition of adaptive skills is premised on well-planned and structured teaching process which may include instructional content, teaching materials, learning activities as well as the expected outcome of learning. However, inappropriate planning weakens instructional content, materials as well as learning activities resulting to non-acquirement of adaptive skills. More still, planning for instructional strategy entails designing a clear, consistent and a differentiated mode of teaching that motivate the autistic learner to participate in learning activities which may support acquisition of adaptive skills for survival. In accordance with Ganira and Odundo (2020) assertion, planning for instructional methods involve layout of content, activities, materials, monitoring procedures and rewarding system which when appropriately implemented increase learning coherence in autistic learners thus acquirement in adaptive skills for adaptability. Inclined to these sentiments, Gatuura and Mugo (2020) averred that adequately prepared teachers to identify appropriate instructional staretigies for learners with special needs including autism, effectively plan for learning activities which necessitate active participation of learners in

class hence acquirement of adaptive skills for positive living in society. It is worth noting that identification of deficient adaptive skills in autistic learners, enlighten teachers on the appropriate instructional strategies to employ in teaching for sustained acquisition of adaptive skills. As reiterated by Gatuura, Odundo, Kazungu and Ganira (2023), identification of autistic competences like communication competence, social integration and self-awareness inspires teachers on selection of appropriate interventions such as instructional strategies which assist in acquisition of identified adaptive skills for integration in school and wider society.

Seemingly autism speaks (2018) defined discrete learning as a structured method of instruction where complex skills are broken into simpler components which are taught in steps to promote acquisition of skills such as communication, social and self-care. To affirm this Raisingchildren.net.au (2022) stated that discrete learning is a well-structured intervention where intensive teaching of simpler concepts is accomplished to assist adaptive skill acquirement by autistic learner for adaptability in society. Nevertheless, proper planning advance effectiveness of discrete learning which may enhance extensive acquisition of adaptive skills by autistic learner for survival. In the same vein, planning for discrete learning majorly constitute; task identification, data

collection system and reinforcer identification, which when effectively realized may support acquisition of adaptive skills by autistic learner for integration in society. However, inefficient planning may cause inconsistency in learning activities and material use, diminishing acquisition of adaptive skills which may result in isolation of autistic learners.

Appropriate implementation of discrete learning is premised on establishment of learning activities. Rightful identification of tasks, enhance active participation of autistic learners in learning activities which may increase acquisition of adaptive skills for adaptability. As noted by Karpin and Mahmudatussa'adah (2020), significant learning is enhanced by active participation of learner in class activities as a result of increased interaction between the learner, teacher and content which may support acquisition of adaptive skills for positive living. However, non-identification of tasks in learning process, minimize interaction in class activities resulting in passive learning which may slow acquisition of adaptive skills. As noted by Oyier, Odundo, Ngaruiya and Mwangi (2017), planning for learning activities is influenced by financial availability that support acquisition of resources and materials employed in identified activities. More so, Odundo and Oyier (2018) stated that planning for instructional resources include inputs such as supplies of learning materials

which boost effectiveness of strategies in acquisition of skills for survival. Correspondingly, Baswell, (2018) asserts that task identification is banked on breaking and simplifying complex skill into simple teachable steps that are easily comprehended by autistic learners as well as attainment of appropriate varied instructional materials to instigate learning desires. Consequently, teachers should identify flawless tasks which may enhance active participation in learning activities which may result to acquirement of adaptive skills by autistic learner for positive living in wider society.

Similarly, effective planning for discrete learning is propositioned on data recording system encompassing preparation of recording sheet, consistent recording and reward provision which may assist in monitoring adaptive skill acquisition by autistic learner for survival. Ineffective planning for data recording system may hamper tracking of learning progress by virtue of shortcomings in data recording leading to inefficient acquisition of adaptive skills which may culminate to rejection of autistic learner in societal activities. In support of the statement, Odundo, Ganira and Ngaruiya (2018) asserted that responses to instruction during instruction provides feedback on learning progress. Correspondingly, teachers distinguish weaknesses and potentiality of autistic learner in class activities, which may guide the amendments to pursue in learning

process to improve acquisition of adaptive skills for adaptability. For that reason, Roy (2021) explained that tracking of learning progress in an educational set up benefits both teacher and learner. In regard to this, Pratt and Dubie (2008) asserted that observation of behavior using A-B-C (Antecedent, Behavior and Consequence) data collection tool facilitate observing and recording of response and circumstances under which response is given to improve learning. Still Pratt and Dubie (2008), notes that data collection may be impeded by issues like amnesia and inconsistency in recording. However, with a crystal clear planning and clarity of data collection sheet as well as guidance on observation framework, stakeholders like parents, educators, teachers, support personnel and administrators can effectively make observation and record responses. Similarly the ABC data collection tool may be adopted in discrete learning from which the recorded data guide teachers and stakeholders on teaching and acquisition of adaptive skills for autistic learner's coexistence in school and wider society.

Equivalently, planning for discrete learning entangle appropriate reinforcer identification which may motivate the learners to actively participate in activities like singing, playing, storytelling, alphabet game which expedite acquisition of adaptive skills for survival. Inappropriate identification and use of reinforcer, demotivate the learner thus lowering zeal to partake classroom activities weakening acquisition of adaptive skills. More so, reinforcement tend to enhance reoccurrence of a behavior which improves acquisition of adaptive behavior for survival by autistic learner. On the same note Barowski and Williams (2021) asserts that, reinforcer is an outcome that boost the possibility of a given response to reoccur which may enhance acquisition of adaptive skills by autistic learner for positive engagement in society. Similarly, Kendra (2022) states that reinforcement may include provision of a reward to the learner after a response to strengthen and increase a behavior which may promote acquisition of adaptive skills for adaptability. As noted by Odundo and Ganira (2022), a positive reinforcement is giving a reward such as praises, privileges and edibles immediately after the response while negative reinforcement is withdrawal of an occurrence such as watching of cartoon which may seem to suppress expression of a desired behavior. In addition, both positive and negative reinforcement increases acquisition of adaptive skills by autistic learner for adaptability. Appropriate identification of reinforcer entice autistic learner to respond correctly which may increase acquisition of adaptive skills for positive living.

1.2 statement of the problem

Effective acquisition of adaptive skills is

premised on seemly planning for discrete learning method addressing pertinent issues like learning activities, monitoring learning progress as well as motivation of learners to create a participatory avenue which increases acquisition of adaptive skills. However, inappropriate planning for discrete learning subjects the autistic learner to weak systems which may lead to demotivation, segregation and rejection in the learning process. Further, a well-structured discrete learning method, establishes appropriate learning procedures and resources which when judiciously utilized may increase learning capacity, an aspect that autistic learners are devoid of due to inhibiting factors of spectrum. Further analysis of discrete learning planning entangles task identification which influence the learning activities and resources selection. In addition, preparation of data recording system to facilitate monitoring of learning progress based on the recorded responses. Furthermore, reinforcer identification necessitate provision of rewards or withdrawal of privileges which may increase occurrence of the expected responses. Inappropriate planning and integration of discrete learning aspects, impoverish acquisition of adaptive skills which may culminate in disintegration of autistic learner in school and wider society. The study sought to establish Planning for Acquisition of Adaptive skills using Discrete Learning Method in Tharaka Nithi County, Kenya;

Integrated Autistic learner support.

1.3 Purpose and objective

The purpose of the study is to examine Planning for Acquisition of Adaptive skills using Discrete Learning Method in Tharaka Nithi County, Kenya; Integrated Autistic learner support. Similarly, the study adopted specific objectives as follows;

1. Assess task identification support on achievement in adaptive skills,
2. Examine data collection sheet support on achievement in adaptive skills,
3. Reinforcer identification support on adaptive skill acquisition.

2.0 Literature

Enriched instructional procedures are premised on a well-planned discrete learning method which may support acquisition of adaptive skills by autistic learner for positive engagement in society. A rigorously planned discrete learning method may involve configuration of task identification, data recording system and reinforcer identification which may result to a meaningful learning when incorporated in teaching autistic learners.

2.1 Task Identification and achievement of adaptive skills

Efficiency of discrete learning is banked on task identification which may support acquisition of adaptive skills for survival by autistic learner. Unrightfully identified tasks lowers participation and exposure in class

activities weakening the acquisition of adaptive skills resulting to non-functionality of autistic learners. As noted by Baswell (2018) ,tasks identification signify adoption of learning activities comprised of simple tasks which are derived from complex concepts depending on the adaptive skill to be acquired. For instance, Lynch (2019), postulated that identified tasks, makes class activities manageable by autistic learner for increased participation in learning activities for acquisition of adaptive skills. In the same vein teachers may encourage acquisition of adaptive skills through execution of identified activities which may be accomplished by use of simpler words as well as adoption of real-life materials to facilitate understanding of concepts. According to Bekele, Odundo, Mwangi and Ganira (2021) identified tasks in instructional strategies should be participatory in nature to facilitate achievement in adaptive skills for positive living by autistic learners. According to Pratt and Steward (2020) forward chaining which involves teaching the first step until the learner acquires the skill and independence before embarking on the next step may support acquisition of adaptive skills by autistic learner for survival. For example, when teaching a word like "cup", the teacher starts by teaching the letters C U P, followed by the sounds /c/ /u/ /p/, then syllable 'cup'. To support the statement Bekele, Odundo, Mwangi and Ganira (2022) insinuated that teaching of simpler concepts

first may necessitate smooth flow of content thus creating an understanding from known to unknown. Furthermore, identified tasks in discrete learning should be simple and easy to support acquisition of adaptive skill autistic learner for adaptability. However complex tasks disorient the autistic learner leading to sluggish achievement in adaptive skills.

2.2 Data collection system and achievement of adaptive skills

Appropriate and meaningful learning is banked on a well-structured monitoring criterion in adaptive skills acquisition by autistic learners for survival. In the same vein, learning progress monitoring provide feedback to teachers on the achievement of the learner and also the validity of the instructional procedures including content and materials. As noted by Victoria (2022), monitoring of learning progress gives an understanding of the learner's abilities and effect of instructional strategies as an intervention to acquisition of adaptive skills by autistic learner. Additionally, Ganira (2022), asserted that monitoring of learning progress provides feedback on autistic learner's strengths and weaknesses in the learning activities. On the same vein, efficient monitoring is premised on a proper data recording system which may influence decision making by stakeholders on effective interventions on adaptive skills acquisition by autistic learner. In accordance with Pratt and Dubie (2008), A-B-C (Antecedent, Behavior and Consequence)

data collection tool helps in recording of responses capturing the circumstances surrounding a given behavior and the outcome of the response. Further, Antecedent implies the event that precedes the response such as an instruction, for instance, 'give me that book' which is intended to stimulate the response. More so, Behavior signifies the response given by the learner following the instruction such as 'the learner gives the book to the teacher or the learner fails to give the book due to inability in discerning the book from other items.

It is worth noting that correct response indicates a good comprehension of instruction whereas incorrect response indicates non-understanding which may appeal for amendment in instruction procedures to support acquisition of adaptive skills. Furthermore, Pratt and Dubie (2008) states that consequence is an activity that is subsequent to behavior aimed at increasing acquisition of adaptive skills for survival. In the same vein, consequence may include a positive reinforcement which include rewarding or negative reinforcement such as withdrawal of a privilege to increase acquisition of adaptive skills. In accordance with Gray (2021), acquisition of adaptive skills using discrete learning method is achieved when learning progress is continuously monitored to effect adjustments in instances where learner's needs are not met. Correspondingly, data collection sheet should

be well prepared such that it may capture all responses of the autistic learner to support acquisition of adaptive skills for adaptability. Suitably prepared data collection sheet controls implementation of discrete learning by ensuring identified tasks are accomplished correctly to support acquisition of adaptive skills by autistic learner.

2. 3 Reinforcer identification and achievement of adaptive skills

Efficient discrete learning is premised on effective use of reinforcement which may support acquisition of adaptive skill for survival. In the first-place reinforcement entails an activity that follows a given behavior. As noted by BetterHelp editorial team (2023) reinforcement is activity either positive or negative that when performed increases the likelihood of reoccurrence of behavior to support acquisition of adaptive skills by autistic learner for survival. Reinforcer is a reward which is given when a desired behavior is portrayed immediately after instruction, aiming at increasing chances of acquiring adaptive skills by autistic learner for positive living. In the view of Mailo, Odundo Ganira and Mwangi, (2022) a positive reinforcement escalates learning of correct behaviors while negative reinforcement withdraws bad occurrence geared towards increasing acquisition of adaptive skills for adaptability.

Reinforcers identified may be in accordance to the likes of the learner to increase

effectiveness of reinforcement in learning process, for instance autistic learners are mostly enticed by primary reinforcers (edibles). Furthermore Larriba-Quest (2017) states that in instances where primary (edibles) and secondary reinforcers such as social praises, special privileges, tangible items and activities, are paired much impact on skill acquisition by autistic learner is visible. Nevertheless, Alberto and Troutman (2009) postulated that for low functioning autistic learner, sensory reinforcers such as light up toys, fans, massagers will be effective to arouse their senses. It is worth noting that ineffective use of reinforcers may be detrimental in learning and acquisition of adaptive skills as noted by Muchui, Ngaruiya, Ganira and Kinyua, (2022) that slowed teaching and replacement of behavior results from poor use of reinforcement. For that reason, reinforcers used should entice the autistic learner to demonstrate desired behavior. Therefore, careful identification of reinforcers should be done to increase acquisition of adaptive skills for positive engagement. To increase effectiveness of reinforcers, repeated reinforcement may be accomplished to ensure that all learners participate in learning despite of severity in autism. As noted by Fitriati, Fatmala, and Anjaniputra (2020) all learners are accredited to attain knowledge from teachers regardless of functionality level which may be enhanced through repeated reinforcement that serves to motivate autistic learner participation in class activities hence acquirement in adaptive skills.

2.4 Theoretical framework

Constructivist theory by Jean Piaget informed the study. The psychologist postulated that learning is based on experiences in the environment. This implies that learners build up knowledge to form understanding of concepts in relation to environment exposed to. Similarly, a well-planned instructional strategy may stimulate autistic learner draw an inquiry from which knowledge acquisition and utilization in daily life is obtained. On the same vein, Jean Piaget's Constructivists theory mainly focused on the process of learning and not the influences. Further, Piaget highlighted two processes explaining how learning occurs among children including autistic learners. Accommodation implies altering of existing knowledge while Assimilation indicates adjustment of the existing knowledge with the newly acquired concepts. Equivalently, the autistic learner develop new perception of concepts leading to creativity, problem solving as well as independency all that which result in acquisition of adaptive skills for survival. Correspondingly, proper planning in discrete learning entail putting in place learning procedures such as captivating strategies and enticing materials which creates appealing environment to facilitate acquisition of adaptive skills.

2.5. Conceptual framework.

The framework shows interrelationship between planning for discrete learning and acquisition of adaptive skills by autistic learner.
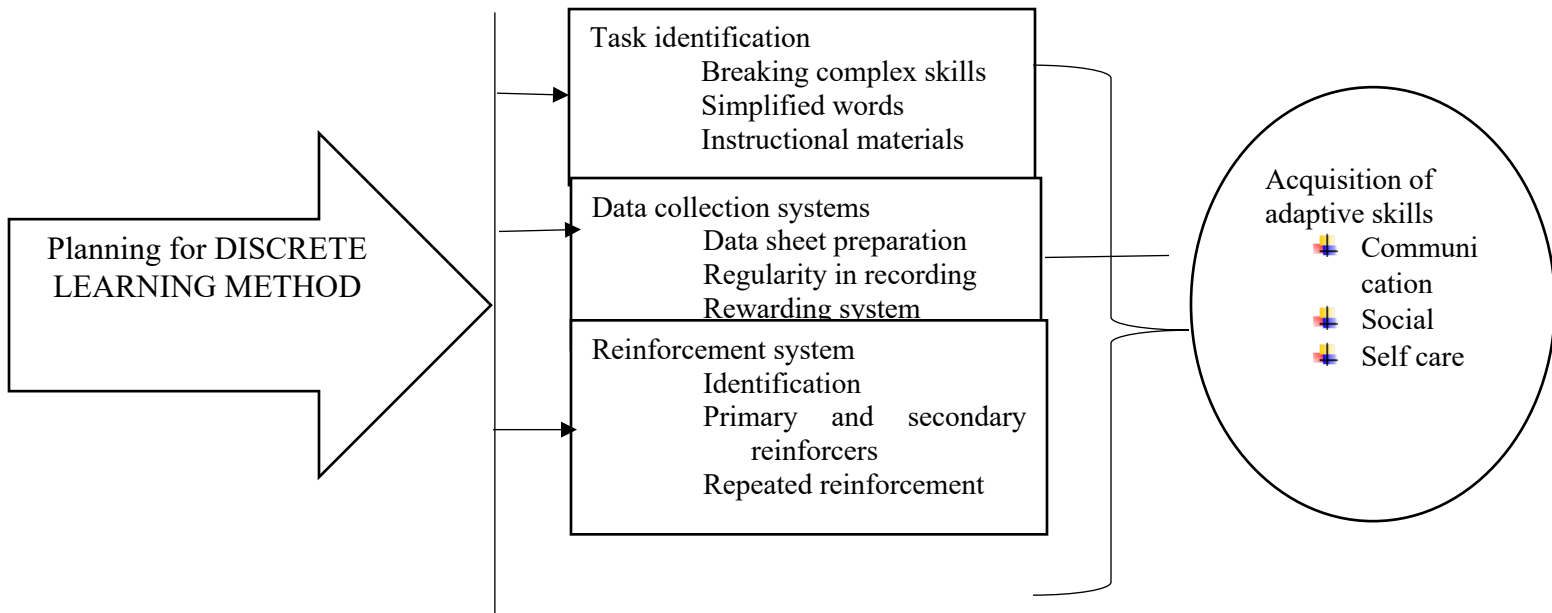
Figure 1. Conceptual framework on Planning for Acquisition of Adaptive skills using Discrete Learning Method; Integrated Autistic learner support.

Conceptual framework represents impact of planning for discrete learning method on acquisition of adaptive skills. Effective discrete learning is premised on appropriate planning for identification of learning tasks which together with data collection systems and adoption of reinforcement system hasten acquisition of adaptive skills like communication abilities, socialization as well as self-awareness skills.

3.0 Methodology

The study was anchored on positivism philosophical approach which begets the causal relationships of variables to envision results of phenomena under inquiry.

Correspondingly positivism philosophical approach holds that there is existence of a single reality that when objectively observed, measured and statistically analyzed draws an inference regarding relationships between phenomena. Equivalently the study adopted use of close ended questionnaire for data collection and descriptive statistics for analysis to acquire relationship between planning for discrete learning and adaptive skill acquisition by autistic learners for independence. Besides, descriptive survey research specifically quantitative surveys were adopted for the study. Furthermore, Mills (2021) asserted that survey comprises structured set of questions

designed to collect a given form of data. More still, Mills (2021) expounds that quantitative surveys encompass close ended questions and the data obtained is usually numerical in nature therefore analysis is done statistically computed

Public primary schools having enrolled autistic learners formed the target population. Sample size was 17 respondents where 13 teachers were purposively sampled while 4 stakeholders random stratified sampling was used. Qualitative approach design was employed which apprehended assumptions from the participants regarding experiences in planning for discrete learning through questionnaires and quantitative approach which quantified the data into numerical data to generate descriptive statistics and inferences. More still close ended questionnaires collected data on task identification, establishment of data collection sheet and reinforcer identification from teachers while stakeholders provided data regarding support accorded to teachers during planning for discrete learning Moreover data was analyzed quantitatively using descriptive statistics creating percentages whilst qualitative data was coded as per themes to make inferences.

4.0 Findings

4.1 Planning for discrete learning and acquisition of adaptive skills

Planning entails putting in place goals and designing activities that aid accomplishment of the set learning targets to enhance acquisition of adaptive skills for survival. As postulated by Ganira and Odundo (2020) adequately planned discrete learning involve layout of instructional procedures such as content, activities, materials, monitoring procedures and rewarding system which when appropriately implemented increase learning coherence in autistic learners thus acquirement in adaptive skills for adaptability. Nevertheless, disproportionate planning culminates in faulty instructional procedures which disorient acquisition of adaptive skills by autistic learner. Further, planning for discrete learning entangles task identification, data collection sheet and reinforcer identification which when appropriately instituted results in acquisition of adaptive skills by autistic learner for survival.

4.1.1 Task identification and acquisition of adaptive skills

Considerable learning is intensified by identification of precise tasks which may enhance participation of autistic learner in class activities for increased acquirement of adaptive skills for positive living. Equivalently, unmethodical tasks results in inconsistent learning activities which may lead to non-acquirement of adaptive skills by autistic learner culminating in rejection from societal activities. More still, Bekele, Odundo, Mwangi and Ganira (2021) averred that

effectiveness of discrete learning method tasks like breaking complex skills, simplified words and instructional materials ought to be laid down precisely to ease understanding of

learning concepts by autistic learner. Descriptive statistics was computed and the analysis are presented in Table 1.

Table 1. Task identification

	Breakingcomplex skill	Simplified words	Instructional materials availability
Strongly Disagree	23.1%	7.7%	15.4%
Disagree	30.8%	30.8%	30.8%
Agree	30.8%	30.8%	23.1%
strongly Agree	15.4%	30.8%	30.8%
Total	100.0%	100.0%	100.0%

Breaking of complex skills to teachable steps, use of simplified words to ease understanding of concepts and use of instructional materials for varied skill acquisition assist acquisition of adaptive skills by autistic learners. In instances where task identification is efficiently accomplished, autistic learner participates in class activities actively resulting in acquisition of adaptive skills. However, inefficient identification of tasks limits participation in learning activities diminishing acquisition of adaptive skills. Findings in Table 1 reveals that out of 13 teachers of autistic learners sampled 46.2% agreed that breaking of complex skills into teachable steps facilitate acquisition of adaptive skills. Furthermore, simple teachable steps arouse autistic learner's interests in participating in class activities because the concepts are manageable and within understanding abilities and for this reason, adaptive skills are easily achieved. In support of the findings,

stakeholders agreed that simple teachable steps are easily incorporated in schemas leading to acquisition of new knowledge through assimilation hence acquirement of adaptive skills as noted by Cherry (2022). Stakeholders further agreed on supporting execution of identified tasks by providing required materials and resources which foster learning and acquisition of adaptive skills by autistic learner. Findings are in agreement with Odundo and Oyier (2018) that appropriate planning for instructional strategies involve laying down activities accomplished in teaching to upgrade quality of education as well as achievement of set goals. Besides 53.9 % of teachers disagreed on the impact of breaking complex skills into simple teachable steps on acquisition of adaptive skills. This could be associated with inadequate resources to support the planned learning tasks, a scenario that may decline effectiveness of discrete learning in promoting

acquisition of adaptive skills.

Further, findings revealed that out of 13 teachers of autistic learners sampled 61.6 % agreed that use of simpler words during instruction enhance understanding of concepts thus acquisition of adaptive skills for survival. More so teachers expressed that use of words that learners understand hasten the grasping of knowledge hence acquisition of adaptive skills. The findings are in agreement with Bekele, Odundo, Mwangi and Ganira (2022) that smooth flow of content enables the learner move from known to unknown creating a sequential learning which instigates understanding and mastery of adaptive skills by autistic learner. Findings further revealed that 38.5 % of teachers disagreed on use of simple words during instruction. From the findings, it was noted that teachers were endowed with insufficient knowledge on teaching autistic learners using discrete learning method due to inadequate training on autism.

More findings revealed that 53.9 % of teachers agreed that planning and acquirement of instructional materials support learning and acquisition of adaptive skills by autistic learner. This was premised on the view that instructional materials expose learners to practical experiences compared to rote learning, allowing use different approaches of working which may improve acquisition of adaptive skills for survival as noted by Tuimur and Chemwei (2015). In departure from the finding, 46.2 % of the teachers disagreed on planning and acquirement of instructional materials which could be associated with challenges in budgetary allocations affecting acquisition of adaptive skills. As postulated by Oyier, Odundo, Ngaruiya and Mwangi (2017), efficient planning for instructional materials sets quality of education at par, a procedure that requires monetary availability. However insufficient money, lead to inadequate instructional materials required to increase acquisition of adaptive skills for adaptability.

4.1.2 Data Recording System and Acquisition of Adaptive Skills

Progressive acquisition of adaptive skills is premised on constant monitoring of learner's participation in class activities. Additionally successful monitoring is banked on a structured data collection tool which when appropriate planning is accomplished, learners progress is obtained. However, as noted by Ganira (2022) failure to plan and prepare for data collection systems prohibits understanding of strengths and weaknesses of the learner as well as effectiveness of the instructional strategies limiting acquisition of adaptive skills. Consequently, the study examined use of data recording system focusing on data collection sheet preparation, regularity in recording and rewarding system. Descriptive statistics was computed and the findings illustrated in Table 2.

Table 2. Data collection systems

	Data sheet preparation	Regularity recording	Reward system in data sheet
Strongly Disagree	30.8%	23.1%	23.1%
Disagree	15.3%	15.3%	23.1%
Agree	23.1%	38.5%	38.5%
strongly Agree	30.8%	23.1%	15.4%
Total	100.0%	100.0%	100.0%

Out of 13 teachers sampled 53.9 % agreed that planning and preparation of data collection sheet accelerate monitoring of adaptive skills acquisition by autistic learner in discrete learning. Concisely teachers monitored learning progress of autistic learners however, not using the structured ABC data collection sheet. Nevertheless, teachers employed alternative tools like Individualized Educational Programme (IEP) which captured strengths and weaknesses of the learner as well as teachers' recommendations on the learner's abilities. Similarly, tools like working portfolio capturing the activities that autistic learner does best, showcase portfolio capturing skills that autistic learner has achieved or evidence of learning and assessment portfolio capturing the mastered adaptive skills. The findings were supported by Victoria (2022) assertion that monitoring gives feedback on the acquisition of skills by autistic learner when exposed to a given intervention. Besides 46.1 % of teachers disagreed on planning and preparing data collection sheet for monitoring learning progress. The teachers asserted that monitoring was done termly using progress report which did not capture the abilities of the learner thus diminishing effectiveness of tracking lowering acquisition of adaptive skills.

Further, findings postulated that 61.6 % of teachers agreed that recording of learner's responses regularly facilitate acquisition of adaptive skills. This is associated with frequent recording of learner's attempts in responding to instruction either correct or incorrect which enable teachers make informed decisions regarding the impact of discrete learning in achievement of adaptive skills by autistic learner. The findings corroborate with Odundo, Ganira and Ngaruiya (2018), that response to instruction guides teachers on the changes to effect in instruction procedures to improve acquisition of adaptive skills. All the same, 38.4% of teachers disagreed on regular recording of responses which was connected to lack of data

collection sheet therefore a need for sensitization on importance of data collection sheet which influence acquisition of adaptive skills through regular recording of responses.

Correspondingly, the findings further revealed that 53.9 % of sampled teachers of autistic learners agreed that planning for rewarding system in data collection sheet steers adequate preparation on reinforcement given whenever a response is provided by the learner to foster acquisition of adaptive skills. However, 46.1 % of teachers disagreed with incorporation of rewarding system in data collection sheet. For instance this could be associated with inadequateness in knowledge regarding importance of rewarding system in data collection sheet which may lead to poor acquisition of adaptive skills since the teacher is not guided on reinforcement to give.

4.1.3 Reinforcer identification and acquisition of adaptive skills

Effective discrete learning is anchored on well-planned and systematic procedures describing ways of using reinforcement appropriately to support acquisition of adaptive skills by autistic learner. However, Muchui, Ngaruiya, Ganira and Kinyua, (2022) averred that ineffective use of reinforcement lowers teaching and replacement of behavior which obstruct acquisition of adaptive skills by autistic learner for adaptability. Further, planning for reinforcement entails reinforcer identification, use of primary and secondary reinforcers and repeated reinforcement to enhance effectiveness of discrete learning. Descriptive statistics was computed and the analysis are illustrated in Table 1.

	Reinforcer identification	Primary/secondary reinforcers	Repeated reinforcement
Strongly Disagree	23.1%	15.3%	23.1%
Disagree	15.3 %	30.8%	23.1%
Agree	30.8 %	23.1%	38.5%
strongly Agree	30.8 %	30.8%	15.3%
Total	100.0%	100.0%	100.0%

Reinforcement entails consequences that follow a behavior targeting to increase reoccurrence of a pleasant behavior or withdrawal of a bad behavior. The finding in

Table 3 revealed that 61.6 % of teachers sampled agreed that when reinforcer identification is executed effectively, acquisition of adaptive skills is elevated. The

teachers revealed that appropriateness of reinforcer identification is based on autistic learner's interest and likes and at the same time age relevance where edibles are mostly preferred compared to praises in autism. In departure from the finding 38.4 % of teachers disagreed that reinforcer identification facilitates acquisition of adaptive skills for positive engagement. In furtherance, the situation subject teachers to poor use of reinforcement thus non-acquirement of adaptive skills. As noted by Larriba-Quest (2017) though reinforcement seems to be a simple activity in learning, mostly may not be effectively utilized as required which may be associated with impoverished identification.

More findings postulated that 53.9 % of teachers conceded that use of both primary and secondary reinforcers complementary to amplify acquisition of adaptive skills by autistic learner. More so, primary reinforcer is a reward that satisfies biological needs such as edibles while secondary reinforcer is a conditioned reward devoid of innate value such as praise, tangible items and privilege that works best when associated with primary reinforcer. Further analysis by Larriba-Quest (2017) stated that when primary and secondary reinforcers are paired, acquisition of adaptive skills by autistic learners is rapidly achieved. On the other hand, 46.1% of teachers disagreed on using both primary and secondary reinforcers a scenario that lowers acquisition of adaptive skills by autistic

learner resulting in disintegration of autistic learner.

Further finding revealed that 53.8 % of teachers subscribed to repeated reinforcement impacting acquisition of adaptive skills by autistic learner for survival. In the view of Fitriati, Fatmala, and Anjaniputra (2020) every learner is entitled to receive attention from the teacher through reinforcement despite of severity level in autism. This implies that repeated instruction place learners at the same level of reinforcement which may facilitate acquisition of adaptive skills. Nevertheless, 46.2% of respondents departed from acceptance of repeated instruction influencing acquisition of adaptive skills. Consequently, an inference may be drawn that repeated reinforcement was not practiced by the teachers weakening the acquisition of adaptive skills by autistic learner.

5. Conclusion

The study sought to examine Planning for Acquisition of Adaptive skills using Discrete Learning Method. Wherefore, specific aspects evaluated were task identification, data collection systems and reinforcer identification. Furthermore, respondents were in agreement that planning for discrete learning enhance acquisition of adaptive skills by autistic learner. Further respondents cited that planning necessitate adequate preparation in terms of learning activities/materials selection, designing of learning progress monitoring system and recognition of

reinforcement system. Which when coherently implemented in teaching autistic learners, may trigger learning enthusiasm reflected by activeness, attentiveness and perseverance in class activities which may support acquisition of adaptive skills for survival. Nevertheless, study findings lead to a conclusion that planning for discrete learning was sparingly accomplished as evidenced by descriptive statistics analysis. Equivalently, drawbacks like inadequate budgetary allocation and insufficient expertise in discrete learning could contribute to inadequate planning which weaken acquisition of adaptive skills.

6. Recommendations

1. Government through Ministry of education should consider allocation of more funds to schools targeting autistic learners to facilitate adequate planning through acquisition of learning materials and reinforcers which may accelerate learning enthusiasm to support acquisition of adaptive skills.

2. Ministry of Education through Teachers Service Commission to organize for in-service trainings for capacity building to teachers for acknowledgement of diversity in education systems.

3. Further research on effectiveness of discrete learning on acquisition of arithmetic among autistic learners.

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Effect Of Pedagogical Policies on Teacher of Business Studies Efficacy in Public Secondary Schools in Kajiado County, Kenya

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Abstract:

Pedagogical policies inform ways in which teachers of business studies efficiently adopt desirable instructional skills, qualification standards and professional advancements according to regulatory norms of Kenya for conformity between theory and practice. Proper map out and accomplishment of policies guiding teachers of business studies practices tend to ensure winsome proficiency that benefit learners. The study examined effect of policies guiding pedagogical practices on teachers of business studies efficacy in public secondary schools in Kajiado county, Kenya. The research adopted descriptive survey design and was informed by Context, Input, Process and Product Evaluation (CIPP) Model. A target population of 42 respondents was selected using random and purposive sampling from eleven public secondary schools in Isinya Sub- County of Kajiado County. Data were collected from teachers of business studies using questionnaires as the main collection tool. Additional data were gathered from school principals and sub-county education officials using interview schedules. The data were analyzed qualitatively through a thematic approach and quantitatively using SPSS software version 25.0. The findings revealed that policies on instructional skills were significantly related to teacher efficacy. The study further found that level of relevance of policies guiding qualification standards of teachers of business studies was very high with an associated p-value of 0.3034 (p>0.05). Additional findings showed that policies guiding professional development of teachers of business studies were significantly related to teacher competency. The study concluded that proper implementation of pedagogical policies is likely to direct teachers of business studies on accommodative instructional skills that cater for learners regardless of learning differences for better scores, directing on proper qualification standards and professional development vital in the teaching service. The study recommends the TSC and MoE to formulate more policies which emphasis on instructional skills which lead teachers of business studies to accommodate learners during learning process. Further, the TSC and MoE should make teacher training in the country more practical by formulating guidelines that improve teaching practice period and institutions frequenting micro teaching sessions that equip business teacher trainees fully before they graduate and formulate procedures that guide and create morale among teachers of business studies through regular professional development for better learner achievement.

Keywords: Pedagogical Policies; Efficacy; Instructional skills; Professional Development; Qualification Standards

1. Introduction

Desirable practices adopted by teachers of business studies are guided by structured policies for ensuring adherence to stipulated courses of action. As opined by Coburn, Hill and Spillane (2016), successful pedagogical policies are instructional in nature and therefore, teachers of business studies serve as key link between procedures and practice and compliance to the policy trail indirectly influences on learner achievement. Feasible policies ensure that teachers cohere to recommended standards for heightened efficacy. This is echoed by Mailo, Ganira and

Odundo (2022) who claimed that raising business teacher quality through feasible policy direction led to substantial gains in learner achievement. Effective pedagogical policies ought to guide teacher of business studies efficacy, which in turn may foster better learner scores for preparing individuals to be productive members of society. According to Kolenick and Patterson (2018), enthusiasm for lifelong learning led by structured guidelines is increasing dramatically across the world, given that relevant education translates to meaningful work for realization of better scores. As nations move towards the goal of "education for all' in ensuring United Nation's Sustainable Development Goal 4, there will be increasing use of modern pedagogical ways (Gaskell, 2018; UNESCO, 2015), and teachers of business studies should be in front line to contribute to this course of action through adhering to pedagogical policies. Education policies are vital in providing direction and commitment to teachers of business studies on what is expected. Peña (2018) states that policies, principles and regulations shape development of teachers upon which systems of education depend. This is premised on the view that policies targeting pedagogy may improve quality of a teacher of business studies; fostering better learner achievement. As a result, pedagogical policies tend to give direction to instructional skills, qualification standards and professional development of a teacher of business studies. Policies targeting instructional skills are likely to lead teachers of business studies to improve class experience for improved learner scores. According to Sugihartini, Sindu, Dewi, Zakariah and Sudira (2019), instructional skills are pedagogical competences of a teacher of business studies leading instruction and regulating classroom learning system by establishing interactions among learners.

Based on this view, a study conducted by Mailo, Ganira and Odundo (2022) on "*Policies Guiding Pedagogy and Teacher of Business Studies Competency in Kajiado County, Kenya: Instructional Skills' Policy Discourse.*" noted that instructional skills applied at diverse levels for business studies can be obtained from a broad range of sources, given that the skills are essential for a teacher to assess the effective ones in aid of lesson objectives' attainment. Instructional skills possessed by a teacher of business studies may determine learning and improve learner experience in class. Tzivinikou (2015) argues that teaching skills of teachers of business studies have considerably preoccupied researchers for many years and confirms that learner achievement and effective learning are impacted by the skills. Anchored on this, Peña (2018) denote that teachers are crucial resources in schools, hence improving instructional skills guarantee competent people work as teachers of business studies, pedagogy is of high standard and quality instruction benefits all learners.

Policies targeting qualification standards of teachers may regulate practice of teaching, professional ethics and registration of teachers of business studies in Kenya. According to Leibur et., al (2021), one approach to heightening professionalism is using qualification standards policies and competency frameworks which target business teacher training, continuing professional development, certification and performance appraisal. Inadequate policies guiding pedagogy is a constraint to learning business studies since teacher competencies are essential to facilitating successful teaching and learning during class activities (Sulistiyo, 2016). Policies on qualification standards inform pedagogical practices and teacher competencies which if appropriately

structured and implemented, teachers of business studies exhibit desirable behavior that may indirectly influence learner achievement in the subject. In view of this, a study by Odundo, Ganira and Ngaruiya (2018) on teaching practice reveals that preparing teachers of business studies is made more functional by developing competencies needed using reforms in teacher education. In concurrence, UNESCO's Global Framework of Professional Teaching Standards (2019) impels member states to create qualification teaching standards to enhance achieving Sustainable Development Goal 4, specifically Target 4. C (SDG4.c) on improving qualified teachers supply by 2030. Pursuant to this, the TSC Act (2012) Section 23 (2) prohibits unregistered persons from engaging in teaching service; and those who wish to be registered as teachers of business studies must meet TSC Code of Regulations (2015) that provides conditions for registration. Qualification standards for teachers of business studies can be ensured through proper teaching practice, professional ethics attainment and registration.

Business teacher efficacy is guided by overall vision and essential features governing wider education field in Kenya, which should be strategic, feasible, holistic, context- sensitive and sustainable. Silva and dos Santos (2020) argue that education policies aim to expand and batten quality of pedagogy by prioritizing demands and services where they are relevant through proper professional development. This is in tandem with Mailo, Ganira, Odundo and Mwangi (2022) assertion that policies guiding pedagogy regulate business teacher competency that may impact on behaviors, values, aims, communication and practices in schools and also support professional development that is vital in improving teaching- learning process.

Through a professional development program, the Kenya Teacher Education and Professional Development (TEPD) program emphasizes on teacher professional development through capacity building for coping up with contemporary issues arising from the profession (MoE, 2020). In view of this business teacher professional development may be improved through pre-service training, capacity building and job promotion that foster positive morale for more effective pedagogy.

1.1 Pedagogical Policies, Instructional Skills and Teacher Efficacy

Didactical policies guide teachers of business studies in acquiring relevant instructional skills and effectiveness for successful pedagogy. As postulated by Mailo, Odundo and Ganira (2022), one of the fundamental human rights and a public service is education, that a nation should responsibly ensure its dispensation without discrimination whatsoever; by formulating policies which direct teachers of business studies to acquiring effective instructional skills for accommodating every learner during class instruction. This view is premised on the position that policies guiding pedagogy are key in enabling teachers of business studies to make right and dependable decisions for improving pedagogical outcome. Pedagogical skill possessed by teachers of business studies is a powerful propellant structuring appropriate learning experiences for enhancing learner achievement. For better classroom experience and learner scores to be realized, Okkinga, Steensel, Gelderen and Sleegers (2018) suggest that teachers require policies which emphasize on hands- on skills and tools, for guiding learners to construct knowledge collaboratively rather than passive acquisition of information. Business teacher efficacy is brought about by adoption of

effective instructional skills that are guided by feasible didactical practices. A study carried out in Yogyakarta Indonesia by Sugihartini, *et, al* (2019) titled "*Improving Teaching Ability with Eight Teaching Skills*" used ADDIE model on its focus and revealed that policies directing instructional skills are vital as they inform pedagogical competencies which are ways a teacher of Business studies teach and regulate the system of learning through proper interaction with learners. The study confirms works of Ganira and Odundo (2020) that teacher of business studies requires pedagogical skills for influencing learning achievement; raising quality of the teaching-learning process, reinforcing collaborative learning, breaking up the boredom, and simplifying a personalized learning experience. Hence, procedures directing adoption of fruitful instructional skills are therefore, essential for ensuring teachers of business studies practices are desirable for improved achievement.

Policies on instructional effectiveness are among critical issues surrounding education which according to Tzivinikou (2015), is to contribute to effective learning by use of proper instructional resources and fair learning assessment. The findings of Tzivinikou, (2015) is supported by a study conducted by Peña (2018) on *"Effective teacher policies"* which claims that when learners are taught by effective teachers, they gain better learning achievements and life outcomes relative to others not handled by such instructors. Business teacher efficacy is manifested in proper acquisition and utilization of instructional skills that are led by structured policies for high learner scores. Feasible policies guiding pedagogy answer questions regarding instructional skills effectiveness in shaping business teacher efficacy. According to Bouchamma *et al*

(2019), policies on instructional skills aim to improve educational practices and services by fostering pedagogical and professional development for teachers of business studies, optimizing educational actions impending learner academic achievement. A study by sugihartini *et al.* (2020) indicated that instructional skills which are pedagogical competencies possessed by teachers of business studies form the cornerstone for instruction and regulating systems of learning in classrooms by establishing functional relationships with learners. In instances where operative business studies learning happen, a conducive environment for learners is provided, which is made possible by a teacher who possesses classroom management skills. Sugihartini *et al.* (2020) claim that classroom management skills create and maintain desirable conditions of learning and teachers of business studies should ensure every learner in the classroom can learn in a manner which is orderly and the instructional objectives are obtained efficiently and effectively. Guidelines that direct teachers of business studies on use of effective instructional skills are thus, crucial in teaching- learning process.

1.2 Pedagogical Policies, Qualification Standards and Teacher Efficacy

Qualification standards possessed by teachers of business studies enhance efficacy if they are well guided by structured policies. In consonance to Sessional Paper No. 1 of 2019 and the policy framework for education of 2012 there is urgent need to better coordinate and clarify Kenya's qualification system for making qualification more relevant to societal and labour market needs. This is in line with UNESCO's Global Framework of Professional Teaching Standards (2019) that impels member states to create professional standards of teaching for enhancement of achieving Sustainable Development Goal 4,

and specifically Target 4.c (SDG4.c) on improving qualified teachers supply by 2030. A study carried out in Serbia on *"Teacher competencies being a basis for teacher education"* by Pantić and Wubbels (2010) used quantitative methods of data collection and found that there are four underlying sub- sets of teacher competencies among them being guidelines on professional qualification standards of teachers and ways a nation can improve it. The study utilized a response sample of 370 teacher respondents, which was not adequate to make general conclusion for a nation. Jitendra, *et. al.,* (2022) argues that professional teaching standards acquisition is a process and not an event, and Yousef et, al (2022) confirm the works of Jitendra et. al., by stating that an effective teacher of business studies should be able to practice and portray professionalism, pedagogical skills, social and personality into practice of teaching and solve classroom instruction problems complexity to enhance learner achievement. As noted by (Örgütü, 2016), creation of consensus on education standards, goals and criteria to judge proficiency can be done through well-designed learner assessment policies which regulate teacher of business studies behavior, for better learner academic achievement.

Pursuant to UNESCO's Global Framework of Professional Teaching Standards (2019), the Teachers Service Commission Act Chapter (212) conceptualizes the policy by indicating that a person shall be entitled for registration as a teacher of business by holding any license, certificate or consent to teach issued under the Education Act to him or her as in force immediately before the Act's commencement. Business teacher qualification standards efficacy can be measured from learner achievement through instruction (Waluyanti *et al.,* 2018) but Osarenren and Irabor (2018) claims that the

state of education system raises concern to all stakeholders' hearts as goals of education such as producing skilled, professionally competent teachers of business studies, technological advancement in business education to fulfill set objectives of national prosperity and development are realistically improbable. Qualification standards maintenance is one of the most difficult issues that attract stakeholders' interest (Burdett *et, al* 2013) which according to Sulistiyo (2016), result from unclear policies guiding qualification standards that is a constraint to learning business studies; since teacher competencies are essential to facilitating successful teaching and learning during class activities.

1.3 Pedagogical Policies, Professional Development and Teacher Efficacy

Pedagogical policies guide professional development for teachers of business studies which is vital in helping to bolster confidence in work and greater productivity for enhancing learner achievement. UNESCO Incheon Declaration and Framework for Action on the implementation of Sustainable Development Goal 4; Education 2030, proposes for empowerment, thorough training, professional qualifying, developing and adequate recruitment of teachers of business studies and educators by member states. A study carried out by Jitendra et. al (2022) titled *"Sustainability of a teacher professional development program on students' proportional reasoning skills"* sought to examine benefits of guidelines directing continuous professional development of teachers in influencing classroom experience in paths that enhance learner achievement. The study used qualitative method that sourced data from teachers through in-depth interviews and found that both face to face and online professional development of teachers such as

seminars and workshops are guided by policies that ensure provision of participants with opportunities to reflect requirements over relatively accumulated periods of time and create conducive environment which participants interact asynchronously for influencing learner achievement. The study provides inadequate information on policy framework guiding professional development of teachers of business studies over time. This study is anchored on a research conducted by Srinivasacharlu (2019) in India *"Continuing Professional Development (CPD) of Teacher Educators in 21st Century"* which revealed that professional development is divergent on-going activities that focus on developing intellectual abilities of a teacher of business studies attitudes, self-confidence, interest, values, skills and competencies and proper policies are required to carry out the teaching professions responsibilities properly and in accordance to the changing needs and times of the prospective society and teacher.

Professional development of teachers is guided by policies that ensure teachers of business studies do not remain stagnant in the teaching profession. TSC (TPD modules, 2020) state that all teachers employed by the commission shall undertake mandatory professional development which will be offered during school holidays. Thus, Odundo, Ganira and Kinyua (2018) recommend the government layout guidelines that lead the professional development of teachers of business studies, respond to institutions' educational goals and contemplate instructional competencies necessary for quality pedagogy. Continuous professional development is therefore vital for propelling teachers of business studies to higher their capabilities with the aid of certified learning. According to TSC policy document (2019), business teacher

professional development will continuously improve skills, knowledge, values and attitudes for better scores. Professional development is vital to pedagogical growth of teachers for improved efficacy. Research by TSC (2020) shows that majority of teachers of business studies exhibit weakness in preparing professional documents, pedagogical strategies, incompetency in handling special needs learners, weak assessment skills and poor classroom management and planning which prompted the commission to propose for teacher professional development sessions on effective pedagogy, and classroom management. In Ethiopia, Latchanna et, al (2019) carried out a study that supports the effectiveness of policies guiding professional development of teachers of business studies, stating that continuous policy reforms make changes on continuous establishment of professional advancement for enhancing standards of teachers hence learner achievement. Policies influence ways in which teachers of business studies develop professional competency that impart on learner achievement.

2. Statement of the Problem

Pedagogical policies when implemented appropriately tend to motivate teachers of business studies to gain desirable competencies that directly or indirectly heighten learner achievement. However, policies directing business teacher efficacy in Kenya seemingly have inviolable gaps between theory and practice owing to written theoretical guidelines. Inappropriate implementation of pedagogical policies may result in inadequate practical instructional skills, inconsistent teacher of business studies qualification standards and paucity of professional development. In this regard, teacher of business studies efficacy appears like a fragmented program due to erratic implementation of policies directing the

course of action. As a result of the garbled implementation of policies, teachers of business studies merely develop desirable competency, consequently resulting in degenerative learner achievement. Though sessional paper no. 1 of 2019 points out desirable teacher practices, there are no clear execution guidelines which in turn lead to inability of proper application. Based on this observation, spieling inadequacies in the teacher of business studies efficacy require participative formulation of policies and implementation in: instructional skills possessed by teachers of business studies, well-structured professional development programs and impelling qualification standards that heightens morale of teachers and consequently higher learner achievement. In cases where policies guiding teachers of business studies pedagogy are well implemented, there are high chances of improved knowledge and skills acquisition by teachers which is likely to lead to higher scores. On the other hand, where policies are not formulated and implemented collaboratively, spasmodic teacher of business studies efficacy might occur leading to incompetence and low learner achievement. Based on this realization, this study evaluated effect of pedagogical policies on the teacher of business studies efficacy in Kajiado County, Kenya.

3. Purpose and Objective

The purpose of this study is to examine effect of pedagogical policies on teacher of business studies efficacy in Kajiado County, Kenya. The specific objective of the study was to establish effectiveness of didactical policies on instructional skills, qualification standards and professional development of teachers of business studies in Kajiado County, Kenya.

4. Theoretical Perspective

The study used Context, Input, Process and Product Evaluation (CIPP) model. The CIPP model was propounded by Daniel Stufflebeam (1966) and his colleagues to reveal how decision-making process could be made possible by evaluation in program management. CIPP model was created during the early years of evaluation discipline programmes and has been refined several times by Stufflebeam (1983, 2000 and 2007). Borrowing from the work of Stufflebeam (1983), CIPP model, according to Boulmetis and Dutwin (2005), is an effective evaluation model based on decision-making that has been widely used in educational policy evaluation studies. Gauging following the CIPP Model also help external groups such as program specialists and policy groups outside the program being evaluated; to understand and assess the worth and merit of project, program or other service. The model views evaluation as an equipment by which to assist formulate policy programs work better for stakeholders they are intended to serve. According to Stufflebeam (2000) evaluations of CIPP should be anchored in the principles of democratic fairness and equity. CIPP evaluation model is a comprehensive framework for directing programs, staff, products, and institution assessments (Stufflebeam, 2007). The model was applied by Molope and Oduaran (2020) on evaluation of the community development practitioners' professional development programme. It is characterized by its significance in provision for holistic evaluation, systems-oriented elements and structure to accommodate needs based on universal evaluation. CIPP model is applicable to this study in evaluating pedagogical policies, to ascertain whether what has been achieved is comparable with what was objected initially. With regard to the context evaluation, the researcher identified the objectives of pedagogical policies on business teacher's efficacy. The input

evaluation stage guided the researcher in identification of policies guiding instructional skills, qualification standards and professional development vital for business teacher growth. The process evaluation stage is where the researcher stressed on implementation of the procedures guiding pedagogy. Lastly, the product evaluation stage aided in the conclusion that the researcher will make on whether pedagogical policies have effect on business teacher efficacy in secondary schools in Kajiado county; Kenya or not, and make recommendations based on the findings.

5. Conceptual Framework

Independent Variables   **Dependent Variable**

Pedagogical policies on

Instructional Skills
- Teaching Methods
- Assessment Methods
- Teaching Resources

Teacher of Business Studies Efficacy
- Mastery of policies
- Policy implementation
- Learner achievement

Qualification Standards
- Teaching Practice
- Professional Ethics
- Teacher Registration

Social and Health Challenges facing a Teacher of Business Studies
- Drug use
- Disabilities
- Chronic illness

Professional Development
- Pre- Service Training
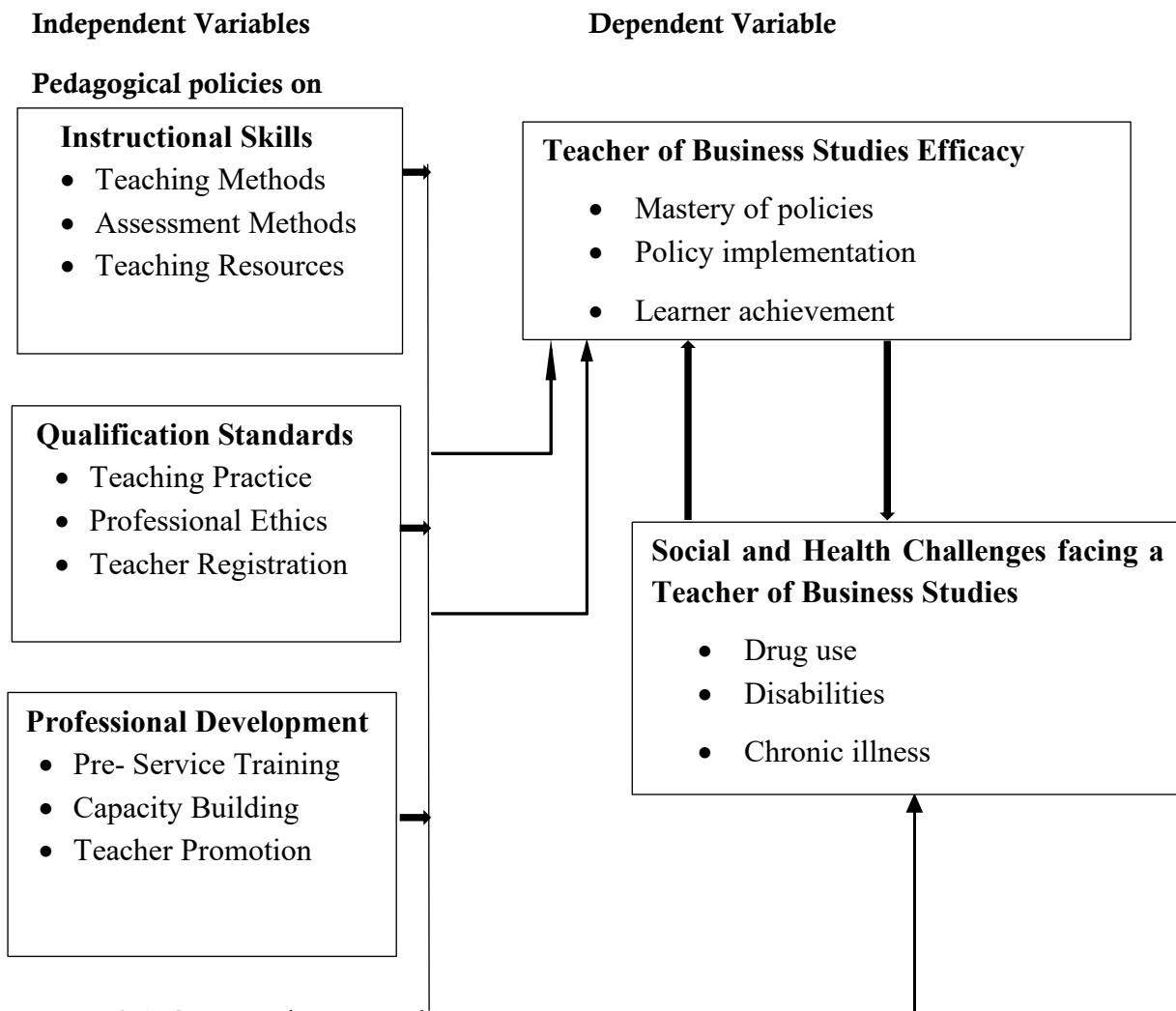- Capacity Building
- Teacher Promotion

Figure 2.1: Conceptual Framework

6. Methodology

This study was a descriptive survey targeting teachers of business studies from public secondary schools in Isinya sub-county of Kajiado county; Kenya. The data for this study were obtained through questionnaires filled by 18 teachers of business studies and interview schedules responded by 11 school principals and 2 sub-county education officials randomly and purposively sampled from a target population of 42 respondents. The data were analyzed both quantitatively using SPSS software version 25.0 and qualitatively through a thematic approach and presented on tables for easier interpretation.

7. Findings and Discussions

Proper policies on pedagogy of teachers of business studies emphasis on acquisition of skills and knowledge relevant to teaching work. Beyond acquisition of new skills, it is likely that learner achievement is enhanced upon application of skills by teachers of business studies. In this study, teacher of business studies efficacy was determined using instructional skills, qualification standards and professional development.

7.1 Pedagogical Policies, Instructional Skills and Teacher efficacy

The first objective examined the relationship between policies guiding instructional skills possessed by teachers of business studies and efficacy in Isinya Sub-County; Kajiado County. Structured policies give teachers of business studies guidance on proper pedagogical skills; that were assessed using three different aspects namely teaching methods, assessment methods, and use of instructional resources.

Table 7.1: Policies on Instructional Skills and Teacher efficacy

Source	Partial SS	Df	MS	F	Prob>F
Model	53.043	7	7.578	9.23	0.003
Teaching Methods	1.744	2	0.872	0.85	0.462
Assessment Methods	14.334	2	7.167	7.01	0.017
ICT related resources	11.538	1	11.538	11.29	0.010
Charts	35.362	1	35.362	34.60	0.000
Models	2.142	1	2.142	2.10	0.186
Residual	8.176	8	1.022		
Total	61.219	15	4.081		
R-squared	= 0.8664				

Table 7.1 produced an overall F-statistic of 7.41 with an associated p-value of 0.003 (p<0.05). This indicates that policies guiding instructional skills are significantly related to teachers' efficacy. This affirms the findings of a study carried out at Yogyakarta Indonesia *by* Sugihartini, *et al*., (2019) which revealed that policies directing instructional skills are vital in informing pedagogical competencies which a teacher of business studies teach and regulate the system of learning through proper interaction with learners. Australia (2017) emphasized that pedagogical skill is all that a teacher of Business studies does to influence learning in learners for better academic scores. Further, this supports Article 26 of the Universal Declaration of Human Rights (UNESCO, 2003) that argues that education should contribute to the development of teachers by imparting them with relevant instructional skills which are consistent with objectives of education that enable them to

yield changes in society by inspiring and enhancing learners' academic achievement rather than just constituting to trained professional teachers. In an interview schedule, a school principal claimed that,

> "Relevant instructional skills are very essential but neither the Ministry of Education nor TSC has provided adequate guidelines on instructional skills of teachers of business studies and all teachers in general. The government should formulate feasible procedures to lead overall instructional process in public schools."

7.2 Pedagogical Policies, Qualification Standards and Teacher Efficacy

Effective implementation of policies on qualification standards of teachers of business studies is likely to develop appropriate practices and accountability necessary for enhancing sanity in the teaching profession. Maintenance of qualification standards is a very challenging issue and one that attracts stakeholders' interest (Burdett et, al 2013). Qualification standards in this study were measured using teaching practice, professional ethics, and teacher registration.

Table 7.2: Qualification standards policies and Teacher Efficacy

Source	Partial SS	Df	MS	F	Prob>F
Model	34.310	7	4.9014	1.46	0.3034
Teaching Practice	4.741	1	4.7413	1.41	0.2692
Professional Ethics	2.910	2	1.4551	0.43	0.6631
Teacher Registration	24.591	4	6.1477	1.83	0.2169
Residual	26.909	8	3.3637		
Total	61.219	15	4.0813		
R-squared = 0.5604					

Table 7.2 further produced an overall F-statistic of 1.46 with an associated p-value of 0.3034 (p>0.05). This indicates that policies guiding teachers of business studies qualification standards are not significantly related to teacher efficacy. This negates the findings of a study by Waluyanti *et al.,* (2018) who argued that business teacher competency standards can be measured from learner achievement through following instructional policies. A sub-county education official in an interview said,

> "The main objective of TPD programme in the country is to continuously develop and improve teachers' qualification standards by enhancing skills, competencies and knowledge that is in line with the 21st century core competencies aimed at enhancing the provision of quality education in the country. The commission is doing what it takes to ensure total compliance to the policy, but we still have a long way to go as a country unless all stakeholders in education including teachers of business studies cooperate."

7.3 Pedagogical Policies, Professional Development and Teacher Efficacy

Proper policies on professional development of teachers of business studies emphasis on acquisition of skills and concepts related to teaching work. Beyond the acquisition of new skills, Ganira, (2022) states that it is likely that learner achievement is enhanced upon

application of the skills by teachers of business studies. In this study, professional development of teachers of Business was measured using pre- service training, capacity building and teacher promotion.

Table 7.3: Policies on Professional Development and Teacher Efficacy

Source	Partial SS	Df	MS	F	Prob>F
Model	53.444	5	10.689	13.75	0.000
Pre- Service Training	19.890	3	6.630	8.53	0.004
Capacity Building	26.001	1	26.001	33.44	0.000
Teacher Promotion	3.030	1	3.030	3.90	0.077
Residual	7.775	10	0.778		
Total	61.219	15	4.081		
R-squared	=	0.873			

Table 7.3: produced an overall F-statistic of 13.75 with an associated p-value of 0.000 ($p<0.05$). This indicates that policies guiding professional development of teachers of business studies are significantly related to teacher competency. Similar impressions were made by Hauge and Wan (2019) that guidelines on teachers of business studies professional development can bring about improvements in teachers' pedagogical thinking that cater for learners' acquisition of knowledge and development for better scores.

A school principal in an interview made the following remarks:

"The right kinds of policies on professional development for both teachers of business studies and school heads can contribute directly to improved learner achievement, but despite this, lack of time and required resources on the side of teachers mostly render this futile."

8. Conclusion

Teachers of business studies knowledge of subject matter and pedagogical skills improve through appropriate instructional practices

which are led by structured policies. Aligning business studies curriculum with substantive training and existing work experiences of teachers is vital for acquiring competencies necessary to heighten learner achievement. The study established that there exist inconsistencies in the manner in which policies guiding pedagogy are formulated and implemented besides the great significance they have. Formulation and implementation of feasible policies guiding pedagogy is crucial in shaping instructional skills, qualification standards and professional development of teachers of business studies in Kenya. The study concludes that if the policies guiding instructional skills are properly implemented, teachers are likely to employ more accommodative methods that will cater for learners regardless of specific learning differences for better scores. Structured policies give teachers of business studies guidance on proper pedagogical skills. The study also concludes that policies on teacher's qualification standards are vital in providing important qualification function by ensuring that only people who have been trained and have acquired prerequisite necessary qualifications are fit to teach and be engaged

as teachers of business studies. In addition, effective implementation of policies on qualification standards of teachers of business studies is likely to develop appropriate practices and accountability for enhancing sanity in the teaching profession. Based on the findings of the study, it is concluded that policies guiding professional development of teachers of business studies are significantly related to teacher efficacy. The study concludes that right kinds of professional development for both teachers of business studies and school heads can contribute directly to improved learner achievement, but inadequate time and required resources on the side of teachers mostly render this futile. The study in addition concludes that principals encourage implementation of policies on professional development of teachers of business studies by organizing benchmarking with more performing schools and encouraging teachers to attend capacity-building trainings.

9. Recommendations

1. Teachers of business studies and school principals should appreciate and implement policies targeting pedagogy for guidance on preferable instructional skills, qualification standards and professional development for heightened learner scores.

2. The teachers' employer; TSC should formulate more policies that guide instructional skills, qualification standards and professional development undertaken by teachers of Business studies for improved efficacy.

3. Further studies should be conducted focusing on pedagogical policies on teacher of business studies efficacy in

secondary schools in more than one county so as to widen the scope and be able to make comparisons.

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Covid-19 crisis and online learning in higher education institutions in Kenya: A review

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Abstract

The detection of a case of COVID-19 in Kenya in 2020 was a disturbance to education institutions in Kenya and Higher Education Institutions (HEIs) to be specific. It led to closure of all institutions from Kindergarten to the university consequently halting face to face learning that had dominated these institutions. The universities which were at different stages of building infrastructure for online learning responded by offering online learning classes of different formats and in different platforms. The purpose of this study was to identify challenges that HEIs in Kenya faced in transitioning to online learning and to provide suggestions for mitigation that HEIs can latch on to derive the benefits of online learning. To achieve the purpose, the researcher conducted literature review of papers published between the year 2020 and 2022 using the scoping method. The study adopted Selim's critical success factors as a framework for analysis of challenges of online learning (Selim, 2007). The data collected were analyzed qualitatively using inductive thematic analysis technique resulting in identification of challenges categorised as lecturers' challenges, students' challenges, information technology challenges and lack of university support. The strategies for mitigating lecturers', students', information technology and university support challenges to enable successful transition to online learning are herein suggested.

Key words: Covid-19, Online learning, Challenges, Mitigation, Higher Education Institutions

1. Introduction

The spread of COVID-19 pandemic to many parts of the world created a panic that impacted the global socio-economic and psychological foundations negatively (Okeyo, 2020; Ndung'u & Mutegi, 2021). In Kenya, the discovery of a case of Covid-19 in March 2020 led to immediate and indefinite closure of all institutions of learning paralysing learning for about 18 million learners (Mbogo, 2020; Makachia, 2020; Kiroro, 2020; Miller, 2020). As a consequence of this disruption, online classes became the popular option to ensure continued learning in institutions of higher learning (Wekullo et al., 2022). The shift from face-to-face learning to online learning caused stress to administrators, lecturers and students (Khalil et al. 2020; Oketch-Oboth, 2021; Ndung'u & Mutegi, 2021). The higher education institutions that had online learning platforms at different stages of development had to respond to the pandemic challenge to remain relevant in the global scene. A number of higher

education institutions had infrastructure for computer mediated communication that included computers and internet before Covid-19, however, these were insufficient to mount a robust online learning environment for the entire student population. According to Nyerere (2020) some higher education institutions responded by using meeting platforms like Zoom and Skype which are not adapted to large online classes. Mbogo (2022) notes that some institutions immediately responded by creating whats App groups to bring together lecturers, students and technical support team. Mbogo (2022) continues to observe that some institutions responded by creating digital libraries where students could access e-books, e-journals. Some lecturers sent notes and past exam papers via e-mail and whats App. According to Ndung'u and Mutegi (2021) some institutions responded to this disturbance by adopting online learning through recorded lectures and online platforms such as video conferencing, webinars, virtual meetings, telegram and twitter. Miller (2020) noted that a majority of university students

experienced suboptimal online learning environment even though they had better access to information communication technology. Ndung'u and Mutegi (2021) continue to observe that some institutions postponed teaching and learning due to lack of online infrastructure for both students and lecturers. In some of the cases where courses are of a practical nature like in the science and engineering courses, learning was halted until normalcy returned.

For successful online learning implementation, there is need for significant online learning infrastructure that includes hardware, networks, computers, software, internet and electronic learning resources or digital content (Alcock, 2007; Mosa et al., 2016; Odoyo & Olala, 2020; Wekullo et al., 2022). It also requires that institutions address the challenges that lecturers and students are likely to experience without forgetting to provide the requisite institutional support (Selim, 2007). Despite the government's formulation of vision 2030 strategic plan in 2007 to introduce virtual learning in institutions of higher learning, most of them still lack robust infrastructural

capacity to conduct meaningful virtual learning (Nyerere, 2020; Osabwa, 2022; Wekullo et al., 2022). The absence of the needed infrastructure influences the readiness to adopt online learning.

1.1 The concept of online learning

According to Ally (2004) it is difficult to come up with a generic definition of the term online learning due to a multiplicity of terms used for it. Some terms used for it include 'e-learning', 'web-based learning', 'digital learning', 'internet learning' 'distributed learning', 'networked learning', 'tele-learning', 'virtual learning', 'computer assisted learning', and 'distance learning'. This study adopted the usage of the term online learning. Several scholars have also given definitions of the same. Khan (1997) defined online learning as an innovative approach for delivering instruction to a remote audience using the web as a medium. Ally (2004) defined online learning as the use of internet to access learning material to interact with content, instructor and other learners and to obtain support during the learning process in order to acquire knowledge, to construct knowledge

and to gain from learning experience. Munezero et al. (2016) defined online learning as learning with assistance of computers. Pete and Soko (2020) defined online learning as the delivery of instruction to a remote audience using the web as an intermediary. O'Doherty et al. (2018) defined online learning as the use of information communication technology interventions to deliver support and enhance learning and teaching. Alipio (2020) conceptualized online learning as learning that involves the use of technology to access the curriculum outside of the traditional classroom. Underlying these definitions is the fact that online learning involves the use of technology of digital devices and internet connectivity to deliver learning to learners who are remotely connected. Also implied is that the learner and the process of learning are the focal point of online learning.

1.2 Review of related literature

This section provides a review of literature of studies that have been done in the past as regards challenges of implementing online learning specifically in Kenya before the emergence of Covid-19 pandemic. The

success of adoption of online learning is dependent on a consideration of confluence of factors that relate to the technology itself, users of technology and institutional factors. A failure to look at adoption of online learning from this prism poses implementation challenges. Muuro et al. (2014) conducted a study to investigate components of online collaborative learning perceived as challenges by learners in higher learning institutions in Kenya in two public universities (Kenyatta University and Jomo Kenyatta University of Agriculture and Technology) and two private universities (United States International University and AUSI) to identify students' perceived challenges in an online collaborative learning environment. The survey was conducted through purposive sampling in which 183 students responded to the survey. The findings indicated that students had the following challenges: Lack of feedback from instructors and peers, lack of time to participate in the collaborative learning environment, slow internet connectivity and low or no participation by group members. Tarus et al. (2015) conducted a study among

148 staff of three Kenyan public universities who were using e-learning in a blended approach. The purpose of the study was to investigate challenges hindering implementation of e-learning in public universities. Data were collected through questionnaires, in-depth interviews and document analysis. The findings revealed six challenges: Inadequate ICT and e-learning infrastructure, financial constraints, lack of affordable and adequate bandwidth, lack of operational e-learning policies, lack of technical skills on e-learning and e-content development by teaching staff, lack of interest and commitment among teaching staff to use e-learning and inadequate time to develop e-learning content.

Mutisya and Makokha (2016) conducted a study between 2012 and 2014 to determine the challenges affecting adoption of e learning in institutions of higher learning in Kenya using questionnaires which were administered to 420 lecturers and 210 students in 7 universities (University of Nairobi, Moi University, Egerton University, Kenyatta University, Jomo

Kenyatta University of Agriculture and Technology, Maseno University and Masinde Muliro University of Science and Technology). The findings indicated that lecturer's challenges were heavy workloads, insufficient network connectivity, limited ICT skills, lack of computers, inadequate computer laboratories, lack of incentives, and insufficient time for online interaction. The students' challenges included insufficient internet connectivity, lack of computers, insufficient time for online interaction, limited ICT skills and inadequate computer laboratory. Munezero et al. (2016) conducted a study to find out the challenges of online learning in University of Eldoret. A questionnaire was administered to 17 instructors at the university. The findings revealed that cost, speed and access to internet was an issue of concern to lecturers, Inadequate institutional ICT support to the lecturers, lack of e-learning and learning management system skills, frequent power outages, lack of modern computers, lack of incentives.

Hadullo et al. (2018) carried out a study to establish the quality of e-learning in Jomo Kenyatta University of Agriculture and Technology. The study involved 180 students, 19 instructors and 1 administrator. They responded to questionnaires and interviews. The findings indicated that students were not satisfied with the structure and organization of the courses; the content of the courses were inadequate and they also experienced infrequent feedback from the instructors; Information support, affirmation support and emotional support to the students was not effective; The students also had inadequate computer skills to navigate the learning management system. The lecturers on the other hand had inadequate training on learning management system and course development; they had low motivation and limited access to e-learning seminars. The institution experienced poor network connectivity and low internet bandwidth.

Njihia et al. (2020) conducted a study that sought to establish the obstacles that hinder the success of open and distance learning programs at Kenyatta University. The study employed a sequential mixed methods design that allowed collection of both

quantitative and qualitative data from 207 students and 5 key informants who were members of staff involved in management of online learning. The obstacles were sought from the perspective of technical, instructional, institutional and personal dimensions. The findings indicated that technical challenges of students and staff were insufficient exposure computers and ICT technology, lack of finances and lack of internet connectivity. The institutional challenges were delayed delivery of study materials and inadequate learner support services. The instructional challenges were inadequate academic support due to lecturers failing to facilitate courses online and poorly designed course materials. The individual challenges were financial constraints, insufficient study time and imbalance between family and study commitments.

The review has indicated that extant studies of this kind have been done in 10 universities in Kenya. The studies have looked at challenges from different perspectives that boil down to infrastructural challenges, institutional challenges,

lecturers' challenges and students' challenges. The reviewed studies used either quantitative methods only or a blend of both quantitative and qualitative methods. The studies by and large focused on students and lecturers as respondents with a few also focusing on administrators.

1.3 Statement of the problem

Online learning has many benefits that include increasing access to education of many learners, enhancing flexibility of learning in terms of time and place, reducing the cost of learning, making effectiveness of teaching better and ease of administration among others. Despite these benefits that come with implementation of online learning in institutions of higher learning, the extent of migration to online learning remains low in Africa (EdTech, 2020). In Kenya a number of institutions had existing online learning environments before Covid-19 but were not robust enough for mass usage by the entire university fraternity during the Covid-19 pandemic outbreak. It would be significant to synthesize the hindrances of transitioning to online learning in the light of basic requirements

for migration to online learning in the Kenyan context. This would also help institutions to focus on specific aspects in transitioning to online learning. This would ensure uninterrupted access to and provision of quality online learning now and in the uncertain future so that the benefits of the same are derived. This would also help to design strategies for successful transitioning to online learning. The purpose of this study was therefore to determine the challenges of migrating to online learning in higher education institutions and from there suggest strategies for mitigation to enable a focussed migration to online learning in the future from a literature review perspective.

1.4 Research questions

The study was guided by the following questions:

i) What were the challenges that faced online learning during Covid-19 pandemic?

ii) What are the strategies for mitigating these challenges?

2. Methodology

To answer the review questions, the scoping review method was utilized. This is a type of research synthesis that aims to map the literature on a particular topic or research area and provides an opportunity to identify the key concepts, gaps in the research and types and sources of evidence to inform practice, policy making and research (Pham et al., 2014). According to Munn et al. (2018), scoping review is significant in studying an evolving discipline such as online learning where experiences are dynamic.

The review investigated extant literature from studies published between 2020 and 2022 that were done in Kenya. The study analyzed the content of the papers with the objective of identifying the major challenges institutions of higher learning experienced during Covid-19 lockdowns in migrating to online learning. From the challenges faced, it was consequentially possible to suggest strategies to surmount the obstacles. The review adopted steps of the scoping review strategy specified by Arksey and O'malley (2005). The steps involved identification of research questions, location of relevant studies, selection of studies that are relevant to research questions, data extraction from

selected studies and finally summary of data.

The reviewed papers were obtained from Google Scholar using English language. The search was limited by using variants of online learning like 'e-learning', 'distance learning' 'web-based learning' 'internet-based learning' together with the words 'challenges', 'difficulties', 'Covid-19 pandemic', 'Higher education institutions' 'Universities' 'Colleges'. To narrow down the search, the word 'Kenya' was added. The search was further narrowed to papers published between the year 2020 and 2022 that concerned challenges faced in migration to online learning during Covid-19 pandemic. Though the query produced 30 articles, the researcher restricted the focus to the specific online learning challenges experienced in Kenya during the lockdown of institutions due to Covid-19. As a further exclusion criterion, the articles of review type, non-empirical studies and commentaries were not included. After

exclusion, 11research papers were subjected to a thematic analysis.

The framework for analysis of literature was based on Selim's online learning Critical Success Factors (CSFs) for effective implementation of online learning in universities (Selim, 2007). This framework was based on a survey of university students. According to this framework, successful implementation of online learning requires the instructor (lecturer), the students, information technology and university support. Consequently, the challenges and mitigations are based on the perspective of lecturers, students, information technology and university support.

3. Results and Discussion

The table below shows the results of a review of challenges experienced in implementing online learning in Kenya during the Covid-19 pandemic. This was got from 11papers that were reviewed between 2020 and 2022.

Table 1: Challenges of implementing online learning in Kenya during Covid 19 pandemic

Category of challenge	Sub-category	Literature
Information technology challenges	Infrastructure	Gaceri (2021),Gachanja et al. (2021), Kabare et al. (2021), Ndungu and Mutegi (2021), Millan (2021), Nyaegah (2021)
Lecturers' challenges	Technical Skills	Gaceri (2021), Pete and Soko (2020), Omulando and Osabwa (2021), Gachanja et al. (2021), Omariba (2021) Osabwa (2022)
	Attitudinal/Psychological issues	Kabare et al. (2021), Millan (2021)
Students' challenges	Technical skills	Gachanja et al. (2021), Kabare et al. (2021), Millan (2021), Nyaegah (2022), Okech-Oboth (2021)
	Digital devices	Kabare et al. (2021), Millan (2021), Nyaegah (2022), Okech-Oboth (2021), Omariba (2021) Osabwa (2022), Omulando and Osabwa (2021).
	Psychological issues	Gaceri (2021), Kabare et al. (2021), Millan (2021), Okech-Oboth (2021), Osabwa (2022)
University support challenges	Technical support	Gaceri (2021), Gachanja et al. (2021), Omariba (2021) Osabwa (2022),

Table 1 shows the categories and sub-categories of the challenges experienced in migration to online learning from the perspectives of information technology challenges, lecturers' challenges, students' challenges and university support challenges. In this section, the results of the review are presented followed by discussion. Consequently, the presentation follows the same order and criteria.

3.1 Information technology infrastructure challenges

Gaceri (2021), Gachanja et al. (2021), Kabare et al. (2021), Ndung'u and Mutegi

(2021), Millan (2021), Nyaegah (2022), Okech-Oboth (2021), Omariba (2021) and Osabwa (2022) reported poor information technology infrastructure. Infrastructure challenges included ease of technology access, ease of internet access, website ease of use, limited bandwidth to access internet, slow internet speed, lack or unreliable internet connectivity, poor quality software and hardware. This findings on technology infrastructure are worrisome since infrastructure availability is at the heart of implementation of online learning. In the African continent only 24% of the population is has access to the internet, with poor connectivity, exorbitant costs and frequent power outages (Tamrat & Teferra, 2020). Nyerere et al. (2012) had noted earlier that infrastructure outside of major cities in Kenya remains inadequate for implementation of online learning. Tarus et al. (2015) had earlier observed that most universities in Kenya lack affordable and adequate internet bandwidth. It appears that despite earlier observation of these challenge, not much had been done to improve technology infrastructure in the

universities.

According to Mosa et al. (2016), the internet factor for successful implementation of online learning includes components as access, bandwidth, broadband, speed and reliability. They continue to opine that online learning requires a bandwidth that is sufficient for transferring videos and audio forms of communication. Mwangi (2015), reported that the range of internet bandwidth in most higher learning institutions was less than 100Mbs which was way below the expected range for an efficient and reliable online learning. Without stable internet, there can be no quality online learning leave alone the psychological stress posed on the learner. Gakunga and Owuor (2021) have noted that internet connectivity problems bring about buffering and lagging of live streaming due to excess load on the server.

3.2 Lecturers' challenges

The Covid-19 pandemic came as a jolt to the lecturers who were accustomed to face to face teaching/learning mode. Gaceri (2021) observed that most of the university lecturers lacked technical skills on online

learning, online content development and digital online learning unpreparedness. This observation was corroborated by Pete and Soko (2020), Omulando and Osabwa (2021),Gachanja et al., (2021), Omariba (2021) and Osabwa (2022). This finding was surprising in two ways: Firstly, in a study done by Mutisya and Makokha between 2012 and 2014, the same observation was made (Mutisya & Makokha, 2016). Secondly, it is not practical and sensible to expect the lecturers to apply technology that they are insufficiently trained to use. Nyerere et al. (2012) and Mutisya and Makokha (2016) noted that effective use of online learning demands that the teaching staff be properly trained in using distance education as a delivery mode and be competent in technology utilisation. Koehler and Mishra (2005) have rightly observed that for online learning to cause transformation in education, there should be focus on how instructors use technology. They continue to aver that for lecturers to become fluent with technology, there is need to go beyond mere competence with the latest tools to developing an understanding

of a complex web of relationships between users, technologies, practices and tools. Technological inadequacy of the lecturers would further mean that they are not of any significant technological and pedagogical assistance to the learners in any learning situation. For quality online learning to take place, lecturers need to be adequately trained to deliver the online courses (Wekullo et al., 2020). Technological incompetency could also be attributed to the sudden shift to online learning by universities that did not afford sufficient time of preparation by lecturers to change from the traditional mode of teaching. Related to technological incompetency is technological inertia which prevents pedagogical staff from making efforts to embrace novel technologies in teaching.

Kabare et al. (2021) and Millan (2021) reported that lecturers had attitudinal issues with regard to technology. Negative attitude of teaching staff is a matter of concern to administrators of institutions of higher learning. Sun et al. (2008), have observed that instructors' attitude towards online learning has a significant effect on online

learners' satisfaction. They continue to observe that an instructor with a negative view of online learning will negatively affect learners' satisfaction. Mahdizadeh et al. (2008) observed that the instructors' perception of online learning directly influences the actual use of online learning environment. Huang and Liaw (2005) opined that instructor's attitude towards technology influence their acceptance of the usefulness of technology and its integration in teaching. Negative lecturer attitude could be directly related to lack of technical skills and age of lecturers. This could be further brought about by the fact that technology develops at a much faster pace. Some lecturers are aging and may not cope with the faster pace of technological advancement. Studies about the effect of age on attitude towards computers have shown that older people tend to have less positive attitudes towards the use of computer technology than the young peers (Christensen & Knezek, 2006; Melissen, 2008). The implication is that older lecturers are less likely to use computer technology in teaching than the younger ones. Attitude

towards technology use has also been shown to be linked to technological competency (Smarkola, 2008). Agyei and Voogt (2011) observed that technological competency is a precursor to successful integration of technology in teaching and learning.

3.3 Students' challenges

Gachanja et al. (2021), Kabare et al. (2021), Millan (2021), Nyaegah (2022), Oketch-Oboth (2021), unanimously found out that lack of technical online skills was a challenge to most of the students. This finding was surprising since it was anticipated that most students joining the universities had basic computer skills that they would easily apply in the online environment. Furthermore, most institutions in Kenya at the moment embed basic computer skills as part of the mandatory courses that students undertake.

Kabare et al. (2021), Millan (2021), Nyaegah (2022), Oketch-Oboth (2021), Omariba (2021) and Osabwa (2022) consentaneously reported students' lack of digital devices like smart phones, laptops. A study by Omulando and Osabwa (2021) in one the universities indicated that 90% of

the students had smart phones while only 10% had personal computers. The imbalance in favor of smart phones is largely reflected across the country. Even though smart phones are usable in online learning, they have technical restrictions associated with insufficient operations compared to laptops and desktop computers. The fact that a majority of digital devices were smart phones means that the students would strain a lot using devices with small screens. This also indicated that this challenge could be related to affordability of these digital devices.

Gaceri (2021), Kabare et al. (2021), Millan (2021), Okech-Oboth (2021) and Osabwa (2022) reported psychological challenges. These factors included lack of psychological readiness to undertake online learning, feelings of loneliness or isolation from peers, loss of attention and lack of motivation. These psychological challenges are expected in any learning environment and can be caused by a multiplicity of factors. Cabansag et al., (2020) observed that the motivation of online learners declines due to poor internet connectivity, outdated digital tools, software

system glitches. Thandevaraj et al., (2021) noted that online lectures which require learners to use online media that they have insufficient understanding of leads to high stress rate among students. Thandevarag et al. (2020) continue to aver that the difficulty to access online learning due to insufficient network is a cause of student depression and anxiety. It is worth noting that psychological issues are precursors to student learning during normal times and they are likely to be even more important in the context of Covid-19 pandemic due to the unique challenges posed.

3.4 University support challenges

Gachanja et al. (2021), Omariba (2021), Gaceri (2021) and Osabwa (2022) reported lack of institutional technical support during online learning. University support includes technical assistance by staff, availability of library services and computer laboratory reliability. According to Amoozegar et al. (2017), institutional support refers to the provision of dedicated services to assist students and facilitators throughout the development of learning resources for successful online learning. Amoozegar et al.

(2017), continue to opine that this support includes preparing and spending resources on communication and interaction to learners become actively involved in online learning. Lack of institutional technical support is a disturbing finding in the light of studies which have reported its significance in enhancing online learning. Maheshwari (2021), has noted that support provided from the institution in form of class activities, class interactions and instructor support play a profound role in students' decision making to study courses online in the future. Alexander et al. (as cited in Amoozegar et al., 2017) noted that when students receive administrative and technical support, their satisfaction towards online learning is boosted. Kee et al. (as cited in Amoozegar et al., 2017) observed that university administrative and instructor support were able to influence the adoption of online learning among students.

Lack of technical support in Kenyan universities could be attributed to lean staff that is occasioned by funding challenges that most universities have faced in the recent past (Wekullo et al., 2022). This situation is also attributable to the haste with which online learning was implemented without due consideration of critical success factors.

4. Strategies for mitigating challenges

From the foregoing review of literature, it is evident that these challenges suppress the implementation of online learning in the institutions of higher learning in Kenya and hence affect the realisation of the benefits that would arise from transitioning to online learning. It is also noteworthy that these difficulties differ in complexity from one institution to another. The following strategies are suggested for successful implementation of online learning in higher education institutions. The suggestions are in line with Selim's framework of critical success factors for implementation of online learning (Selim, 2007).

There is need for institutions to scale up investments into online learning infrastructure since this is a basic requirement for successful implementation of online learning. This can be done by enhancing and modernizing the existing infrastructure. The basic infrastructure includes internet access, hardware and

software. According to Mosa et al. (2016), internet access has sub-components like bandwidth, broadband, speed and reliability. Institutions need to consider all these aspects of internet access. Hardware components that need to be invested in includes computers, servers, networks along with equipment for end users. The software should include information management tools like operating systems, learning management systems and application systems. The expansion of infrastructure for online learning should take cognisance of pedagogical staff, students and other stakeholder.

There is need for continuous professional development of lecturers on the issues of online learning. Enhancing lecturers' technological competency decreasing their fears should be an integral part of design for online learning programs. Attempts should be made to make professional development of lecturers to be a regular program which should focus on current trends in online pedagogy. This is particularly significant since the domain of information communication technology is very dynamic.

Attitudinal issues of lecturers can be addressed by rewarding the staff who have excelled in embracing online pedagogy.

There is need for prior training of students before the launch of online courses for learners. This would sharpen the skills they have acquired in the basic training on computer skills. This will also give them the competence to navigate the learning management system. It will also give them confidence to participate well in conferencing platforms like zoom and google classroom. Students' lack of appropriate digital devices can be addressed through government or institutional interventions that can enable learners to acquire laptop computers through subsidized programmes or on credit which can be spread over a period of time. If infrastructural challenges like stable network and connectivity can be sorted, the students' psychological challenges can be addressed partly. Related to infrastructural challenges is the fact that online learning management system should be designed with a friendly, easy to use interface and provide for collaborative learning. This will enhance

students' accessibility to the online programs and also improve student-student interactions. Student-student interactions are particularly important since they serve as extrinsic motivators to the learners in the virtual environment. There is need to come up with strategies for enhancing intrinsic motivation which is a driver of self-directed learning.

Institutions of higher learning need to deliberately develop support programs to help students realise the usefulness of online learning especially in the context of uncertain future. Institutions of higher learning need to have well planned strategies to support student learning which have the effect of retaining learners in online learning mode. University support may call for employment of staff who specifically give technical and administrative support.

5. Conclusions

This study has explored the challenges that hindered the transitioning to online learning during the Covid-19 pandemic from the perspective of infrastructural challenges, lecturers' challenges, students' challenges and institutional support challenges. These challenges have prevented the realisation of the benefits that online learning is premised on. It is also noteworthy to mention that there is no uniformity of experience of these challenges in the institutions across Kenya. There is a variation of challenges from simple to complex in the institutions. Having examined 11 different studies done between 2020 and 2022, the infrastructural challenges included unreliable internet connectivity, limited bandwidth, slow internet speed, poor software and hardware, user unfriendly internet and website. The lecturers' challenges included technical incompetency and attitudinal issues. The students' challenges included lack of technical skills, lack of digital devices and psychological challenges. The university support challenges included lack of technical support. Strategies for mitigation are suggested above to enable a seamless transition to online learning.

Conflict of interest

The author declares no conflict of interest

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