Understanding and Improving Outcomes for Students in an Underserved Secondary School in Kenya: A School-Community-University Partnership

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Abstract

Although universities are positioned to lead change, specifically by improving educational systems, there is no evidence of universities in Kenya engaging with schools. Concurrently, the quality of education in Kenya is declining. This article explores the problem of disparities, poor educational outcomes, and ways to improve education at an underserved secondary school over the course of a three-year participatory action research project. Qualitative design was used to gather data through interviews, focus group discussions, and document analyses. Data were analyzed utilizing constant comparison technique and ecological and sociocultural theories. Emerging themes included: disparities and poor academic outcomes; focus on external rather than internal locus of control; absolute power and authority; isolation that is breaking systems and institutional thinking; and partnership infused new knowledge for improvement.

***Keywords*:** partnerships, secondary schools, ecological and sociocultural theories

INTRODUCTION

School improvement has been conceptualized as a process that involves creating a vision, using school data to plan strategies that align with the vision, and acting on the strategies (Bryk et al., 2010). This article documents the outcomes of a three-year holistic participatory action research (PAR) project that explored the problem of disparities and poor educational outcomes in a Kenyan secondary school. A holistic approach views the system as networks of interactions that influence each other in a complex way (Shaked & Schechter, 2018). A school-community-university partnership (SCUP) was created to undertake the study. According McLaughlin et al. (2017), partnerships have been used to tackle vexing issues in education. Specifically, "highly structured, intentionally formed collaborations among education professionals, researchers, and designers" have been used to address high leverage practical problems (Russell et al., 2017, p.1). They have advanced processes of systematic learning, accumulation of new knowledge, and dissemination. The diverse composition of partnerships instigates understanding of complex problems from multiple perspectives, while harnessing local collective intelligence for contextual learning and improvement. Russell et al. (2017) argue that while educational reforms anywhere are slow to respond to change forces, innovations have produced minimal improvements because of non-systematic practices dominated by management. In contrast, partnerships that comprise supportive communities of multiple institutions and people with varying knowledge, talents, skills are more able to simultaneously identify problems and interventions (McLaughlin et al., 2017). Not without challenges, McLaughlin et al. (2017) found that despite their appeal, "the challenges of creating and sustaining collaborative, productive school-university partnerships are formidable" (p. 90). In this research, a partnership was set up in an underserved Kenyan secondary school for the purpose

of facilitating self-study and proposing context-specific solutions.

Self-study was intended to uncover school contextual factors contributing to disparities and poor academic outcomes in the national examination, Kenya Certificate of Secondary Education (KCSE), and to generate contextualized approaches for improvement. The KCSE exam is a high stakes summative evaluation of students' academic performance at the end of four years of secondary education. The KCSE outcomes have far reaching implications for students, their families, communities, and the nation. When schools fail, communities fail. Since 2016, half of secondary school students taking the KCSE scored grades of D and below, limiting their opportunities to access professional career programs or jobs (Wanzala, 2018). In 2016 and 2017, 295,463 of 571,161 students and 350,467 of 610,359 respectively, scored the grades of D and below. Besides limiting opportunities, such outcomes violate the rights of citizenship, which begin with ensuring equitable access to quality educational outcomes (Freire, 2002).

Despite heavy investment in education (10% of GDP and 20% share of total government expenditure) and poor outcomes (Republic of Kenya, 2019), governmental reforms in education have continued to focus on re-structuring, teacher salaries, free education, and school governance (Institute of Policy Analysis and Research (IPAR), 2008). Absent from reforms are progressive pedagogies, a focus on student's rights, professional development for teachers, and support for the democratic leadership that would likely improve outcomes (IPAR, 2008; Lawrence & Orodho, 2014), hence the need to investigate these areas.

Related literature

In Kenya, interactions among government policies, social factors, and school factors have produced a system of education that is characterized by disparities in resources and educational outcomes (Onsomu et al., 2005). Students attending national schools qualify for higher education at rates of 90–100%, while those attending sub-county schools qualify at 0–11% (Glennerster et al., 2011). In a tiered structure of national, county and sub-county secondary schools, national schools are at the top, well-funded, fully staffed, and admit the highest performing students from primary schools. Between 2016 and 2017, most of the 50% of students scoring grades D and below were girls, students from poverty, and/or those attending poorly resourced sub-county public schools (Wanzala, 2017, 2018). Despite these findings, academic outcomes are rarely challenged and/or investigated for purposes of fairness in resource allocation and improvement. Government responses have excluded research and "infrastructure focusing explicitly on improving teaching and learning … and strengthening the institutional arrangements in which educators and students carry out their work" (Bryk, 2015, p. 467). Kenya government-initiated school reforms are typically modest and vary greatly in their impact. For example, while free education had positive impacts on student achievement in regions with established schools, it was detrimental in regions with few schools because of overcrowding and lack of resources (Sawamura & Sifuna, 2008; Sifuna, 2005, 2007). Limited efforts have been applied to understand how schools work, why schools do not produce desired academic results, and how to improve educational outcomes. This is reminiscent of claims that government efforts tend to move rapidly with little knowledge of their effects or piloting to understand the effects of reforms (Bryk, 2015). To diversify knowledge input, research suggests that partnerships that engage communities in identifying systemic problems of practice and solutions over a sustained period are more likely to improve the school outcomes (McLaughlin et al., 2017).

Theoretical framework

Educational outcomes depend on interactions among overlapping systems in and outside of school (Luter & Kronick, 2017). This assumption is consistent with ecological and sociocultural theories (Bronfenbrenner, 1993; Rogoff, 2003; Spencer, 2006). The ecological approach proposes that student and school outcomes depend on multiple layers of context, including the individual, family, school, community, and society at large. Sociocultural theory argues that cultural artifacts, local practices, and activities in which individuals participate (Lantolf et al., 2015) mediate human functioning. While ecological theory provides context, sociocultural theory provides medium for interactions. Sociocultural interactions mediate contextual circumstances. Thus, the nexus between ecological and sociocultural explains the whole. For example, negative sociocultural experiences have been found to "account for deviant behaviors that result when individuals cannot develop interpersonal relationships" (Barnard, 2006, p. 70) in their ecological environment. In this context, such individuals are likely to experience low self-esteem and/or lack social interest that in turn, impact performance. Thus, together, these theories suggest that "context offers affordances and constraints for particular kinds of development" or outcomes (Nasir et al., 2011, p. 1759). What is perceived as an individual mind is, in reality, a web of exchanges and transformations within a context (Frielick, 2004). The "dialogical processes of language and communication between teachers, students and the subject within the nested contexts can be seen as the pathways in which the process of information exchange and transformation occurs" (Frielick, 2004, p. 330). In this case, not only are "children's developmental patterns influenced by interactions …, [but] children can also actively shape the environment" (Luter & Kronick, 2017, p. 120).

Ecological and sociocultural theories postulate that school context and interaction have influence on the quality of academic, psychological, and social outcomes. Lawrence and Orotho (2014) found that poor performance in Kenyan schools was explained by examining the school context, especially those with "inadequate human and physical resources, with most district schools lacking the critical human and instructional resources" (p. 69). Not considered in this research and others (IPAR, 2008) are the intensities of impact created by the intersections of systems, specifically when there are financial, social, knowledge, or leadership deficits in the systems. In other words, optimum performance among students and schools require adequacy and interdependent functionality of the interlocking systems. It is within this context that a partnership and participatory action research was used (a) to identify factors leading to disparities and poor student and school outcomes, and (b) for possible solutions.

METHODS

Over three years, a school-community-university partnership (SCUP) was formed at a secondary school in Kenya. Participatory action research (PAR) was utilized to implement the research study project. PAR was preferred for its collaborative "strategy in which research and action are closely linked" (Whyte, 1991, p. 8). Through the partnership, PAR engaged members of the school community from all ranks in research design, data gathering, and data analysis. According to Call-Cummings and Martinez (2017), PAR produces authentic knowledge in an inclusive way and has the "potential to empower those involved in it" (p. 564). Creswell (2012) found collaboration to be critical in collecting, analyzing data, and enhancing accuracy. The SCUP team used a qualitative approach to collect data. The 5Whys questioning technique (Serrat, 2009) enabled respondents to think beyond the obvious, especially in relation to issues they had become accustomed to and normalized. The repeated questioning in the 5Whys provided the opportunity for systematic

questioning and thinking or responding to the same question in-depth. As participants' answers revealed more of their in-depth knowledge and concerns about the topics that arose, the inquiry led them to dig deeper into causes and contributing factors (Hibino et al., 2018).

Qualitative data were gathered through observations, focus group discussions, and interviews with students, teachers, school administrators, and members of the school community. Eighteen teachers, 30 students, 10 staff members, 2 administrators, 4 members of Board of Governors (BoG), 3 parents, and 2 government officials provided that data. Of eight focus group discussions, five involved students (two with each gender, one with both male and female students), two involved teachers, and one with staff. Each focus group had a minimum of six and maximum of eight participants. Three interviews were conducted with the school principal, one with the school matron (in charge of the boarding section), two with senior teachers, and one with the chair of BoG. Focus group discussions and interviews lasted between two and three hours and focused on: 1) the day-to-day operations at the school; 2) factors influencing school, class, and individual student outcomes; and 3) how the school could reach the desired goals or vision.

Documentary materials from the school and government offices were analyzed. They included school records, minutes from meetings, photographs, memos, contracts, and reports from government officials. Qualitative data were analyzed utilizing a constant comparison technique (Glaser & Strauss, 1967). The process allowed for iterative development of codes by comparing new data to existing data (Leech & Onwuegbuzie, 2007) and theories. In addition, deductive (based on theoretical frameworks) and inductive reasoning (allowing for new themes to emerge) were utilized (Creswell, 2012).

The school-community-university partnership

The PAR started with formation of the partnership (SCUP) that involved faculty and researchers from a Kenyan University, faculty and researchers from a North American University, and Khalston Secondary School (KSS), a pseudonym. The SCUP included an experienced researcher and professor, two teachers, two students, a member of the Parent Teachers Association (PTA), a school representative, a County Department of Education (for advisory) representative, a community representative, and a graduate research assistant (Doctoral student and educator). The group selected one of the teachers as the team leader. For one month, researchers reviewed relevant literature that confirmed: significant disparities in school inputs and outcomes among Kenyan secondary schools; poor performance in underserved schools; limited interventions at school and governmental levels; the lack of human resource and effective school management; and the detrimental impact of poverty (IPAR, 2008; Lawrence & Orodho, 2014; Ministry of State for Planning, 2012; Onsomu et al., 2005; Republic of Kenya, 2005; Wasonga, 2013;). Based on Bryk's (2015) suggestion, the team developed a community that shared their innermost concerns and goals: common theoretical and structural understandings of the project; a guide for partnership; processes and norms governing interactions among individuals in the partnership, including roles and responsibilities; evidentiary standards for warranting claims (data); and technical resources and communication mechanisms necessary to accelerate wide learning networks. The teachers agreed to not share the information generated in the project against students involved in the SCUP. The SCUP team organized a 2-hour meeting twice a week for three weeks to explain the expectations, duties, responsibilities, and ethos for the project.

The SCUP worked with KSS for three years continuously, studying the school context, inputs, processes, and outcomes (Stufflebeam & Shinkfield, 2007). This focused on the

multilayered complex factors that affect students' interpersonal and institutional connections (Nasir et al., 2011), developing tools for data collection and collecting data that informed identification of issues and possible solution approaches (Langley et al., 2009; Lewis 2015). The three-year period provided time to understand the school's context, develop working relationships, build trust (Lincoln & Guba, 1985), and initiate ideas for improvement.

Study context: Khalston secondary school

Pseudonyms were used to hide the identities of the school and respondents. Khalston Secondary School (KSS), a sub-county school, provided a relatively open and conducive environment for the purposes of this PAR project. At the time of study, the school had a population of 570 students (220 females and 350 males), 32 teachers and 20 staff members. Members of the SCUP visited the school on five occasions as a group over a period of two years. The graduate research assistant and the main researcher from a North American university spent one day (on different days) every week for a total of twelve weeks over two years to observe the day-to-day operations of the school, including class observations, faculty meetings, condition of facilities, and co-curricular activities. Researchers engaged with teachers, students, staff, and visitors including parents, vendors, and other members of administration consistently. On invitation, SCUP members attended three Friday morning school assemblies to share information about the project.

KSS is a co-ed school that had been in operation for over 25 years at the time of this study. The school was founded by a priest in the 1990s to serve children in this remote, sparsely populated area in western Kenya. Most parents could not send their sons and daughters to same sex boarding secondary schools that are the norm. Most of the children born in this area did not attend secondary school, and as Mr. Mzalendo (a pseudonym), the current principal, noted, they were "simply wasted." However, KSS did not become the magical place the community expected. Performance in the summative national examinations was dismal (averaging 2–3.5 out of possible 12 points), with girls scoring in the bottom half (averaging 1–1.5 points). The community proposed turning the day school into a boarding facility, at least for the examination of the senior class. Discussions around the issue at the time indicated that the long periods of time and energy spent walking to and from school, and the poor conditions in many homes prevented learners from devoting time to school tasks, especially for girls who spent inordinate amounts of time on home chores (e.g., cleaning, cooking, or caring for younger siblings). The major challenge was funding to build boarding facilities. The Kenyan Government's policy requires that parents cover the cost of school buildings while the Government provides teachers (Republic of Kenya, 2005).

At the time of this study, there was a modern dormitory for girls, which was built to accommodate up to 60 students and without indoor plumbing. However, there were over 100 girls sleeping on three decker beds and bathing outside in the open air. The boys' modern dormitory was under construction. There were three dilapidated dormitories built of bricks and rusted corrugated iron sheets. The dormitories were overcrowded with relatively small windows, most of which had broken glass. Outhouses (toilets) were in extreme state of disrepair, posing both health and physical risks to the students. Like the girls, boys bathed outside. The school had a borehole with a water pump, not big enough to pump water to the dormitories, kitchen, or the teachers' houses. Without access to a proper dining facility, students picked up food from the kitchen and took what they could find available to their classrooms, dormitories or ate under a tree shade. The principal's office and teachers' lounge were housed in a small, old and rugged building that was too tiny to accommodate them. Mostly, the teachers sat outside on verandas to grade papers.

Classrooms were overcrowded to the extent that a quarter of the students from each class, specifically in compulsory lessons like languages and math, listened to the teacher through the classroom windows. For example, classrooms that were built for about 40 students, had 65. The only laboratory for the whole school was modern and fairly well-equipped. The greatest asset for this school was their teachers. Although the teacher-to-student ratio was 1 to 60, relatively speaking, they had a large number of qualified dedicated teachers. In terms of housing, teachers lived in substandard homes made from old rusted corrugated iron sheets from bottom to top, which were cold at night and hot in the day. While school administrators occupied the only four modern houses in the school compound, some teachers commuted from distant towns, and others from nearby town centers.

The challenges in this school were not unique. In talking to teachers, they found themselves spending inordinate amount of time resolving issues of boy-girl relationships. With 570 students of which 220 were girls in their teen age years and a community where talk about sexuality is a taboo, it was not surprising that teachers had to play the role of mediators. Amenities were inadequate. There were four toilets for 220 girls and about 20 minutes for bathroom breaks, which were against government recommended ratios of one toilet to every 25 girls and one toilet to 30 boys (Republic of Kenya, 2008). A disproportionate number of girls were always late returning to class from bathroom breaks, and disproportionately exposed to corporal punishment for not managing to return to class as quickly as the boys.

Students at KSS were active in co-curricular activities. There was a large playing ground for soccer, netball, athletics, and other small-scale games like throw and catch. Students made impressive shows at local, county, and national competitions in co-curricular activities including music, debate, and soccer. They also had a significant presence in academic symposia that were organized locally and countywide. For many of the students, school was the place of promise, inspiration, and their hopes for a better future, and they wanted to do things that were meaningful in spite of the limitations of the physical plants.

FINDINGS

Findings were based on analysis of qualitative data, analyzed collaboratively by members of the SCUP under the guidance of the researchers. Insights from teachers and students on the team helped in resolving conflicting narratives, idiosyncrasies, and unfamiliar contexts. Emerging themes included: disparities and poor academic outcomes; focus on external rather than internal locus of control; absolute power and authority; isolation that is breaking systems functioning and institutional thinking; and co-created knowledge for improvement.

Disparities and poor academic performance

Performance in the KCSE at KSS was wanting. For three years, including one year during this project, the mean grade for the school ranged between 3.0 and 5.6 of a possible 12 points. Boys performed significantly better than girls, especially in science-related subjects. Three years data revealed a maximum of three girls in the top 50 of 140 students in senior examination class. The mean entry behavior for boys was higher and they also made higher gains on their entry behavior (qualifying score on primary examination) compared to girls. The majority of the girls lost value on entry behavior. In 2017, two girls (0.8%) against 15 boys (12%), out of 43 girls and 80 boys, respectively, scored grades high enough to join university. A look at every class list of grades indicated that over 95% of girls were in the bottom half.

Discussions relating to the causes of poor performance produced the following reasons: inadequate sleep, poor comprehension, poor attitudes towards science subjects, home environment, poor study skills, boy-girl relationships, laziness, fear of teachers and the principal, harsh prefects, lack of confidence, poor time management, peer pressure, stress, lack of study materials, testing without teaching, and discrimination.

The performance of girls was brought up often as the factor, "gravity" pulling down the school mean grade without consideration for context (poverty, facilities) or mediating factors (relationships). When the SCUP team raised the issue of poor performance among girls at meetings with various stakeholders (teachers, principal, members of the BoG, students), respondents shifted the blame. According to the girls, teachers spent more time working with boys because they assumed girls are not at high academic levels, especially in sciences. Teachers blamed variation on boy-girl relationships, lack of focus or interest in school, and poor upbringing at home; and school administrators blamed it on a lack of discipline. One teacher made the following observation:

> I will lie if I say that these girls are here to study. Some of them are here to get husbands and they will tell you that there is a man studying hard for them. So, why should they? Time dedicated to help them is time wasted.

A female teacher, who first narrated how difficult it was for her in school, added, "Many of these girls are damaged already. They come with low grades and it only gets worse. It does not help that they spend too much time trying to look beautiful. That is why we need [same] sex schools." In the boys' focus group discussion, the consensus was that girls are weak academically and are more worried about their looks than on academics. They also indicated that teachers often humiliated girls or girls were embarrassed, specifically during menstruation and fell sick or did not come to class because of the lack of sanitary pads. "Lack of discipline" was a phrase used often by the principal and members of the BoG in describing students. The phrase seemed to provide a convenient way to avoid explanations. Generally, discussions about boys tended to be global and more forgiving (e.g., "they have goals," "they just need a place to sleep," and "boys will be boys"), while the discussion about girls tended to be more specific and incriminating, revealing demeaning attitudes (e.g., "they are concerned about looks," "they are stubborn," "they do not like sciences," "they are weak" or "they get emotional"). The data indicated that poor performance and disparities were normalized, explained, and unquestioned.

Focus on external rather than internal locus of control

There was tendency to put blame on "others" (e.g., government, parents, teachers, students, or political leaders) for not doing enough to improve school and student outcomes, and hence absolving everyone directly involved in the school off responsibility or accountability. "We cannot control what happens after we teach," a teacher claimed. The inability to look inward as individuals were repeated mantras at every level, students, teachers, school administrators, parents and government officials. Neither community members nor professional educators recognized the interconnections between what they do and student/school outcomes; instead, data shows every constituent abdicating responsibilities. County education officials attributed poor performance to school principals, admonishing them for inadequate facilities, learning materials, few teachers, or a lack of fields for games; things that were out of their control to provide. One school inspector stated:

> We visit schools and tell principals what they need to do, but they don't. Principals do not keep schools in good shape and do not monitor teachers. Teachers are always absent. How can students do well with low teacher attendance and inadequate facilities? Some schools have no labs for science, what is the principal doing?

Document analysis indicated that county level school inspectors visited schools regularly to ensure that: schools are managed effectively, there is suitability and availability of teaching and learning resources, health and hygiene conditions are adequate, the status of buildings is up to code, and the school functions appropriately. However, structural improvements at KSS have neither matched increased demand of the student population nor significantly impacted academic outcomes.

The school administrator referenced county officials as "tax collectors," who they say are insincere during visits. According to this administrator:

> When you see them [county officials] at the gate, prepare money. And if you do not, then you and your school are in trouble. They will go to the extent of initiating disciplinary actions or your transfer to a smaller school.

Administrators also accused students of laxity and indiscipline, while chastising parents for not helping their children or paying fees on time. Teachers had the most to say about students, imputing poor performance to students' negative attitudes towards learning (particularly girls), stupidity, poor upbringing at home, poverty, lack of role models, naivety and lack of exposure, and laziness. One teacher said:

> These young students do not have role models and some have negative role models. What I mean is [that] without people to show them the right way, they are lost. And that is not the job of a teacher. Our job is to impart knowledge.

When asked, "Why do you think there are no role models?" A male teacher responded that most students came from homes where their parents did not have secondary education and were mostly poor. This teacher made the following remarks:

> With no ability to be the right models, most of their mothers got married too young and expect their children to do the same. As teachers, we are also busy with our lives and the best we can do is tell them what to do. Stupid ones don't listen.

Students blamed teachers, the government, and politicians for their poor performance. In a focus group discussion, students expressed dissatisfaction with conditions of learning, living, and mistreatment by teachers. One student said, "Instead of lighting fire in us, they extinguish it by making you feel small, like you do not matter, and you can never be better than them." Several students indicated that teachers were only concerned with teaching, but not students' feelings, life circumstances or learning. Students claimed many of them sleep in class as they were often tired due to inadequate sleep and overcrowding everywhere (classrooms, dormitories). They expressed disappointment with the government and politicians for not funding schools adequately, while engaging in a lot of corruption and making policies that do not focus on helping students, especially those from indigence. In a focus group, students affirmed this sentiment:

> We are sent home a lot for fees. I personally can be away from school for a quarter of the term as I have to stay home until my Dad gets money. And by the time I get to school, we are sent back [home again] because I still owe back fees.

Students complained about politicians who do not pay due attention to the plight of students, specifically the low academic outcomes in recent years. Students felt that while teachers and principals were pernicious and not held to account, students were censured. Data indicated that blame was externalized, making it difficult to initiate and implement interventions without somebody feeling targeted. For example, when it was suggested that teachers focus on learning rather than testing, teachers objected, claiming that they were not the cause of poor performance. Any suggestions from the non-teaching staff or students, especially on matters relating to teaching, was undermined by teachers, who considered themselves the only authority and absolved themselves off blame for the learners' poor performance.

Absolute power and authority

The hierarchical school system exacerbated the misuse of power and authority by school leaders and teachers. Paradoxically, parents condoned absolute exercise of power and authority as necessary and inevitable in managing schools. Members of the community assumed that students can only learn in an environment where discipline and power over students is supreme. Teachers/principals/prefects were not only found to exercise absolute power, caning and surveilling over students' daily activities, but also lacked empathy and compassion. Students' statements to this effect included: "teachers are rough, tough, and harsh"; "we are mistreated and harassed by teachers"; "they teach without giving proper instructions and guidance on assignments and if you fail, they cane and so we fear"; "I fear some of the teachers because they threaten when they teach"; "I fear to fail in math"; "we sleep at 11.00pm and have to wake up by 4.00am to go for studies, and if you are late the teacher or prefect will be waiting with a cane, or a slap"; and "sleeping in class is a crime." All these views were contextualized by one students' comment, "Teachers do not care about students or students' needs. Their words and actions are demeaning. You are only as good as you perform on tests." Students exemplified pervasive fear, a feeling that foretold deprivation and academic failure. Teachers and staff registered a similar fear from their bosses. The SCUP team found that everyone acted out of fear of their superiors rather than exercise good conscience. Every single infraction was dealt with severe punishment, ranging from caning, hard labor, suspension, to expulsion among students, firing for workers under the BoG, and employer discipline among teachers.

In the classrooms, authoritarianism was exercised through teaching pedagogies that were teacher centered (e.g., lectures, assignments, readings, note taking, homework, testing without critical thinking, student engagement, or active learning). One teacher explained that students were discouraged from talking to each other and were removed from class for "talking when they were not talked to." Teachers asked rhetorical questions, admonished students for poor responses, and used derogative language in addressing students (e.g., "stupid," "lazy," "failure" and "uncultured"). Teachers rarely acknowledged students' efforts and, whenever they did, it was in reference to high performing boys. Unquestioned power and authority thwarted the students' egos, inhibiting their opportunities to learn, interact, or ask questions. Due to this hierarchical authoritarianism, subject matter seemed esoteric, hardly related to students' reality and, therefore, difficult to conceptualize, according to the students. When teachers were asked why they would not engage each other in professional development, one responded, "It is above my pay scale," meaning knowledge can only come from those with higher ranks, not lower. Due to the power differential, there was underutilization of multiple types of knowledge found in the different levels of school hierarchy, undervaluing and subjugating subordinates' knowledge.

Isolation that is breaking systems functioning and institutional thinking

KSS, like an island, is isolated and operates as a gated entity with limited outside input. External interactions were limited to vendors, legal guardians, and education-related government offices. Despite scathing reports from school inspectors, there was minimal engagement with external entities to generate ideas for change or improvement. The SCUP team visited the County Education Office to review reports on school inspections. Access to five years of documentation indicated that the school was always in violation of the majority of safety and physical indicators, like school grounds, infrastructure, finances, health and hygiene, food safety, teaching and learning environment, and school management (Republic of Kenya, 2008). This information was not shared with school leadership team, teachers, or parents. The reports looked the same from year to year with no evidence of change in school improvement or subsequent reports. A member of the BoG interviewed claimed that they are briefed, but have no details of the report. And if they did, "there are no resources for changes anyway." Parents interviewed did not know the members of the BoG. The Parent Teacher Association (PTA) was considered a rubber stamp entity that endorsed the BoG demands, but not involved in generating ideas to develop the school. According to one parent:

> PTA members are selected for their ability to stamp whatever the school wants. They come up with levies like tuition fee, bus fee, teacher motivation, and then they plan on how to get a few parents to make noise at PTA meetings, and claim parents wanted it when parents do not even understand it. I never know what is going on in school, there is no genuine participation. Go to any school and you will find this practice and it hurts poor parents.

Similarly, teachers, like the parents, had limited interactions with members of the BoG, and when they did, it was not on the same level as those in charge. One teacher said, "We are to the BoG what students are to us." In private, teachers intimated that the members of BoG were compromised, lacked experience in educational issues, and rarely interacted with them to gain or create institutional knowledge. Data indicated that members of the BoG were professionals in other fields, with excellent ideas that hardly surfaced in meetings out of fear of rejection or being booted off the Board. Their engagement was dominated by overseeing financial matters and school construction projects, "raising money from parents in terms of fees and levies," "banking and ensuring money is used well," and "paying salaries."

Knowledge and practices in different parts and levels of the school system were not coordinated for purposes of school-wide institutionalization or utilization. Institutional knowledge resided in school administrators and a few members of the BoG. Data indicated that teachers had no knowledge of school operations other than going to class. Every decision needed the principal's seal of approval. For instance, despite having cleared his child in every department, a parent was compelled to return twice to the school, for the same reason, because only the principal has the power to sign a student's clearance form. Whenever a principal was transferred, a teacher bemoaned that nobody knew "where things were, what he was doing and how." Many significant decisions about construction, school fees, and purchases were made at ad-hoc meetings without input from teachers, parents, or community leaders. This compartmentalization meant that actions were taken in isolation without consideration for their impact on other aspects of the school. Novel ideas were often abandoned because of personality differences, allegiances, or personal interests, disregarding the benefits they might provide to the school. Based on our data, an incoming principal could fire teachers in order to hire their preferred instructors, change vendors because of personal interests and benefits, abandon on-going building projects, or fire contractors to accommodate cronies. Conclusion from this research did not reveal any explicit policies and

governmental actions that guided the schools' processes, held leaders to account, or deterred corruption. School administrators and the BoG were left to act on behalf of the school's interest. Teachers and staff alike, who were employed and paid by the BoG, abandoned their professionalism for cronyism. These behaviors were sustained by the dearth of efforts to institutionalize organizational values, ideologies, or policies and processes that outlive leaders with no indication of a common purpose. The impact of these actions was evidenced in the lack of improvement in student outcomes and disgruntled employees.

Co-created knowledge for improvement

It took over one year to establish the SCUP at KSS and to develop trustworthy working relationships. On-going collaboration among members of the SCUP, in collaboration with school staff, co-created practical, effective, and sometimes very simple improvement strategies. The SCUP strategically shifted discussions from seeking explanations to poor performance to eliciting actionable alternatives and new ideas. The use of the question, "What about?" followed by a suggestion, provoked and stimulated discussions. A snowball of ideas and criticisms followed, which helped the SCUP team discern what was acceptable, possible, and doable. For example, teachers defended the lecture method as the most appropriate way of teaching. When asked, "What about having students read and discuss topics and share their understanding and opinions in class?" This questioning technique created opportunities for teachers to think about alternative methods of teaching, elicited greater variation of ideas for intervention, and provided insights of their thought processes. It was important for stakeholders (teachers in this case) to realize they had essential ideas that would create improvement. The SCUP focused on low cost ideas, which were within the powers of the principal, teachers, and students, to implement and held promise for improving the school's outcomes, without involving radical changes to the operations of the institution. Consequently, four doable ideas emerged from our discussions with teachers and students: a) developing resiliency among students, b) improving living conditions, c) professional development on active learning and the importance of voice/democracy, and d) finding alternatives to corporal punishment.

a) Developing resiliency among students: Both boys and girls had low self-esteem and self-worth, and low expectations, while teachers demonstrated little to no empathy. Students' latent aspirations, hopes, and promise were often thwarted by fear of their teachers and school administration. Effects on girls were more deleterious because of their vulnerability in a co-ed school, especially from male students and teachers. Despite the hardships associated with school and home conditions, students understood the need to excel and were eager to do well. These two factors aligned with their need to develop resiliency and ability to overcome adversity. The SCUP team collaborated with a professor of guidance and counseling to provide resources to build resilience. Opportunities to engage in extra-curriculum activities were enhanced by expanding and initiating new programs. Such programs included problem solving activities and games, resolving conflicts, peer-to-peer counseling, entrepreneurship projects to develop creativity, motivation workshops, peer tutoring in academic subjects, discussions of sexuality and personal hygiene, and educational and co-curricular trips. Teachers were encouraged to form student clubs based on their interests by providing students a variety of activities from which to choose, a move that was empowering.

b) Improving living conditions: Unhygienic conditions, including inadequate ablution blocks, dirty dormitories and classrooms, and inadequate and poorly prepared food, needed urgent attention. The SCUP, in discussions with the school administration, explained the debilitating impacts of the

living conditions as expressed by students. After further discussions, students offered to help with cleaning, the principal ensured supply of cleaning materials, and the BoG agreed to finance the construction of ten additional modern toilets (five for girls and five for boys). This action minimized the issue of lateness and punishment after bathroom breaks, specifically a positive outcome for the girls. Students appreciated their cleaner environment and worked to maintain it. Similarly, the discussions with the kitchen staff, led to improved services in food preparation and service, especially taking into consideration younger and female students in a culture where the 'survival for the fittest' reigns. Food portions were also increased and rationed. Furthermore, considering the consequences of sleep deprivation, students were allowed to sleep for at least seven hours (10.00pm – 5.00am).

c) Professional development on active learning and the importance of voice/democracy: Expertise in the SCUP team was used to organize professional development sessions for administrators and teachers. Three gatherings were organized with the BoG, the principal, and teachers as participants and resource persons. This was intended to develop trust and appreciation of knowledge and skills within the group. Researchers assembled reading materials and videos based on prioritized topics that included resilience, active learning, democratic governance, and the role of teachers as models. A schedule was presented that included selected topics. Teachers prepared and showcased exemplary lessons from which all could learn. This process transformed teachers from recyclers to creators of new knowledge, and extended into the classrooms. This harnessed and underutilized talent among teachers inspired and motivated those who were reluctant to become engaged. As an outcome, teachers started visiting each other's classrooms, after attending a workshop on a "flipped classroom." This approach was a framed model in a collaborative concert between a professor of education and one of the school's teachers. Teachers were encouraged to offer constructive criticism, and learn from each other's successes and pitfalls. Finally, a follow-up was facilitated to assess and evaluate the effects of professional development.

d) Finding alternatives to corporal punishment: The SCUP team confirmed from focus group discussions and interviews that corporal punishment was the default form of discipline. Corporal punishment not only inflicted undue pain, but it is also illegal in Kenya. This type of punishment was considered disproportionate to the infractions committed and dehumanized students. Although, some teachers claimed that it worked. The SCUP team suggested and invited a professional educator and/or counselor to provide workshops on alternatives to corporal punishment. However, on-going actions, including better food services, increased number of toilets, cleanliness, and increased communication about learning expectations, resulted in fewer infractions and minimum cases of corporal punishment. This was evidenced in the interconnections between conducive conditions of learning and living, and student behavior.

DISCUSSION

This study found gaps in the functioning of interlocking systems as explained by ecological and sociocultural theories. Poor learning conditions, failure of county governments to follow up on infractions, inability of the school community to provide sufficient support to meet both academic and affective schooling needs, and teacher centered teaching, together had a significant bearing on the school's operation and the students' academic outcomes. In isolation, these factors may not have impact, but in combination, they can debilitate. This study found an absence of institutionalized and systemic approaches to teaching and learning, which have been found to breach success in schools (Bryk et al., 2010; Jarrett et al., 2010; Lawrence & Orodho, 2014). Ad-

hoc actions and reactions noted at KSS compartmentalized problems and decisions impairing coherence, cohesion and common purpose.

Public secondary boarding schools in Kenya are underfunded, with government policies diametrically opposed to physical and human resource needs. The 100% transition to secondary school policy revealed an increase in student population without increases in infrastructure (Otieno & Ochieng, 2020; Republic of Kenya, 2019), leading to a spike in indiscipline and a slump in educational outcomes. This breakdown in the system's interlocking parts, among other things, violate the students' rights of access to quality educational outcomes (Freire, 2002). Meanwhile, the idea of shifting blame contradicts ecological and sociocultural theories. Amutabi (2002) found that students are blamed and vilified by the media, parents, politicians, scholars, and the public for problems in schools, while the "autocratic nature of the institutions and structure under which they operate are often ignored" (p. 159). Absolute power with impunity is condoned and used without accountability, responsibility, and consideration for impacts on subordinates. As this study suggests, research has associated absolute power with subordination and poor performance amongst students and teachers (Amutabi, 2002; Cooper, 2014).

How do students and teachers overcome these circumstances? Participatory action research goes beyond the very act of doing research, but incorporates practice. In this study, researchers also focused on actionable solution approaches. For example, how to empower and enable students to determine their destiny as it was clear the system was broken and not in their favor. Of the four solution approaches developed in the period of this research project (i.e., developing resilience, improving living conditions, professional development, and alternative to corporal punishment), developing resilience was the most salient as it focused on what students could do for themselves. Resilience is a "human capacity to face, overcome, and even be strengthened by experiences of adversity" (Grotberg, 1997, p. 2), which includes, but not limited to: autonomy, trust, having a sense of belonging, achievement orientation, self-esteem, empathy, locus of control, creativity, persistence, communication, problem-solving, and intellectual and emotional skills. According to Grotberg (1997), resilience enables students and teachers to face adversity, while maintaining normal development, promoting growth beyond the present level of functioning, and anticipating adversity. The SCUP contended that building resilience among teachers and students at KSS would empower them to recognize and play their role in the school system, while noting the values of the system as a whole rather than its parts; therefore, engendering the spirit of collaboration and partnership for the common good of the institution.

CONCLUSION

Overall, the findings of this study indicated that schools are systems within systems and their success depend on how well the ecological and sociocultural systems work to reinforce each other positively. At KSS, although the students' performances were negatively impacted by various challenges (e.g., internal interactions at the school, community and individual factors), they were normalized to the detriment of the school's learning outcomes. Often, normalization of the aforementioned factors can blind institutions; therefore, there is need to disrupt this normalization through outside consultation and partnerships (like SCUP) in the following ways: 1) recognizing assumptions and issues that are normalized and not discussed for change; 2) noticing divergent and unequal experiences and outcomes; and 3) repurposing old and generating new ideas for improvement. The partnership co-created at KSS inspired teachers to develop new critical thinking skills, through collaboration, and harnessed pertinent knowledge amongst school employees and

students, which then was posed to enhance the institutional success in general. Consequently, there is a great potential for Kenyan public schools, communities, and universities to collaborate in exploring, implementing, and sustaining practices that promote student learning and achievement.

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