

A Toolkit Intervention for School-Aged Jamaican Students: Strategy for Collaborative Involvement during the Pandemic

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Abstract

The Ministry of Education and Youth, Jamaica, designed Home Learning Kits (HLKs) for students in Grades 1–6 to address learner disengagement due to the change in classroom settings because of the COVID-19 pandemic. This intervention required a collaborative approach by diverse educational stakeholders for the production, distribution, collection, implementation, and bi-directional return of the kits. This novel approach to learner engagement prompted a need to understand the implementation of the HLKs and their use by students. Using a convergent explanatory mixed method approach, the sample included 167 of 400 schools and approximately 36,000 students islandwide. The quantitative data was analysed descriptively and thematically for the qualitative data. Overall, the results revealed the need for better collaborative efforts to execute the HLK intervention. The findings are significant to assist the Ministry of Education to implement policies and further initiatives for transformed educational outcomes.

Keywords: National Standards Curriculum; parental involvement; school leadership

Introduction

Transformation in society is enabled through deliberate community efforts (Anthony, 2019; Gerdes et al., 2020; Levkoe et al., 2016; Rees et al., 2020; Weale, 2013; Wiek et al., 2014), and transformation requires organisational structures that promote partnership and commitment to implementing initiatives (Boons & Lüdeke-Freund, 2013). Collaboration leverages the strength and resources of partners that are stronger collectively than by an individual or agency (Kinsella-Meier & Gala, 2016; Kraemer & Douglas, 2020). Therefore, COVID-19 pandemic presented a unique opportunity to demonstrate collective efforts in positive transformation.

Teaching and learning are crucial to societal functionality (Musbaing, 2020; Van de Werfhorst, 2014), and national development (Burriss, 2017; Sundaram, 2020). In Jamaica, the government's response to abate the disastrous long-term impact of the COVID-19 pandemic on the education system required contextual research data to provide pivotal responses. Since these were unavailable, this research used quantitative and qualitative research methodologies to unearth rich, thick data (Merriam, 2014), to understand this phenomenon, and posit learning interventions.

This study uses a convergent explanatory mixed methods approach to highlight the collaborative efforts undertaken by the Ministry of Education and Youth (Hamilton-Flowers Head of the MoE core curriculum unit, Jamaica], personal communication, October 12, 2020) and stakeholders: The National Parenting Support Commission, parent mentors, parents, educators, educational researchers, and non-profit organisations to address student learning challenges during the COVID pandemic.

The Problem

While natural disasters occur globally and the Caribbean is prone to experience hurricanes, earthquakes, and volcanic eruptions, which causes infrastructural damage and dislocation; the COVID-19 pandemic was unprecedented. It caused the largest disruption in the world's education system by restricting physical contact including face-to-face classes. Additionally, literature pre and post-pandemic suggest that in instances of limited learning opportunities, despite the presence of virtual or online learning activities, primary school children were the most affected demographic (Gallagher & Cottingham, 2020).

Due to interrupted face-to-face instruction with the onset of the pandemic, the learning deficit for over 600,000 school-aged children in Jamaica has not been empirically numerated (S. Bennett [Acting Head of the MoEY curriculum unit, Jamaica], personal communication, January 14, 2021). Internationally, researchers posited that children ages 6-12 years were the most affected (Gallagher & Cottingham, 2020). Researchers suggested this learning deficit was due to the dependent nature of these students on their learning compounded by lowered reading and comprehension skills (Bratsch-Hines et al., 2020).

The inadequacies of digital gadgets and technical infrastructure, such as reliable internet connectivity to enable economical teaching platforms, limited the technical capabilities of parents, teachers, and students, and complicated teaching and learning endeavours. To ascertain which intervening variables significantly

impacted student learning is a question yet to be answered. Notwithstanding the response, the issue was the absence of face-to-face which was once the educational norm. The prolonged lack of face-to-face interaction adversely affected the student learner incrementally. The result was learning loss, and loss of opportunities for new learning (García & Weiss, 2020).

However, not all countries were devoid of statistics to assess lost learning opportunities. Within eight weeks of a sustained school lockdown, the Netherlands reported three percentile points or a fifth of the school year was lost for the comparable period pre-COVID. Additionally, children of less educated householders suffered a 60% loss in learning (Engzell et al., 2021).

Comparatively, Jamaica's school system was closed to face-to-face activities since March 2020, *albeit* the statistical data for evidence-based decision-making is unavailable. With the second wave and persistent high numbers of COVID cases, there was mandated school closure across the island with exceptions for students sitting external examinations. In 2019, the Jamaican government allocated 17.3% of its Gross Domestic Product to education. In 2020-2021 the MoEY received some J\$117 billion of the government's J\$853.5 billion budget, which equalled approximately 14% (McIntosh, 2020). However, the vast inequity in school facilities, programme offerings, and funding across schools was so pronounced that this allocation did little to address the persistent inequity. Students from less-resourced schools and the lower socio-economic brackets were at greater risk of limited or no access to the internet, had fewer familial resources, and were limited or demotivated to seek learning opportunities. This was coupled with inadequate adult support throughout the lengthened school closures.

COVID-19 Impacts on Sustainable Development

A significant proportion of Jamaica's population experienced reduced income resulting from the loss or low employment during the pandemic (Statistical Institute of Jamaica [STATIN], 2020). This situation exacerbated the

disproportionately skewed impact on the lower socioeconomic sector (Bottan et al., 2020; STATIN, 2020). Students in less economically stable households were extremely disadvantaged by this income reduction.

Similar to other countries, COVID affected the psychological stability of teachers and learners; albeit, in Jamaica, citizens were already burdened with escalating crime and an over-burdened health system.

The sustainable development goal (SDG 4) posits inclusive and equitable education and the promotion of lifelong opportunities for all (UN Sustainable Development) and is a determinant of national development (Boeren, 2019; Fägerlind & Saha, 2016; Nazar et al., 2018; Tsang, 2000). Therefore, interventions were needed to allow the kind of transformation required to reinstate education levels to their pre-COVID stage during and post-COVID. Any other alternative could result in devastating socioeconomic consequences and derail sustainable educational goals (Bailey, 2018; Khan et al., 2018; United Nations Development Programme [UNDP], 2021).

Implications of School Closures on Student Transition in Jamaica

The Primary Exit Profile (PEP) is a series of placement tests done from Grades 4 to 6. PEP creates a profile of each learner who is then placed in an appropriate secondary school. One of the downsides of the pandemic was the rescheduling or cancellation of these examinations. Accordingly, students due to exit Grade 6 to transition to secondary schools were placed based on their grades from the previous two years (i.e., 2018 and 2019). This occurrence pointed to the need for strong profile assessments of students and the abatement of learning gaps so that school transition was not hampered by the absence of standardised test scores. This pinpointed that transition from primary to secondary school is more successful when students' learning is consistent (Uka & Uka, 2020).

Learning Deficit among Jamaican Students

The MoEY conducted diagnostic tests at grade levels to assess students' grade level completed in 2020. In the absence of similar data from previous years, the results were unhelpful in determining learning loss. What was ascertained were figures that showed that of the national student cohort of approximately 600,000 at least 100,000 (16%) students were not adjusted to school and were outside virtual schooling (S. Bennett [Acting Head of the MoEY curriculum unit, Jamaica], personal communication, January 14, 2021). Most of these students were disconnected from formal learning programmes and considered most "at risk"—a term used to describe "students with a higher probability of failing academically or dropping out of school" (Trauth & Harris, 2019, p.25).

The Home Learning Kit Intervention

The MoEY conceived the Home Learning Kit (HLK) as a means of reaching students who would have been underserved by virtual learning during the pandemic. The HLK was designed to help students in Grades 1 to 6 connect with structured learning as well as to promote community collaboration and awareness of the importance of continued learning.

The HLKs were developed from the national school curriculum around specially selected subject areas and represented objectives assessed by the curriculum developers. To facilitate the success of the program, particularly among the lower socioeconomic groups, an enabling environment needed to be created to motivate and support student learning. Therefore, students needed to receive the kits promptly, and schools should devise systems to collect students' work and provide feedback. This logistics could only be possible with collaborative community effort and a buy-in between school and community. Parental, church, and community organisations needed to lend their influence to promote student engagement.

Stakeholders and Collaboration

Education should matter to everyone; therefore, all institutions should be considered committed partners in this sector (Gorur, 2020; Hernandez, 2010). According to Kinsella–Meier and Gala (2016), four levels of partnership exist, i.e., communication, coordination, and collaboration. However, collaboration is characterised only when interactions between individuals or multiple agencies establish interdependency to achieve common long-term goals. Collaboration requires “increased involvement and investment of time” (Kinsella–Meier & Gala, 2016, p. 6).

The interconnected network of individuals and organisations who work to provide educational opportunities and support for student success represents the educational ecosystem. In this ecosystem, school leaders, teachers, community organisations (e.g., The National Parenting Support Commission), parent mentors, parents, students, educational researchers, and non-profit organisations are all collaborators to enable meaningful intervention at the local school level (Potochnik et al., 2017).

Principal Collaboration. The principal is the main school leader called to provide transformational leadership within their sphere of influence to enhance the educational ecosystem. According to Burns (1978), transformational leadership involves mutually influenced leaders and followers performing at advanced levels to benefit the team. Transformational leadership is evident when principals mobilise staff and influence the behaviours of teachers, parents, and students to achieve the desired outcome of HLK delivery, collection, feedback, and bi-directional return of HLK material to students within the two weeks cycle (Anderson, 2017; Putra et al., 2020). This convergence of attitudes from players influences positive behaviours toward the goal and is required before the start of the project. Attitudes should be aligned for successful intervention (Wightman et al., 2020). This suggests that various stakeholders of the collaborative team, especially the school leader, need to be impactful to formulate cohesion with other stakeholders at the school level.

Additionally, the school leader needs to nurture parents to understand their role in a successful objective (Prestiadi et al., 2020).

Parent Collaboration. Parental involvement included parenting, communicating, volunteering, attending, supporting learning at home, partaking in decision-making, and working in partnership with the community or schools (Sylaj & Sylaj, 2020). Parental involvement implies efforts to take an active role in their child’s education via participating or volunteering in school activities (Sad, 2012). For the educational process to function successfully, there must be a respectful and appreciative relationship between teachers and parents. This relationship must be extended within the teaching and learning and communal spaces. The importance of parent-teacher collaboration and its positive impact on children is well documented and shows a strong statistical significance between parental involvement and academic achievement (Mahuro & Hungi, 2016). According to Sylaj and Sylaj (2020), the lack of effective communication is the greatest barrier to increased parental involvement because weak communication reduces the partnership between family and school.

Teacher collaboration with the families of students also helps to maximise the school’s role to ensure the achievement of common goals. The link between school and parents in the school-home intervention is so significant that the ability of the MoEY to engage parents at a national level, particularly among the targeted population of those households with little or no virtual learning opportunities, should require little effort.

The National Parent Teachers Association (NPTA)

Collaborators such as the National Parenting Commission engaged parent mentors islandwide for the HLK intervention, and they were instrumental in strategic alliance with their communities. The National Parent Teachers Association was also contacted to collaborate and provide parental support to other parents to empower them to support and motivate their children when using the HLK. Home-based

learning during the pandemic has resulted in greater observance of the home–school relationship (Zhang, 2021). This has led to the interrogation of home–to–school collaboration, the perceptions of immediate stakeholders, and investigations to address the learning loss challenges in Jamaica as well as to find ways to deliver best practices for equitable and inclusive quality education.

Aim of Study and Research Questions

The overall aim of the study was to assess the effectiveness of distribution and use of the HLK for children at the primary level, aged 6–12, during the pandemic, and the extent to which collaborative design influenced the effectiveness of this process. Five research questions guided the study:

Research Question 1 (Quantitative):

How many HLK were distributed?

Research Question 2 (Qualitative):

While executing the HLK intervention, what did the school leaders perceive their roles to be and how were these roles demonstrated?

Research Question 3 (Qualitative):

In what ways did the roles of parents impact the HLK intervention process?

Research Question 4 (Mixed):

To what extent did the kit delivery numbers translate into effective remote teaching and learning?

Research Question 5 (Mixed):

What was the best practice for the HLK intervention during natural disasters in Jamaica?

Method

Research Design

The research employed a convergent explanatory mixed methods research design. The quantitative stage used a survey while the qualitative phase used focus group interviews. Integration occurred with concurrent data

collection. The mixing continued through analysis and the presentation of the data. Data collection was impeded by COVID restrictions which impacted the research team’s ability to validate reports of HLK distribution numbers post–school delivery.

Participants

The sample population was delimited to government–owned public primary schools for students, aged 6–12 years (Grades 1–6), their principals, teachers, and parents. The selected schools for delivery of HLK were perceived by the MoEY as having the most disadvantaged learners, and they were located in urban, rural, and deep rural areas, within regions one to seven, across all 14 parishes. Selected communities had limited or no internet connectivity, had reported disengagement from the teaching and learning process since COVID, and students had little or no access to devices. Approximately 462 schools received HLKs at each cycle; a total of 752 schools received HLKs in February 2021.

Research Instrument

The instrumentation process consisted of a mixed survey on the HLKs, a parent survey, and a semi–structured and two focus group interviews.

Survey instruments. The HLK mixed survey was a Google Form questionnaire administered online to school leaders. The items included demographic queries, four were rated scales, three were closed–ended (quantitative) and five were open–ended (qualitative). The survey collected numerical data and rated perceptions and opinions. Here is a sample of the survey items:

- Was the number of kits provided adequate for the student population in your school?
- Were the kits distributed on time after drop–off at the schools? (RQs1–2)
- What was the volume of completed work submitted by students?
- How did administrators rate their perception of how students used the Learning Kits?

- What was the perceived level of use of Learning Kits when rated against online, radio, and television use by students?
- Did school leaders perceive a need for continued publication of the Learning Kits? (RQs3–5)

Analysis of the HLK survey directed qualitative data collection. The follow-up checks and monitoring of the schools' distribution process were interrogated. School leaders who reported high, low, and median collection numbers, or challenges on the HLK survey were prioritised for the next phase of data collection.

Ethical Considerations

The participants provided consent. All ethical considerations were followed and consent was received from all participants.

The Intervention Perceived by the MOE

The intervention logistics involved the preparation and production of the HLK, delivery, and distribution to the schools which was managed by individual school leaders. Feedback was completed before the students could receive another HLK as a quality assurance measure and to track the HLK's use and students' progress.

Preparation and Production. The content for the HLK intervention was prepared under the supervision of the MoEY's Core Curriculum Unit. The 28-page HLKs were in tabloid format. Approximately 50,000 and 96,000 copies were prepared and published by two media houses and distributed to the schools biweekly. Kit learning is best augmented by teaching content (Gallagher & Cottingham, 2020); therefore, at another level, collaboration was logistically sought to have weekly programmed radio and televised broadcasts concomitantly addressing the content of the Learning Kit. The HLK intervention ranged from October 2020 until February 2021. There were no publications in January 2021 based on a late December publication schedule that extended into January after the Christmas holidays. Monitoring of the distribution was done at a regional level by the MoEY, and the

communication for delivery and collection was coordinated between the publishing media house, the school principals and teachers, and the parents and students.

HLK delivery and distribution to schools.

The printed Kits were delivered via the newspaper publisher's delivery route mechanisms to centrally located schools and then redistributed to other schools. The principals/school leaders collected HLK for their respective schools and local arrangements were designed by the schools.

Parent Survey on Virtual Learning. This survey was administered online to parents of students in receipt of HLK for Grades 1–6. Questions surrounded the collection, student home use, and redelivery for feedback (RQs 3 and 5). The instrument consisted of 14 questions on a 4-point Likert Scale ranging from 1 – never, 2 – sometimes, 3 – always, 4 – I do not know. Both survey instruments had a suitable reliability score ($\alpha > 0.8$).

The semi-structured interviews.

Interviews were conducted with the school leaders including principals and teachers. Two separate focus group interviews were conducted – one session consisted of a face-to-face with parent mentors and the other session involved parents via an online virtual platform. Data collection modes ensured triangulated validation.

Data Collection Procedure and Analysis

The data were collected in two consecutive phases up to March 2021. The quantitative data was obtained initially from production to delivery of the HLK. Validation of the delivery data was done via the delivery records from the publishers as well as the main survey instrument which captured numerical data on the HLK delivery to the students (RQ1), return from the students to the school and subsequent feedback from the teacher (RQs 4–5). The different schools as well as pool of multiple participants allowed for varied responses through the intermixing and intramixing during data collection and the mixing design also occurred during the analysis (Johnson et al., 2007).

A sample of 12 principals was interviewed; an appropriate number to assess a phenomenon qualitatively to get rich, thick explorative data and achieve saturation (Creswell, 2013; Fusch & Ness, 2015). The school leaders' interviews were done via telephone and lasted on average 30 minutes. Twenty parent mentors attended the face-to-face focus group in an open courtyard under strict COVID protocol. Five outspoken and willing parent participants were selected for the focus group engagement from a MoEY parent meeting of 97 parents. The focus group engagements for the project lasted one hour and pseudonyms were provided to protect the participants and the integrity of the data. Qualitative data were transcribed and managed by an appropriate coding system which included the date, time, place, and pseudonyms, to ensure an ethical research process. The qualitative codes and subsequent categories were highlighted from the transcribed scripts with the best practice

of consistent memoing being employed for the qualitative analysis procedure (Merriam, 2014). This continued until data reduction was achieved independently by each researcher (Creswell, 2013). Thematic revelations were reviewed together for further research validation.

The Results, Qualitative Findings and Discussions

Research Question 1: Distribution of HLK

School leaders reported the number of HLKs distributed to the students were adequately prepared and delivered to centrally located schools within the set timelines. In February 2021, 752 schools collectively received a total of 79,000.00 HLKs. The delivery detail is shown in Table 1.

Table 1

Typical Publication and Delivery Detail of HLK

Time	Region	Parish	Number of Schools	Quantity of Learning Kits
	1	Kingston & St. Andrew	59	13,447
Oct. Week 1	3	St. Ann	60	5,084
	3	Trelawny	33	2,851
	5	St. Elizabeth	69	8,902
	5	Manchester	53	6,709
	6	St. Catherine	80	13,514
Oct. Week 1	1,3,5,6	6 parishes	354	50,507
Dec. Week 3	All 7	14 parishes	627	95,408
Dec. Week 4	All 7	14 parishes	627	95,408
Dec.18, week 5	All 7	14 parishes	627	95,408
		Total	627	432,139

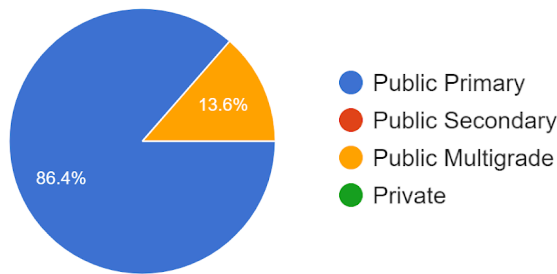
Note. Table 1 represents publication and delivery detail of the HLK for October-December 2020. One week is itemized (as seen in the first half of table-above line) to show details of the summary of publication and delivery for October week 1. Thus the total publication and delivery for October week 1 is 50,507 and the Grand Total for October week 1 through to December week 5 in 2020 is 432,39. The Gleaner published five series of Kits, totaling 115 lessons. Printed, packaged, and delivered were 432,139 copies of learning kits to a maximum of 627 primary schools in Regions 1-7.

Figure 1 shows 88.4% distribution of HLKs were to primary schools, and 13.6% were to multi-grade schools. Multi-grade schools have small populations so multiple grades are taught by a single teacher. Approximately 84% of the schools reported the HLKs were adequate for the intended number of students.

The survey returned a 21% response rate. The preceding in-depth qualitative exploration enhanced the data analysis. Of the 160 responses, 120 (75%) school leaders indicated that the HLKs were promptly distributed to students/parents. This meant that 40 (25%) of the schools in the sample either failed to deliver the HLKs to the students/parents within the week or did not deliver them at all (see Figure 2).

Figure 1

Distribution of HLK Islandwide based on School Type



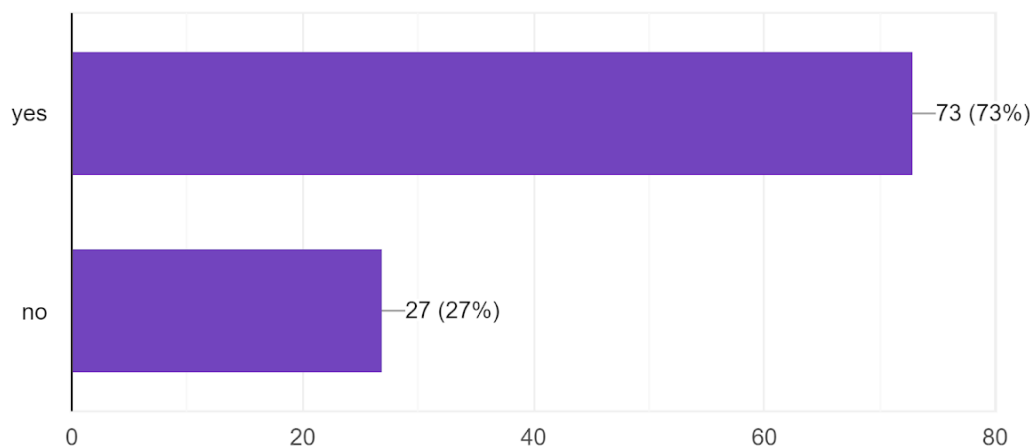
Both approaches facilitated a comprehensive appreciation of the phenomenon. The quantitative data alone was insufficient to interpret the perceptions submitted during the interview or the behaviours displayed by interviewees towards the HLK intervention programme. The qualitative study concluded on four significant themes:

1. School leadership requires resourceful creativity in challenging times;
2. the distribution of the HLKs were impacted by the varying levels of apathy among parents;
3. The 21st-century learner must be self-directed, and
4. Jamaica’s educational ecosystem needs supportive collaboration.

Interestingly, the participants did not offer any specific solution to the HLK distribution or usage challenges. Participants expressed disparate satisfaction with the overall intervention process, i.e., school leaders successfully delivering and returning feedback for student engagement consistently or parents who sought their child’s learning with the HLK and associated media. Satisfied participants were triumphant, and dissatisfied ones complained. These parental challenges and benefits of involvement were supported by the literature (Wanat, 2010; Coleman & Churchill, 1997).

Figure 2

Collection Time of the Kits by Parents



Research Question 2: School Leadership's Response to the Distribution of the HLK

(Theme 1) School leadership required resourceful creativity in challenging times.

The interviews revealed that successful delivery of the HLK from schools depended on the efforts of both school leaders and parents. Some targeted schools had different degrees of online teaching, and some students were able to gain varying degrees of access, depending on internet connectivity. The principals distributed and prioritised the HLK to the disengaged portion of the student population while teacher leaders were responsible for the teaching and learning process. The school leader received the HLK after being briefed by the MoEY, to ensure the delivery and mobilisation of the teaching staff to retrieve work from students and provide feedback. The schools successful at this task had principals who could be described as resourceful, creative, and interested in their students' learning. (*Teacher interview-007*), "My Principal called me in to assist with the HLK distribution and...I went to some workplaces to deliver and collect..."; "I visited the homes of the students but they were seldom home ..." (*Teacher-009*); "I personally made several calls for parents to pick up the kits. We did not confine the HLK to remote learning but included the HLK activities for all students in the school while online."

(*Principal interview-012*), Principal Clear said, "The HLK supplements the learning resources, and my teachers formatted the content to teach students online." Principal Determined (*pseudonym, interview-008*) shared how he took the HLK to the post office and delivered it to agreed locations in the community by riding his bicycle after realising a number of students had not received their kits. This was a stark difference from Principal Nonchalant who said, "I do not have students' contacts..."; (*Principal interview-001*), Principal Nonapologetic hastily retorted, "I was not able to reach my teachers to assist..."; (*Principal interview-002*), The HLK got wet when the pipe ...", Principal Frustrated explained (*Principal interview-010*). Principal Excuses ensured that we understood the geographical

constraints, "Most of our students live outside of the community..." (*Principal interview-004*). The principals also expressed their encounters with some parents who promised to show up but did not visit the school. Mrs. Patterson, Johnson, ... were just too busy... (*Principal interview-003*). Miss Patsy (*pseudonym*) hurled her frustration at me and reminded me that COVID was still raging (*Principal interview-006*). "Principal, the work is too hard and I cannot assist my child, I require help myself...the technology..." (*Principal interview-005*).

The principals also reported that office hours were mentioned by some parents as a deterrent and most understandably were the unfortunate cases of ill health and or death of family members which impacted students and their families negatively.

Overall, the principals explained facing geographical challenges, infrastructural mishaps, uncooperative or frustrated parents, low administrative or personnel support, lowered communication capabilities, and general non-idealistic circumstances that hindered the timely distribution and collection of the HLKs and bi-directional flow to students. However, in successful cases, there were animated tales of self-involved volunteerism to ensure the task was executed or by rallying supportive teachers. These principals and teacher teams perceived their professional roles as critical to student learning and emphasised the HLKs as a learning resource. This resulted in successful distribution and aligned content for online lessons.

Research Question 3: The Response from the Parent Mentors and Parents

(Theme 2) Varying levels of apathy among parents that impacted the distribution of the Learning Kits.

The more apathetic parents were less likely to collect the kits or make arrangements for collection. Individual educational convictions coupled with socio-economic circumstances determined the learning outcome for children. Responses from the parent mentors and parents were noted from the online parents meeting; qualitative details were captured from the focus

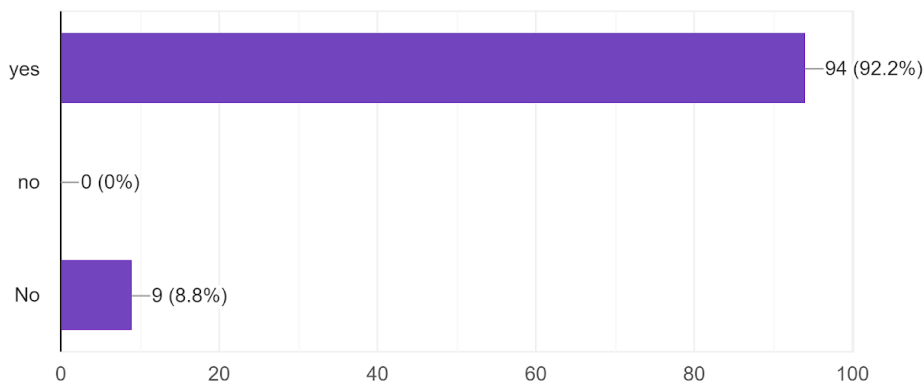
group interviews. Varied comments emerged from parents who participated in the online parent meeting. Participants spoke freely and broadly covering issues surrounding school closure, parents' attitudes towards children being at home, and parental response to the new modes of schooling being used in the pandemic. The comments were informative. Some parents were quite passionate, for example, Miss Icilda declared, "My child has to sit and do the work online because she knows what she will get from me if she forms the fool". Mrs. Tarant shared, "Some parents don't care if the children are online or doing schoolwork, they are relying on children being taught when schools are open, so when schools are closed there is no need for children to do school work". Some parents reluctantly admitted, "I had to go to work before the school office opens so I could not collect the Learning Kits".

In the telephone interviews, parent mentors were asked to suggest reasons parents did not assist students with their school work during the pandemic. Some common responses were parents' frustration because they were not used

to "sitting down" with their children. Mr. French and Mr. White reported that parents were not trained to assist their children with schoolwork. Other sentiments expressed were the lack of motivation by some parents to help their children. It was also reported that some parents distracted children from classwork by assigning them chores. When asked about the challenges preventing the collection of their child's learning kit despite being notified by the school, Velma responded, "I have no time to go collect the kit." These comments suggest that they saw student discipline and attitude toward schoolwork. Parents' investment of time, their technical skills, and financial status were intervening challenges that affected the collection, usage, and return of the HLKs for feedback. These parental perceptions were not unique to Jamaica (Putri et al., 2020). However, though the parents did not dwell on the benefits, the parental collaboration of home learning activities with their children improved academic success as well as psychological well-being (Bhamani et al., 2020). Interestingly, 94% of the respondents indicated that they wanted the continuation of the HLK (see Figure 3).

Figure 3

Parental Support for Continued Publication of the HLKs



Students who benefited from programme had parents who collected the HLKs, ensured their children followed the media, completed the assigned tasks, and returned them to the school for feedback. Students who benefited most from the HLKs intervention were closer to the higher end of the spectrum as a result of parental interest

in their child's learning. The collaborative display sent a message of interest to which the student would have made an autonomous effort to do and use the HLKs. Ultimately, the HLKs cannot affect learning on its own; the learner's input is pivotal (Xie & Yang, 2020).

**Research Question 4:
The Impact of the HLK Distribution**

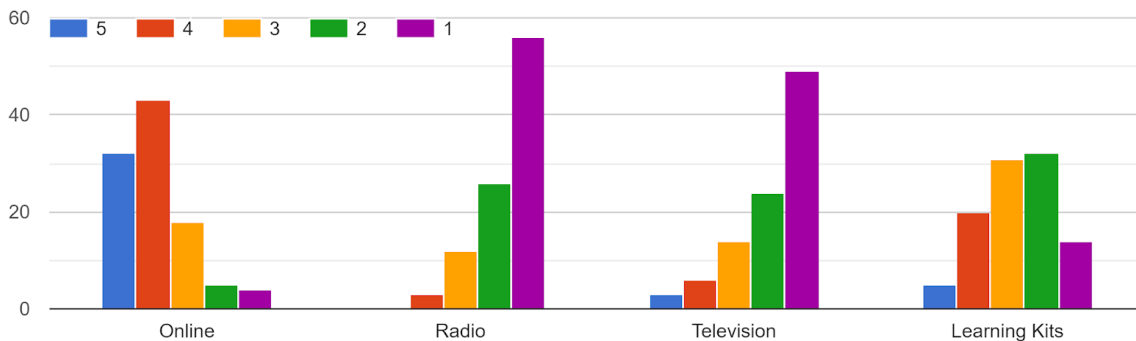
(Theme 3) The 21st-century learner has to be self-directed. The ensuing discussion highlights that the success of remote learning is highly dependent on what the student learner can accomplish autonomously when not engaged face to face with the teacher. Overall, the data confirmed that the use of the resources provided by the MoEY was minimally engaging. The MoEY was able to secure the collaboration of the teacher presenters and media houses to facilitate the synchronous radio and television programmes in addition to the HLKs. These media programmes were prepared using the same content as the HLKs. Students were able to use the virtual resource to assist them in completing the HLKs assignments. The researchers believed that ascertaining how

these resources were used to support learning would indicate the extent to which self-directed learning featured among students.

The triangulated data suggested that students seldom used the media support (television, radio). The school leader and parent survey enquired about the prevalence of use by each of the four media modalities relative to the other. Online was the most prevalent, followed by the HLKs, then television, and finally radio (see Figure 4). The parental interviews revealed the unavailability of cable services in many parts of the country. The issue was exacerbated by poor television reception even when using the traditional antennas. The low rate of students returning assignments and the low use of radio and television was an indication that the MoEY efforts could have achieved a greater impact.

Figure 4

Perceived Usage of Four Modalities (online, radio, television, and HLK)

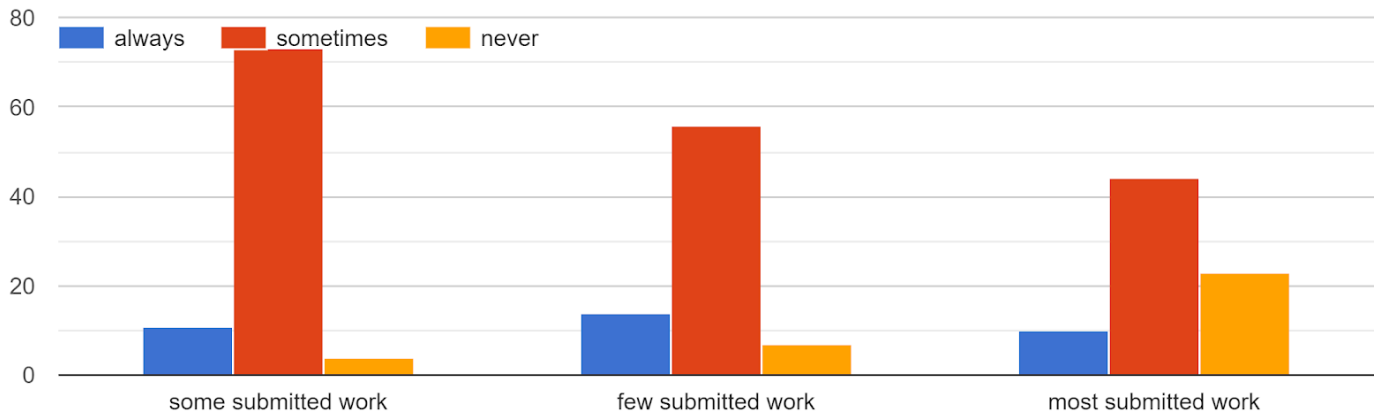


The researchers then assessed how beneficial the HLKs were perceived by determining the return response for feedback and the feedback provided. Only a small proportion of students returned kits consistently while about the

same proportion never returned work. The data suggested that most students sometimes submitted assignments versus not at all (see Figure 5).

Figure 5

An Estimate of the Proportion of Students/kits Returned to the Schools and its Completeness at the Time of Submission

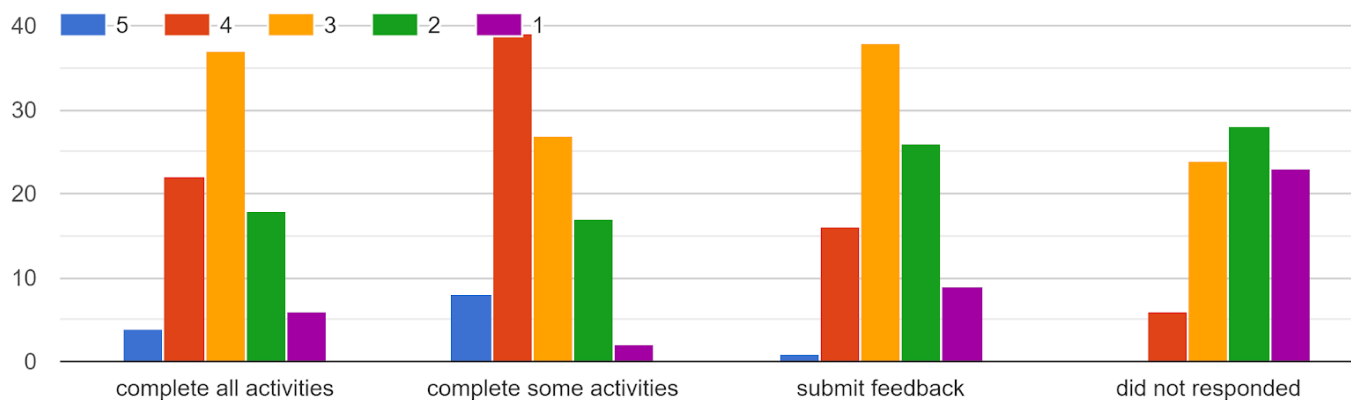


Note. Based on the responses only, a small proportion of students returned kits consistently, with about the same proportion that never returned work done. The chart seems to suggest that most students submitted sometimes, as opposed to not at all.

Figure 6 highlights responses in the context of students’ responses to feedback. Of the students who submitted feedback, most students completed some of the activities while few students completed most activities.

Figure 6

Completion and Return of HLK to the Schools



Note. The school leaders’ perceived report of how their students made use of the kits.

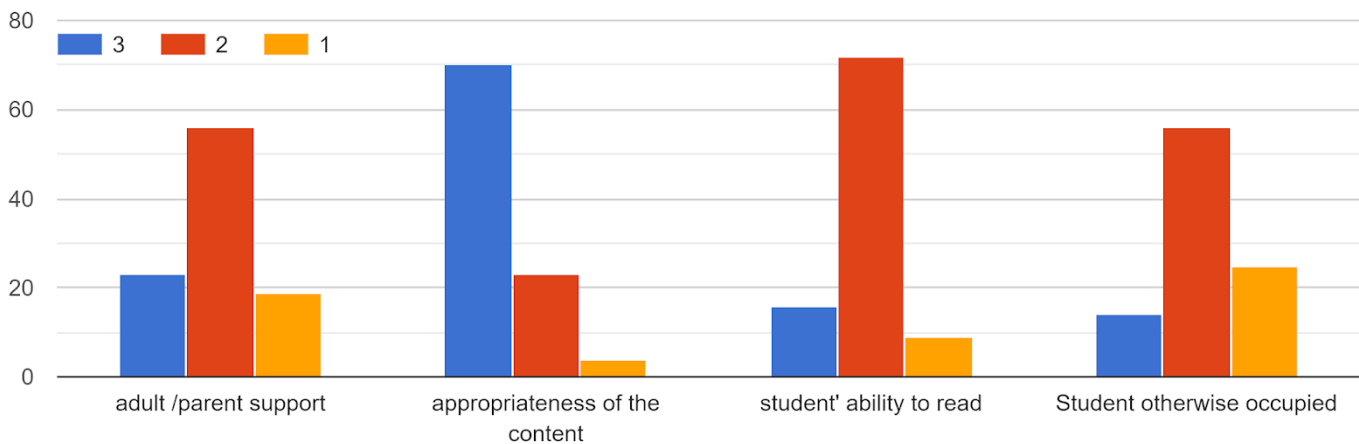
Considering the incomplete response of the HLK activities submitted to the school, it was useful to ascertain the impact of some identified factors on the use of the HLKs (see Figure 7). The appropriateness of the content was a positive influence on the use of the HLKs. Adult/parental support and students' ability to read also reflected significant impacts. Students who were otherwise occupied were interpreted as being absent from home and engaged in non-school activities as well as present at home but not engaged in educational activities in the virtual space.

Overall, the schools with proactive school leadership, including efficacious teacher leadership were best able to assist their students

in accessing the HLKs and benefiting from it. The research focused on the production and distribution of the HLKs, mainly because the emphasis was on physical accessibility for students without internet facilities. However, it was recognised that accessibility also extended to interaction with the HLKs' content. How individual schools responded to the various student-home needs and provided mechanisms to handle responses largely impacted how well students benefited. Therefore, the transformational leader would have been able to convert his school community into an active learning environment despite COVID and in so doing lessen the learning deficit challenge for this cohort.

Figure 7

The Impact of some Identified Factors (parental support, appropriateness of content, students' ability to read, or students' otherwise engaged) on Use of the Kits



Note. Students who were otherwise occupied were interpreted as being absent from home and engaged in non-school activities; however, they could also have been present at home, but engaged in educational activities in the virtual space.

There was an assumption that all parties recognized the same problem and understood their role as being equally important to warrant an attitude of urgency to execute required tasks. School leaders, teachers, and parents did not

maintain the same level of urgency to ensure the delivery and full usage of the HLK. According to Wightman et al. (2020), participant attitudes were a key antecedent of effective collaboration.

Research Question 5: The Impactful Reflections on the Data Analyses

(Theme 4) Jamaica's Educational Ecosystem Needs a Life Support of Collaboration

RQ5: What was the best practice for the HLK intervention during 'natural disasters' in Jamaica? This was answered by the researchers assessing the data and analysis that reflected the policies and processes of the MoEY. Based on the evidence unearthed in the research, the following conclusions were drawn:

1. The majority of schools distributed most of the HLKs.
2. Most kits were collected on time by the students and their families.
3. The kits were perceived as most valuable for the appropriateness of the content.
4. There was significant parent apathy associated with late or non-collection of kits for some students.
5. Few students returned kits consistently with most activities completed; most students returned kits with some activities completed.
6. Of the four modalities for remote learning, HLKs were ranked second after online teaching and learning, followed by television and radio which was the least used. This suggests students did not use multiple media to support their learning as intended by the MoEY, and which rationalised their investment in multiple media to achieve wider coverage and earn greater learning gains. It could also be argued that greater collaboration between actors could have promoted the use of multiple media by students where those possibilities existed, to bolster learning.
7. Of all the respondents, 94% supported the continued publication and distribution of the HLK.
8. Overall, the major data analysis revealed that the collaborative efforts to execute the HLK intervention fell short.

Based on the above conclusions it can be deduced that some critical factors were identified that could translate kit delivery numbers into effective remote teaching and learning. In summary, while the distribution of the kits from the schools posed some logistic challenges, some schools devised creative ways to distribute the kits. Participants mentioned principal and teacher drop-offs, post office drop-offs, and the use of other community points for drop-offs. They also mentioned the travel distance to pick up kits by some students and the prohibitive cost of transport in some cases. Concerning the use of the kits, some schools reported making full use of the kits by integrating the contents as a major teaching resource for all students, including in their online spaces. Conversely, some other schools treated the kits as unconnected to the regular learning process. Kits were distributed to offline students, but no framework was put in place for feedback and inclusion of those students to whom kits were distributed. School leadership and an effective teacher remained catalytic to the teaching and learning process in the face of the pandemic as interventions were sought to execute the HLKs in Jamaica.

The recommended strategy to continue education opportunities during a crisis such as the pandemic must be based on collaboration among parents, school and community, and the MoEY. The strategy has to be convincingly presented to all stakeholders in their various groups. This requires partners to have a common goal with the will to resolve issues and commitment to achieve this goal. To recover from this pandemic, policymakers, educators, school leaders, parents, and all stakeholders need to be focused and motivated to intervene to prevent long-lasting COVID effects on student learning. Stakeholders need to collaborate by creative means to accelerate learning and reduce learning gaps.

Unlike the Chernobyl nuclear disaster in 1996, it is not anticipated that the pandemic will leave behind the health and environmental impacts

that will interplay with educational outcomes. Hence, greater control of the future is possible. However, it is necessary to employ strategies that will achieve early and short-term gains to negate the long-term consequential impact of the pandemic on the social and economic systems. The recovery and transformation of the education system in New Orleans 10 years after Hurricane Katrina in 2005 are instructive (Harris, 2015; Newmark & De Rugy, 2006). Recovery of losses in education as a result of COVID is hinged on committed stakeholder collaboration in the educational ecosystem. SDG 17 calls for a revitalisation of global partnerships for sustainable development. The SDGs cannot be realised without strong global partnerships and cooperation, and this principle is most critical for Jamaica to achieve SDG 4, inclusive and equitable quality education.

The HLK initiative was an innovation of the MoEY, and lessons learned from the intervention are important for future cases in education. Recommendations arising from the study are:

1. As part of their general education, students should be trained to be self-directed in their learning pursuits.
2. Prepare students to learn under extreme conditions by exposing them to possible modalities that could constitute a response to education in an emergency based on their contexts.
3. Prepare teachers, parents, and school leaders to exercise specific courses of action to support student learning in response to possible local or national emergencies.
4. Design a system to engage schools and communities to foster learning in home and settings outside of the traditional classroom setting.

Although the researchers concluded that the use of the HLKs by students was low, the educational benefits of the initiative to promote equity and inclusiveness were admirable. Indeed the low number of returned assignments may not accurately reflect the positive results.

This includes the ability to reach thousands of students who would be otherwise disconnected from the education system. The initiative could have significant positive latent value for these students. However, further research is needed with the return to face-to-face mode, to unearth possible educational impacts of the HLKs on students' learning.

The Jamaican HLK experience suggests the need for society to devise new perspectives, rethink education, and ascertain how teaching and learning can be more integrated into real-life experiences, and how schools and communities can collaborate for meaningful inclusive, and equitable education.

Limitations

The study had some limitations. For example, the geographical areas selected conformed to the sampling criteria for the population in need of the intervention. Additionally, limited or no internet connectivity may have affected the response rate to online questionnaires, which was lower than anticipated (34.6%). Over 462 schools population were targeted in the intervention but only 160 responses were received. Moreover, researchers could not determine that the characteristics of respondents were representative of the overall sample population, hence, the assumption was made that the population was heterogeneous. The fact that the research was conducted during the pandemic limited the collection of primary quantitative data and placed greater reliance on the perceptions of participants from online interactions.

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