



The challenges of large-scale curriculum development: a case study of Guyana and St. Kitts and Nevis

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ABSTRACT

Guyana and St. Kitts and Nevis have recently and independently undertaken large-scale enhancement of their public-school curriculum. An educational leadership consultancy has led the process using an implementation model based on feedback from country communities regarding graduation outcomes and the ensuing preparation of a Curriculum and Assessment Framework. Curriculum outcomes were based on international best practices and captured in a curriculum template premised on backward design. Using a mixed methods approach, independent researchers analyzed factors that necessarily impact the process of curriculum development. Quantitative and qualitative research feedback established challenges in the process of curriculum development. Categories of feedback arose from surveys, interviews, and focus groups. These included challenges in preparation for writing, perceived impact on the school system, and working conditions during the process of writing. Similarities and differences in the country contexts are examined and suggestions for an improved approach are recommended.

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ABSTRAK

Guyana dan St. Kitts dan Nevis baru-baru ini dan secara mandiri melakukan peningkatan besar-besaran kurikulum sekolah umum mereka. Konsultan kepemimpinan pendidikan telah memimpin proses dalam implementasi model berdasarkan umpan balik dari komunitas negara mengenai hasil kelulusan dan persiapan Kurikulum dan Kerangka Penilaian selanjutnya. Hasil kurikulum didasarkan pada praktik terbaik internasional dan diimplementasikan dalam templat kurikulum yang didasarkan pada desain mundur. Dengan menggunakan pendekatan metode campuran, peneliti menganalisis faktor-faktor yang memengaruhi proses pengembangan kurikulum. Penelitian kuantitatif dan kualitatif membentuk tantangan dalam proses pengembangan kurikulum. Kategori umpan balik muncul dari survei, wawancara, dan kelompok fokus. Termasuk tantangan dalam persiapan menulis, dampak yang dirasakan pada sistem sekolah dan kondisi kerja selama proses penulisan. Kemiripan dan perbedaan dalam konteks negara diperiksa dan saran untuk pendekatan yang lebih baik direkomendasikan.

Kata Kunci: framework kurikulum dan asesmen; pengembangan kurikulum; tantangan kurikulum.

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INTRODUCTION

Curriculum Development History in the Caribbean Region

Curriculum renewal is an ongoing process that necessarily involves a range of participants (Krasny & Rose, 2009). This particular study addresses the challenges teachers face as leader-innovators and writers of curriculum revision in Guyana and St. Kitts and Nevis. Past studies of countries in and around the Caribbean. Jennings in her book entitled *Re-visioning Change: Case Studies of Curriculum in School Systems in the Commonwealth Caribbean*, suggest a variety of curriculum development models have been invoked to promote innovative curriculum, yet, these “models of change make assumptions about teachers’ willingness and competence to participate in the curriculum change process.” Most importantly, Jennings’ work suggests that some models compromise teachers’ involvement in the process.

One such curriculum enhancement approach is the Rogers and Shoemaker’s in their book work “*Communication of innovations; A cross-cultural approach*. (2nd ed.)” authority-innovation decision-making model.

Rogers and Shoemaker contend that there are two groups of decision-makers namely the superordinate group (e.g., Ministries of Education, donor agency consultants) who initiate and direct the development and dissemination of the innovation and the subordinate group (e.g., teachers and principals) who implement the decisions made by the superordinate group.

Another popular strategy in the region has been coined the ERDD model.

Embedded in the Research Development and Dissemination/Diffusion (Havelock, 1971) is the notion of the change process involving a rational sequence of activities in which an innovation is initiated, then developed, produced and disseminated to its users who are assumed to be passive consumers willing to accept the innovation. Essentially this is how teachers were perceived in the 1960s and 1970s when the products of curriculum development were made “teacher proof” in that they were expected to be used without any adaptation. This is known as the “fidelity” perspective towards implementation (Fullan & Pomfret, 1977)

These strategies as well as other power-coercive models Bennis et al. in his book “*The planning of change*.” Are lacking in their “coherence between intention and reality”. While innovation is present, problems of implementation may be ignored. The process of writing new curriculum will inevitably lead to implementation where top-down frameworks create problems for the teacher; the user of the curriculum. These implementation problems can be suitably addressed.

The change process here begins when the users articulate a problem within their own situation. The users then search for a solution to the problem from available alternatives with the help of a change agent who collaborates with them without giving directives. According to Jennings in her book.

In the Caribbean context, Jennings in her book further suggests ways we can mitigate the mismatch of an ideal curriculum being presented to a passive recipient (teacher); this user

being responsible for implementing a curriculum in the real world. In the cascade model of training where there are master trainers, it has been observed in the Caribbean context that the trainers sometimes have no more background than the teachers themselves. It is therefore important to give change agents specialized training. In her book, Jennings introducing change into our school systems, we have concentrated most of our effort on the change or innovation, and less on the users of the innovation, namely the teachers and students. We have not given much attention to what they think about the innovation, their concerns, how they feel and what they believe. Innovation developers do not think in terms of it being implemented in a specific situation. They have an ideal or "generalised idea in mind. Teachers do not deal with the ideal. They function in specific situations (Nuere & De Miguel, 2021). Therefore, when mandated to implement an innovation, whatever is in the mind of the innovation developer, the teachers will adapt to suit their particular situation. This suggests that in the future rather than emphasizing fidelity implementation, it would be more realistic for innovation developers to think in terms of multiple contexts in which the innovation will be implemented and configure how the innovation can be adapted in these situations without jeopardizing the integrity of the innovation.

Response of the Curriculum Renewal Leadership

In leading the curriculum initiatives in Guyana and St. Kitts and Nevis, the Mindbloom Educational Consulting® team has attempted to address these concerns.

Teachers have been involved both as leaders and writers in the formulation of the curriculum. In both contexts, there has been significant professional development in the writing process but also in the implementation leadership. The ultimate aim was to build capacity based on expertise in the country.

The curriculum was written based on a curriculum and assessment framework that highlighted the aspirations of the country for the educated graduate of the system. This was based on inception visits to the countries and feedback from the general public (including teachers) regarding the need for a new curriculum and the shape that should take.

The curriculum was written in such a way as to provide options and latitude for the teacher to blend culture, community, technology and traditional curriculum with new pedagogical approaches and progressive learning targets. The curriculum writing allowed for extension of internationally accepted standards to encourage the posing of country-relevant outcomes.

Entering into the Research

In studying the curriculum development process in these contexts, it was important for the approach to reflect the values and needs of the communities of practise. Taylor and Bogdan guided the researchers in their book entitled "Introduction to Qualitative Research Methods: A guide book and resource." Who suggest that "Until we enter the field, we do not know what questions to ask or how to ask them. In other words, our preconceived image of the settings and people we intend to study may be naïve, misleading or downright false" (p.25). To this end, inception visits to the countries were essential in defining the factors that serve as a foundation for research into teacher and system challenges.

An action research stance Rauch, Zehetmeier, & Posch in their book chapter entitled Educational action research. In O. Zuber-Skerritt and L. Wood. Action learning and action research: Genres and approaches was assumed as we addressed the curriculum development process with the teachers as writers and ultimate users. The ultimate aim was to study the system of teacher-led curriculum development such that the factors affecting a most facile and productive process could be defined to promote capacity building in the country in the future. To achieve this, the researchers we were reminded of Beaulieu (2013) who recommended that "Unlike other forms of interpretive research, action research is about seeking perspectives that are defined by the stakeholders, not by principal researchers, and it can involve exposing truths that are not guided by the myths of objectivity. For action researchers, seeking a singular truth or perspective is not necessarily a desirable goal instead (Lawrence et al., 2022), capturing the various stakeholders' perspectives can expose a broader view of the conditions that exist in a setting and offers opportunities for developing strategies that accommodate those different views."

LITERATURE REVIEW

Country Initiatives in Curriculum Enhancement

Curriculum revitalization on a much smaller scale last occurred in Guyana in 2008 (Livingstone, 2014). In St. Kitts and Nevis, initiatives of modest scope date back to 2015. In May, 2018, Guyana secured the services of MindBloom Educational Consulting® to lead them through an initiative entitled *Consultancy for the Development of A Framework for Curriculum Revision*. This project was intended to refresh curriculum in Language Arts, Mathematics, Science and Social Studies for grades primary to nine. St. Kitts and Nevis (hereafter SKN) embarked on a similar project entitled *Consultancy to Develop National Curriculum Development, Monitoring, and Evaluation Frameworks as well as a Quality Teaching and Learning Framework with Related Policies* in December, 2018. The SKN initiative was undertaken an effort to bring curriculum to an international standard for schooling at the primary to form five level. The SKN project included curriculum development in subjects: Health and Wellness, Language Arts, Mathematics, Science, and Social Studies.

The research described herein attempted to establish the factors that should be considered as a country engages teacher-led curriculum development on a large scale. A mixed-method approach was used to ascertain particular challenges as the curriculum writing process progressed. Details of the research methods follow.

The Model for Curriculum Development

The consulting team assisted writing teams for each subject by supplying lead core subject experts. The process began with an inception visit where the consulting team visited regions in the country to elicit feedback from communities regarding their vision for a graduating student. The later, formed the basis for a set of graduation outcomes that curriculum writers were intended to reflect on throughout the writing process (called the curriculum and assessment framework). The writing teams lead by an assigned point lead within the team, were guided through a series of workshops to: 1) learn about the tenets of good curriculum development 2) learn how to use a curriculum template to record learning outcomes,

assessment and teaching strategies and 3) establish the underlying subject specific trends in progressive curriculum worldwide. Teams then met on a regular basis to write curriculum built upon international standards in their core areas. A review of the writing was conducted by the consulting expert (with regular feedback) and a carefully selected vetting committee from the country. The curriculum template shown in figure 1 was used as a foundation in both countries.

Purpose of the Subject:		
Strand (Topic):		
Essential Learning Outcomes: <i>Larger idea into which the Specific Curriculum Outcomes are set (elaborate – are these the same for all grade levels or are they stage specific)</i>		
Grade Level Guidelines:		
Specific Curriculum Outcomes	Inclusive Assessment Strategies:	Inclusive Learning Strategies
Knowledge		
Skills		
Values		
Useful Content Knowledge for the Teacher about the Outcome:		
Inclusive Resources and Materials		

Figure 1. A Curriculum Template to Help Lend Structure to the Writing Process
Resource: Research Findings 2023

METHODS

This research approach involves synthesizing diverse data points or viewpoints to form comprehensive and robust generalizations, contributing to a more nuanced and holistic understanding of the studied phenomenon. According to Robinson-Pant in their book entitled *Cross cultural perspectives on educational research*, The research methods varied slightly between the two countries, and this served to provide triangulated generalizations even though the country contexts were distinctly different (Eden & Nielsen, 2020).

Collecting Guyanese Feedback

In Guyana, early in the process of writing, an abundance of feedback was obtained from exit surveys following workshops. By all accounts, teachers found workshops to be active and practical with clearly articulated goals and outcomes. It was consistently recommended that curriculum vision be reinforced with many exemplars. According to feedback from writers, problem-based activities where lessons plans were created were particularly effective given the feedback group session held at closure. Working with ideas and formalizing this as curriculum, helped writers feel confident in their ability to write independently.

A sample of n=26 writers were invited to complete an anonymous electronic survey of 20 questions. The introduction established demographics and the follow up questions focused on 1) preparation to write curriculum, 2) components of the writing process, 3) perceived impacts of the new curriculum, 4) working conditions and 5) the ranking of particular challenges. The problem of a careless responder was addressed by the inclusion of reverse-keyed questions (Kam & Meyer, 2015; Meade & Craig, 2012). If three of the reverse keyed questions were inconsistent the survey was removed from the sample. One such survey result was removed from the empirical data set.

The survey results were collated, and themes of emergent trends were created. From these trends, a standardized open-ended interview schedule was created (Ogunnusi et al., 2021). Each of the core areas (Mathematics, Science, Language Arts & Social Studies) by design had a lead curriculum author who would communicate directly with the corresponding consultant. Consultants provided feedback on the written curriculum, and it was largely the responsibility of the lead to communicate those adjustments to the team. Depending on the consultant, intermittent clarification sessions were conducted electronically with the entire team. In retrospect, this structure of placing primary responsibility on the lead writer was important for building future capacity for ongoing curriculum renewal. For each of the core subjects an electronic interview (Zoom ®) was conducted with the lead writer at both the primary and secondary level. In total, 8 interviews were conducted. Each interview was approximately 90 minutes in duration. With permission, interviews were recorded, and a text account transcribed. The transcription was vetted for authenticity and literal intent with the interviewee. The transcribed interviews were coded for emergent themes using an iterative approach of axial coding common to grounded theory (Makri & Neely, 2021; Qureshi & Ünlü, 2020). From the analysis, a series of culminating statements were compiled based on the results of both the survey and the interviews. These statements of perceived findings were shared (Guba, 1981; Jamali, 2023) with a second researcher unconnected with the work to ensure objectivity in interpretation (peer debriefing). Finally, the corroborated analysis was shared with a senior leader in the curriculum writing initiative in the form of a focusing session (Guest, Namey, & McKenna, 2017) to confirm the findings and lend further introspective on the rationale behind the feedback.

The demographics for the Guyana sample were as follows. 80% Female, Mathematics writers (24%), Social Studies writers (16%), Language Arts writers (36%) and Science writers (24%). Regarding job description, the distribution was as follows: Teachers 48%, Education Officer 12%, Teacher Educator (28%), Retired Educator (8%) and Curriculum Officer (4%). Further the experiential base included: 1-5 years' experience teaching (4%), 6-10 years' experience teaching (4%), 10-15 years' experience teaching (12%), > 15 years' experience teaching (80%). In the sample, 12% suggested they had written curriculum before.

Collecting Feedback from St. Kitts and Nevis

As per the Guyana workshops, feedback from SKN writers suggested the introduction of the writing process was helpful, particularly the review of sample templates, the team trial template exercises, and the individual sessions with subject specialists. Before the writing began, teams would become aware of the scope and sequence of the curriculum based on international standards. This would accompany a strong introduction to trends in core subject

curriculum including such ideas as social constructivism, inclusion and child-centered learning.

A sample of n=27 writers were invited to complete an anonymous electronic survey of 20 questions. The introduction established demographics and the follow up questions focused on 1) preparation to write curriculum, 2) components of the writing process, 3) perceived impacts of the new curriculum, 4) working conditions and 5) the ranking of particular challenges. The problem of a careless responder was addressed by the inclusion of reverse-keyed questions (Kam & Meyer, 2015). If three of the reverse keyed questions were inconsistent the survey was removed from the sample. Two such survey results were removed from the empirical data set.

The survey results were collated, and themes of emergent trends were created. According to Creswell & Creswell in their book entitled *Research design: Qualitative, quantitative, and mixed methods approaches*. From these trends, a standardized open-ended interview schedule was created. Using the survey results as a basis, the intent was to deconstruct the rationale for the observed trends. The electronic focus group sessions were conducted using Zoom ® and lasted approximately three hours in total in an effort to cover all aspects of the survey results. With permission, interviews were recorded, and a text account transcribed. According to Huberman & Miles, 2002 in their book entitled *The qualitative researcher's*. The transcribed interviews were coded companion for emergent themes using an iterative approach of axial coding common to grounded theory (Mezmir, 2020; Thurlow, 2020). From the analysis, a series of culminating statements were compiled based on the results of both the survey and the focus groups. These statements of perceived findings were shared (Guba, 1981) with a second researcher unconnected with the work to ensure objectivity in interpretation of the results (peer debriefing).

The demographics for the SKN sample were as follows. 66% Female, Health and Wellness writers (18%), Mathematics writers (9%), Social Studies writers (32%), Language Arts writers (18%) and Science writers (23%). With regard to job description, the distribution was as follows: Teachers (36%), Education Officer (18%), Teacher Educator (14%), Retired Educator (9%) and 23% Other category. Further the experiential base included: 1-5 years' experience teaching (4.5%), 6-10 years' experience teaching (18%), 10-15 years' experience teaching (4.5%), > 15 years' experience teaching (73%). In the sample, 41% suggested they had written curriculum before.

RESULT AND DISCUSSION

Introduction

In both country contexts, workshops to introduce worldwide influential subject trends were well received, but it was clear early on, that the transition away from deductive teacher-led instruction based on standardized tests was not going to be an easy one. Many educators seemed very comfortable with the terminology of constructivism, child-centered instruction, inclusion, technology-empowered learning and subject integration (Poku, Caress & Kirk, 2019; Gupta, 2020). However, the practice of employing these foundations in the critical thinking that should shape the curriculum, require significant exemplars and engaging practical sessions. Despite exposure of the writing teams to these examples, it was very

important to consider supplemental workshops later to address emerging concerns around such ideas as formative assessment, differentiation and lesson planning (Lyon, 2023). In retrospect, it was obvious that the real learning by the writing team, was during the process, so-called just-in-time learning as they worked through the details and nuances of actually preparing teacher-ready curriculum.

Arguably, the most important preparation for writing was in establishing a framework- what do we want the educated graduate to possess for knowledge, skills, and attitudes (social predispositions)? This framework emerged from the inception visits with communities and was instrumental in setting the foundation for curriculum writing. The workshops with writers made it clear that in, all the writing, writers should continually refer back to the life skills that communities had defined. In the practice of writing as the project progressed, it was important in subject teams to frequently remind writers of the framework. Said one team leader, "we have to make sure that whatever we write is in keeping with the principles, you know, the framework.". (I3) Some consultants insisted the writers complete a framework table at the end of each Essential Learning Outcome (ELO) so as to draw them back to articulate, where in their planning, did they address some of the framework prompts. In retrospect, this is a good practice as it keeps writers grounded in the overall purpose of the curriculum beyond knowledge acquisition and responding to standardized tests. Later in the study, interviews confirmed that linking the life skills in the framework to ongoing lessons (particularly in language arts) was highly effective in establishing relevance of the subject. In a like manner, the emphasis in science was on intrinsic social issues connected with the science of the world around us. These initiatives and reminders later assisted in the process of subject integration.

Writers were provided with a template in a workshop where the components were explained based on a sequential backward design model (McTighe & Thomas, 2003) of defining specific outcome-how to measure learning (assessment)- teaching/learning strategy. Writers later, spent considerable time with their corresponding consultants deciphering the meaning of the essential learning outcomes emergent from international best practice. An additional workshop on defining scope and latitude of the essential learning outcome would have been helpful according to the writer sample. Feedback in interviews made it clear, writers often usurped the backward design model and went directly from outcome to learning strategy. This predisposition implies more professional development on the importance of assessing summative and formative outcomes. From interviews of team leaders, a common opinion was, "we weren't up to date with how we do formative assessment. Sometimes along the way we stop and give a little quiz but generally we are not tracking the children's progress." (I3)

Results from Guyana

Preparation for Writing

The research seems to suggest that the Guyanese writers had a positive disposition to writing. Said one interviewee, "we all look forward for the curriculum renewal in Guyana because it wasn't done for some time, so we are eager to get on board". Upwards of 92% of the survey sample suggested they felt well prepared by the consulting group to write

curriculum. Upon further probing they indicated the following about specific areas. (*Direct quotes from the interviewees are annotated with I to anonymously indicate different respondents.)

Inclusion

In our survey, 41% found writing for inclusion was straight forward. In interviews later it was determined that teachers in the region have had some experience managing a range of abilities in the classroom. Closer inspection indicated that, in some ways this was because students with greater learning challenges were withdrawn from the classroom by school psychologists to be taught in segregated settings. According Tomlinson & Strickland in their book entitled *Differentiation in practice: A Resource guide for differentiating curriculum*. The consensus in the writers' interviews and follow-up focus session was that teachers don't necessarily understand what inclusion means and while they have heard of differentiation and Universal Design for Learning (hereafter UDL) approaches, they need much more professional development if children of learning difference are to be educated in the same classrooms as the mainstream learners. A team leader elaborated, "there's what we call streaming and teachers are use to one level of student in a course so asking them to write curriculum that caters to all levels, like differentiation, would be difficult for them." (I2) The writers would have benefitted from more practical activities in writing for differentiation-low threshold/high ceiling teaching and learning strategies. McClure in his book "Creating a low threshold high ceiling classroom." Said one interviewee "except for leaders in the ministry, we wouldn't have much training in teaching for special needs, you would try to figure it out yourself, you know just using common sense." (I1).

Child-centered Curriculum

In the sample, 40% said the movement to writing curriculum for child-centered active learning was extremely difficult. They alluded to both the pressures to be successful on standardized testing and the long-time emphasis on didactic teacher led instruction. In interviews, writers suggested that many teachers lacked enough training to stray very far from textbook-based inductive teaching. This is a disturbing finding in that CLASS (classroom observation instrument Pianta et al. in their book "Classroom assessment scoring system™: Manual K-3." data for the Caribbean suggests a serious impediment to literacy development is the lack of child-centered discussions in the classroom. An interviewee shared, "we have to work on discussions, the funneling technique. You know you find people revert back to the old way, instead of asking questions to elicit information or foster discussion, you slip back into giving information and being the one taking control." (I5). The consulting team made a conscious effort to lead active learning sessions where discussions and context-rich teaching were clearly visible and experienced by participants. Despite this, said one team leader, "we were exposed to active learning strategies and so you know you have to choose the best match for the learning outcome but when time is limited for our planning, you probably slip back into old fashion modes of giving information." (I4) Writers relayed that, teachers would balk at this curriculum because it meant more open-ended classroom approaches that gave up safety in structure and control over the students; so-called knowledge as power versus

inquiry as learning. Untrained teachers would be predictably more reliant on deductive approaches to learning. This was confirmed by all interviewees.

Whereas the curriculum was to be child-centered, accessing scaffolded learning through discussion and activities According to [Vitorino et al. \(2020\)](#) A child-centered curriculum is more acceptable in society, the traditional approaches of summative assessment needed to be supplemented with formative assessment strategies. Interviews and the focus session indicated that teachers were in great need of professional development around formative assessment strategies.

Age-Appropriate Curriculum

Of the sample 57% suggested that designing age-appropriate curriculum was difficult. Interviews clarified this finding. One introspective from a curriculum lead suggested, “writers, they may have been teaching one grade for quite a while and wouldn’t know where children would fall developmentally in another grade. They may not have experience at the grade we were writing for.” (I5). In areas of Language Arts and Mathematics, the learning outcomes accepted worldwide show much less emphasis on knowledge of grammatical correctness or multiplication tables and more on the developmental continuum of recurring skills. Health and Wellness, Science and Social Studies arguably by nature might be considered more topic oriented. Knowing where students were on the continuum was challenging for writers to consider because traditionally, they would have taught by the topic and not by a learning outcome. For example, even in science, the tendency was to compartmentalize by topics and teach magnetism at one grade level rather than re-address aspects at different cognitive levels throughout the curriculum. Likewise, movement from parts of speech to reading, writing or listening at a variety of levels, was not an easy transition for the writers. They themselves predicted it would be even less facile for teachers in the system. Writers recommended that tracking developmental skills meant emphasizing formative assessment which teachers were inexperienced with and would require more training. This training and shift towards the student’s needs, would also mean teachers should have professional development in learning styles and learning challenges. According to one interviewee, “we were aware of different abilities, but we had a one size fits all curriculum before, we taught that to everybody, we were accustomed to that for too long, we grew up in it and we practiced it.” (I3)

Curriculum Integration

Subject integration was a difficult task according to 70% of the sample. The focus session was particularly illuminating in this regard. It was suggested that teachers are used to teaching distinctly separate subject content with knowledge recall being the emphasis. Said the focus group participant (I7) paraphrased, it wouldn’t be usual for teachers to collaborate in school so to integrate through collaboration between writing teams would mean putting them altogether; I don’t think that happened often. The notion to integrate subjects to create context for the learning or perhaps create discussion around a socially important aspect of the topic; both were extremely foreign to the writers. Further said one leader, “the new learning outcomes would force them to look elsewhere for the knowledge we wanted to bring

into the curriculum" (I2). Other leaders suggested that some groups in close working proximity would share ideas, but others had little interaction. Said one interviewee, "the level of integration was highly dependent on the amount of collaboration because we were subject specialists and we didn't necessarily see opportunities for integration in other subjects, we needed to hear from other writing teams." (I5) When subjects were piloted in the schools, teachers found that social issues as the center of learning, assisted children with both discussion (literacy) and knowledge retention for standardized tests. Informal feedback from the system suggests that the children are more motivated to learn with the new curriculum because of its rich context and active nature. In the focusing session, the curriculum leader suggested that "integration was more incidental than strategic. In language arts, the teacher may mention science topics, or this is what you do in social studies. Maybe the content or the literature was from social studies, science or math." (I7)

Community-based Culturally-sensitive Curriculum

From the survey, 65% of the sample found it simple to incorporate culture and regional differences in the curriculum. This is not surprising in that many teachers would recognize the established value of learning context, a constructivist tenet. This is closely linked to the need to diversify the curriculum to attend to urban and rural learners. The sheer size of Guyana has meant that the regional relevance of curriculum be considered. In community consultations in the interior, leaders were dismayed at national exams that included questions regarding traffic lights, something their children had never seen. The challenge was articulated by one leader, "so you've got to get activities for indigenous people and that is vastly different from those of us in urban areas. This is really about differentiation; it is difficult; it is a diverse group, but you are writing one curriculum" (I1). Some teams had difficulty writing this breadth of curriculum. One leader accounted for this saying, "exposure I would guess, not knowing much of what is happening across the region." (I2). The focus session corroborated previous indications in interviews, that finding cultural examples online or in text were not easy. "the internet is unstable and even when they got on the internet the range of accessible cultural materials maybe minimal. They couldn't rely on textual materials in libraries, those are even more scarce." (I5)

Predispositions to Writing

While the preparation for writing was largely adequate for most team members, the extent of the workload was not clear to some writers. This resulted in team members withdrawing from the task leaving team leaders with the job of educating new members who would have missed the initial consultant group workshop sessions. This was problematic in that it led later to variations in quality and misunderstandings of the core foundations meant to underpin the writing.

In interviews, team leads suggested that some writers did not necessarily have the content knowledge that was necessary for some of the learning outcomes. In retrospect writers said, it may have been useful to do an analysis of each subject; a survey of the outcomes and a human asset map of the likely strengths required of the writing team.

Impacts on the System

From the survey we compiled predictions from writers regarding impact of the curriculum on Guyana. While 100% felt there would be improvement in literacy, inclusion of national culture and differentiation, 60% felt the curriculum would be difficult to implement. Of the sample, 87% felt implementation would be challenging because of lack of supplemental resources. In interviews the most frequently noted challenge with implementation was the curricular movement away from traditional stand and deliver instruction. They felt this was exacerbated by a segment of the teaching pool that lacked experience in teaching strategies and content. A team lead offered, "as a leader I had a lot of work...there were five writers all working at different levels...some didn't rise to a certain level...different abilities and then I had to review the content and add to it. I spent a lot of time researching content making sure it overlapped with the outcome" (I1). It was oft quoted that many teachers would not know what to do without a textbook. This systemic issue predetermined the need to, not only write a new child-centered curriculum but for the country to make a commitment to ongoing professional development in how to teach that curriculum. The use of technology to supplement and empower learning was noted by writers as a necessary resource; a commitment needed from the government.

Writers indicated that the breadth of the country made them feel like their curriculum didn't always address the needs of more rural regions where cultures were distinctly different from urban areas near the capital. They felt it was a great improvement however on past curriculum that was, by their admission, written for the capital city.

Interviewees were unanimous in suggesting that professional development be offered in the form of sample lessons for teachers. This may invoke the notion of professional learning communities according to Hord in her book entitled *Learning together, leading together: Changing schools through professional learning communities*. within schools or districts where sharing of ideas could build pedagogical capacity.

The testing done regionally was an incessant distraction for writers. In many instances, they shared the concern that there was insufficient overlap of the regional high-stakes exams and the curriculum they were writing. They sometimes expressed a fear that assessment of their new curriculum had to be reconfigured and that this would be difficult to do with the traditional testing system entrenched in their system. Closer inspection indeed demonstrated there was significant overlap of outcomes and exam topics. The real difficulty was in having writers understand that the breadth of the essential learning outcome was such that the topic could easily be encapsulated. Further, writers were encouraged to add outcomes and combine outcomes in order to improve relevancy to the curriculum and assessment framework as well as the regional testing, The new curriculum might drive a change in regional testing seemed too daunting for writers to consider (Selwyn, 2020). Nonetheless, writers felt the new curriculum steered the away from past practice. Said one interviewee, "I have been part of it, you know, when you are working towards an exam, you try to ensure that you cover what is expected and so you just give information to them." (I4)

The focus session led to a suggestion that teachers needed more professional development teaching with technology. It was felt by most writers (exacerbated by COVID-19) that teachers did not know how to use a video or online simulation as a scaffolded discussion prompter. With covid emerging, the use of technology to move to possible online teaching

formats was daunting given the lack of experience of teachers in the system (DeCoito & Estaiteyeh, 2022; Singh et al., 2022). Solomon & Clancy in their book entitled How COVID-19 has reshaped education in Guyana's hinterland. Caribbean Investigative Journalism Network.

The curriculum template recommended by the consultants was used across all subjects in order to provide some consistency for teachers using the curriculum guide. Core subjects have particular fundamental ways of conceptualizing how curriculum is delivered. For some team leaders this shared template structure was uncomfortable at first even though they saw the rationale for keeping all subject guides the same in presentation. Their bigger concern was that teachers may need considerable practice in reading the guides and working from them as a practicing teacher.

Working Conditions

The positive and negative features of the working conditions noted by writers in the survey and interviews are shown in Table 1.

Table 1. Positive and Negative Features of Working Conditions

Working Conditions	
Positive Features	<ol style="list-style-type: none"> 1. The team approach coupled experienced veteran teachers with energetic young educators; 2. Team size was adequate; 3. Teams learned to <i>divide and conquer</i> creating schemes for working individually but more commonly in pairs and then bringing the interim writing back to the group; 4. The technology resources to research and write the curriculum were important and generally good; 5. Timeline for project completion reasonable; 6. Team tensions minimal 7. At times, writing teams through cross-talk understood that another team had submitted their first drafts. This promoted on task behavior and sometimes competitiveness to get work done.
Negative Features	<ol style="list-style-type: none"> 1. 40% suggested variance in the quality of individual work thus necessitating a team review and significant editing by the team leaders. Said one interviewee, "the curriculum must be consistent, some persons would go a little more in depth...when we couldn't collaborate especially, you could tell who the different writers were because we worked in isolation." (I4); 2. Team leaders suggested that they underestimated the amount of time needed to review and improve writing team contributions. This was exacerbated if the teams didn't have an opportunity to get together in the same room. An interesting caveat arose in the focus session. It was posited that the face-to face meetings of the writing

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teams were far more productive because writing teams shared their ideas/critique more freely. The online meetings were more formal and often disjointed because of technology challenges;

3. Resources related to Guyana and culture were very limited which affected the quality of subject integration and more importantly, culturally sensitive curriculum. Libraries were limited and online sources were slow to load. Interviewees suggested that finding resources took much more time than they expected. * It is important to note that the curriculum template was intended to replace textbooks as a resource to teach the learning outcomes. Because of this expectation, the level of detail necessary did depend heavily on creativity and available textual/online resources;
4. Stable internet for research and remote team meetings was problematic. This sometimes forced a silo effect where collaboration/curriculum review by the group (beyond a pair) didn't happen. This put additional pressure on the lead writer. Consultants recognized some variation in quality when this was happening; Said one writer, "it was really frustrating sometime you have this task to be done, you want to meet with your group, but cannot accommodate a Zoom® because of the connectivity strength, its very, very poor" (I2)
5. Remuneration for participation as a writer poor: Paid by completion of a grade rather than by the hour. A prominent complaint that it was much more work than writers anticipated;
6. It was difficult to balance their writer responsibilities with their regular job as a teacher or administrator or education system employee. Said one team leader, "curriculum writing in my opinion should have been full time" (I4);
7. The onset of covid-19 exacerbated the balance of personal responsibilities as writers were then often charged with teaching from home (their students) teaching at home (their children) and modify their pedagogy for distance approaches. Similar challenges impacted writers who were not teachers in the system but had other public responsibilities. Said one team leader about the onset of covid-19, "it was a challenge to all writers, especially given the fact that many of the writers on my team were senior forces within either their school or institutions." (I2)

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Ranking the Challenges

Table 2 outlines how writers ranked challenges when posed with a list of possibilities. The table shows their first and second-highest-ranked challenge based on a sample size of 26 writers.

Table 2. Ranking the relative challenges in the curriculum writing project

Statement	Rankings
Rank aspects of the curriculum that were most difficult to write	#1 Essential Learning Outcomes #2 Assessment Strategies
Which of the learning outcomes were most difficult to write?	#1 Values #2 Knowledge
Rank aspects of workplace/lifestyle balance that were most challenging.	#1 Inadequate resources #2 Competing demands on my time
Rank aspects of your rationale for participating in the curriculum writing.	#1 I feel responsible to contribute #2 My own children will benefit greatly
Rank which areas of education were most likely to be enhanced by the new curriculum.	#1 Child-centered teaching #2 Literacy
Rank the constraints that Covid-19 has placed on their curriculum writing.	#1 Difficult to work as a team to write curriculum #2 It has been difficult to pilot our work in schools and get feedback

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Results from St. Kitts and Nevis

The following are categories that emerged around the process of writing and its associated challenges in SKN. (*Direct quotes from the focus group are annotated with F to anonymously indicate different respondents.)

Preparation and Writing

Over 90% of writers in the survey sample said there was a need to revitalize the SKN curriculum and further they understood the motivation for a curriculum framework document as a foundation for writing curriculum for their country.

The survey sample (n=25) suggested that 40% felt unprepared to write curriculum. Those familiar with the writing plan in the focus group, suggested that this number may be affected by the fact that the writing teams had a changing population such that new members would not have had the benefit of initial workshops. This would put additional pressure on the subject lead to professionally develop the new member. Upon further probing they indicated the following about the writing process:

Working With the Template

While 70% had not encountered the notion of backward design of curriculum, over 90% of respondents suggested they understood the components of the template. Nevertheless 90% said some components were more difficult to complete than others. While understanding the intent of the essential learning outcomes (hereafter ELOs) was not an issue with 80% of the group, writing curriculum within the scope of the ELOs was highlighted as most challenging. The focus group session indicated that writers would likely find it difficult to consider

competency-based outcomes; the idea that standards often shape a broader outcome within which writers have much more flexibility. Almost 60% suggested that writing assessments in the template were not difficult, however informal feedback from lead writers suggested that standardized testing had writers much more experience in summative forms of assessment. For student-centered pedagogy with adequate scaffolding, more training in formative assessment seems to be implied. Ngatia (2022) argues that formative assessment training is necessary in student-centered pedagogy. The focus group suggested that a segment of the writing group may suffer from lack of content background such that extrapolating an outcome to the SKN context would be problematic.

Writing Inclusive Curriculum

Nearly two-thirds of the survey sample suggested it was difficult to write inclusive curriculum. The focus group posited that the very definition of inclusion would not be clear to writers. While they would have been exposed to concepts of differentiation Tomlinson & Strickland in Rose et al. in their entitled book "Teaching every student in the digital age: Universal design for learning." Schooling practices traditionally would segregate children with learning challenges. The idea that abilities of all children could be planned for in curriculum (e.g., low threshold-high ceiling approaches and multiple learning styles) was not something the focus group felt confident was part of the writer's experience. Further professional development in this area is indicated.

Child-Centered Curriculum

Ninety percent of survey respondents saw value in child-centered curriculum. The focus group were not surprised by this. They suggested that the writers may know that child-centered curriculum is preferred (in educational literature). But in fact, the process of writing curriculum that departed from didactic teacher-led approaches was not something they would find easy, especially given traditional modes in the public system (Puustinen & Khawaja, 2022; Wright et al., 2022). Said one focus group member, "And so the idea of student-centered instruction and all these different frameworks, those ideas were attractive, this seemed impressive. They seemed to reflect what we want, but most persons didn't understand one, what that looked like and two, what it would take to get there." (F2)

Age-Appropriate Curriculum

While nearly 60% said writing curriculum that was active was not difficult, almost half of the greater sample suggested that creating age-appropriate curriculum was difficult. Age-appropriateness would be best judged by a range of writers implied one focus group member. Paraphrased (F3), they suggested a writer who has taught grade 3 for twenty years may not have a sense of the rigor necessary at grade 6 much less the content. This may imply that writing teams have to be chosen very carefully not for willingness/motivation to participate but also for experience across the grade spectrum re: content and experience. Knowing where students were on the continuum was challenging for writers to consider because traditionally, they would have taught by the topic and not by a learning outcome. As was the

case in Guyana, it was commonly held that, language arts and mathematics tend to build process skill levels across a school experience rather than working with topics. This made these particularly difficult writing tasks without a clear understanding of child development.

Curriculum Integration

Nearly 65% of the survey sample suggested that subject integration was an easy task. The focus session was particularly illuminating in this regard. It was suggested that teachers are used to teaching distinctly separate subject content with knowledge recall being the emphasis. Both the approach to 1) integrate subjects to create context for the learning or 2) to create discussion around a socially important aspect of the topic; were less familiar for the writers.

The focus group provided insight into fundamental challenges associated with context. First, they suggested that creating integrated, context-rich curriculum would require that the writers interacted significantly with other subject areas. In practice, this was not the case. They also suggested that teachers with extensive experience, while seeing the value of progressive curriculum trends, perhaps felt the shift in pedagogy and culture was too great; it had a way of devaluing what they had contributed over the years. With lack of buy in by these leaders; a lack of support for the tenets of change, the potential to derail ground-level teacher support in schools seems predictable (i.e., if your leadership is not motivated to support the change in pedagogical direction, when teachers face inevitable challenges, the leaders may just claim ignorance or subtly communicate their disapproval of the change). Said one focus group member,

I had the sense that some of the writers, when approached by teachers, have not always given the most positive comments in terms of being able to provide support to the teachers. And the teachers would think that due to the fact that writers were writing, that they would be able to provide some support and guidance throughout. (F1)

Pressures of Regional Testing

The focus group was unanimous in suggesting that writers were steeped in a tradition of standardized testing through CXC and CSEC. Further they implied that the regional importance of students (and corresponding teachers) doing well on these examinations, no doubt drove certain pedagogies that would be counter to constructivist education; the transition away from recall learning seemed reasonable but the reality of the system testing was looming over the writers. Later in the survey, a considerable segment of the writer population indicated a concern that stakeholders (in the public) would not support the new curriculum. It might be speculated that the testing systems are a reality that parents live with and a change in curriculum that drives changes in CSEC/CXC might not happen quickly enough for their children to benefit. Said one focus group member, "there must be a negotiated reality...continual changes" (F1). The sense was that too much change for writers was overwhelming and that curriculum change should happen in smaller steps. It might be argued that setting the bar high and then piloting the curriculum is the best way to get objective feedback; to judge the appropriate magnitude of change.

Community and Culture in the Curriculum

Creating context for learning by linking curriculum to community and culture seems like a good idea but approximately half the sample communicated difficulty with this task. The group from the beginning, would have been told repeatedly, to make the curriculum their own. The consultants would have shared examples of community in curriculum admittedly from their own contexts; the expectation was that writers find their own cultural examples to enrich the curriculum when consultant examples were offshore. The focus group suggested that 1) writers were not accustomed to the flexibility to create when their experience has been to accept curriculum given to them and 2) examples of culture were not readily found on the internet. The notion that you might speak to elders in the community or seek out traditional and non-traditional primary sources was alien to their prior experience. Writers in workshops did see value in blending the curriculum through the use of community contexts to rid the curriculum of rural and urban disparity.

Assessment Implications

Whereas the curriculum was to be child-centered, accessing scaffolded learning through discussion and activities, focus group respondents believed that the traditional approaches of summative assessment needed to be supplemented with formative assessment strategies, a movement that only professional development would promote especially with a segment of the writers who felt "too much weight was placed on formative assessment" (F3).

Writing Team Composition

While the preparation for writing was largely adequate for most team members, the extent of the workload was not clear to some writers. This resulted in team members withdrawing from the task leaving team leaders with the job of educating new members who would have missed the initial consultant sessions. This was problematic in that it led later to variations in quality and misunderstandings of the core foundations meant to underpin the writing. Almost 50% of the survey group were neutral or felt the quality of the curriculum outputted by individual members varied significantly. The focus group suggested that some writing team members lacked the content background which was corroborated by consultants. This arguably points to the need for a larger pool of content experts from the system, a vision that may not be achievable in practical sense.

Communication Styles

An interesting point was made in the focus group about the nature of feedback from consultants. Paraphrased (F3), the writers are accustomed to getting feedback that provides guiding questions as opposed to rewritten curriculum, a process that may impact their self-efficacy and confidence. One might suggest that the difference between visionary curriculum and past approaches is so marked, that is occasionally necessary for the consultant to reconceptualize the approach with an exemplar. There is evidence in practice and in the literature that writers demonstrated significant improvement with time if they carefully

considered the rationale for suggested improvements in written curriculum, rather than simply accepting changes. From a country's capacity-building perspective, this is an important predisposition for writing teams to take.

Impacts on the System

From the survey we compiled predictions from writers regarding impact of the curriculum on St. Kitts and Nevis.

When asked whether they were confident that stakeholders would support the new curriculum, over 50% were either neutral or felt they were not confident. Upwards of 90% of survey respondents said that teachers in the system would struggle with the new curriculum. Said one focus group member,

the number of changes happening simultaneously and the lack of experience of most of our persons, most of our teachers, most of our technocrats, our parents, they have never seen it before. And so, it will be difficult for them to embrace it, even if you explain it as best you can. (F2)

Said another participant, "straight out of the gate, what we have been trying to do is transformational, it just breaks the mold...it goes so contrary to what we are accustomed." (F1)

Writers responded to potential improvements the new curriculum might elicit in the public system. Over 50% said the curriculum reflected national culture. Near 80% suggested that the curriculum was well differentiated for a range of learners. Only five percent indicated that they thought literacy would not improve as a result of the new curriculum. Nearly two-thirds of the sample said that integrating cross-curricular ideas into the curriculum was easy. This later finding was not surprising to the focus group who implied that teachers (especially at the primary level) were used to multiple activities in the same classroom. Almost 70% of writers disagreed with the statement all schools in the country are equipped to offer the new curriculum.

Informal feedback from writers suggested that professional development be offered in the form of sample lessons/exemplars for teachers. This has the potential to stimulate the formation of professional learning communities according to Hord in her book within schools or districts where sharing of ideas could build pedagogical capacity. But one focus member suggested, "we have to reach out and share, network...we're not very good at that." (F1) "Said another person in the focus group, "the ability of the teachers to execute will be dependent on the success of the professional development plan" (F3). Moreover, the group suggested that the notion that curriculum is a work in progress, was hard for this culture to accept. The writers and teachers would want it to be perfect the first time. Said one focus group member, "part of the PD has to be empowering us to feel comfortable enough to try, fall down, try again...that is part of the growth process" (F2). On several occasions, consultants received requests from writing teams to return to previously completed writing templates to improve or rewrite. This corroborates the focus group's observation that, writers may not have understood that writing was an iterative process that would be addressed in cycles over years to come. One target PD area highlighted by the focus group was instructional technology that empowers learning. With the onset of covid-19, focus group

participants noted observing technology-assisted correspondence learning as opposed to technology to empower the learning.

Working Conditions

The positive and negative features of the working conditions noted by writers in the survey and interviews are shown in Table 3.

Table 3. Positive and Negative Features of Working Conditions

Working Conditions	
Positive features	<ol style="list-style-type: none"> 1. The team approach coupled experienced veteran teachers with energetic young educators; 2. Teams learned to work in different group sizes and with pairing and peer correcting common; 3. Adequate time was offered to compare materials with peers in the writing group; 4. The technology available for writing was generally adequate; 5. Writing facilities were good; 6. Team tensions minimal; 7. 70% said writer remuneration was adequate.
Negaitve features	<ol style="list-style-type: none"> 1. Almost 40% suggested variance in the quality of individual work thus necessitating a team review and significant editing by the team leaders; 2. 80% of the sample suggested there was inadequate time to complete the writing; 3. Over 27% suggested there were not enough writers; 4. One third of the sample suggested the resources were not available to write quality curriculum; 5. Team leaders suggested that they underestimated the amount of time needed to review and improve writing team contributions. This was exacerbated if the teams didn't have an opportunity to get together in the same room; 6. Resources related to SKN and culture were very limited which affected the quality of subject integration and more importantly, culturally sensitive curriculum. Libraries were limited and online sources were slow to load. Interviewees suggested that finding resources took much more time than they expected. * It is important to note that the curriculum template was intended to replace textbooks as a resource to teach the learning outcomes. Because of this expectation, the level of detail necessary did depend heavily on creativity and available textual/online resources; 7. Stable internet for research and remote team meetings was problematic. In the first instance it was argued by the focus group that child-centered teaching required resources that could only be accessed through technology. A counter argument is that child-centered learning is a way of thinking about pedagogy (e.g., simple discussions) and can easily be created by the teacher not necessarily dependent on the internet. The lack of internet for team meetings

Working Conditions

sometimes forced a silo effect where collaboration/curriculum review by the group (beyond a pair) didn't happen. This put additional pressure on the lead writer. Consultants recognized some variation in quality when this was happening;

8. The onset of covid-19 exacerbated the balance of personal responsibilities as writers were then often charged with teaching from home (their students) teaching at home (their children) and modify their pedagogy for distance approaches. Similar challenges impacted writers who were not teachers in the system but had other public responsibilities.

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Ranking the Challenges

Table 4 outlines how writers ranked challenges when posed with a list of possibilities. The table shows their first and second highest ranked challenge based on a sample size of 26 writers.

Table 4. Ranking the relative challenges in the curriculum writing project

Statement	Rankings
Rank aspects of the curriculum that were most difficult to write	#1 Inclusiveness/integration (ranked equal) #2 Learning Outcomes/culture (ranked equal)
Which of the learning outcomes were most difficult to write?	#1 Values #2 Skills
Rank aspects of workplace/lifestyle balance that were most challenging.	#1 Insufficient time allocated for task #2 Inadequate resources
Rank aspects of your rationale for participating in the curriculum writing.	#1 I feel responsible to contribute #2 My own children will benefit greatly
Rank which areas of education were most likely to be enhanced by the new curriculum.	#1 Child-centered teaching #2 Context -rich activities
Rank the constraints that Covid-19 has placed on their curriculum writing.	#1 Difficult to work as a team to write curriculum #2 It has been difficult to pilot our work in schools and get feedback

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Discussion

How Were the Contexts Different?

The island nations of St. Kitts and Nevis cover some 269 square kilometers total. Guyana on the northern coast of South America is enormous by comparison spanning near 215,000 square kilometers. The process of completing inception visits to gather community input to prepare a consensual curriculum and assessment framework, was much more involved in Guyana given its expanse. This range of communities contributed to distinct cultural differences across the country's 10 regions. Particular attention was paid to rural versus urban perspectives. Regional differences in culture, necessitated more choices for teachers in the prepared curriculum in order to maintain relevance. In Guyana, the sheer distances required a careful consideration of how to use technology to assist with learning. Many communities in that country would not have stable internet so overuse of web resources was a consideration. To mitigate this disadvantage, curriculum resources such as pictures, videos, and simulations were distributed to hinterland teachers using flash drive technology. Further,

leveraging HDMI connectivity adapters and digital televisions diminish the need for expensive projectors and allowed for mobile phone use as a technology tool in the classroom. While internet stability was certainly an issue in SKN, the size of the islands precluded the distance challenges experienced in Guyana.

It is not surprising with the difference in size, that the populations would vary markedly as well. Guyana, as of the year 2020 had a population of 786, 559 with approximately 10,000 teachers across primary and secondary school systems. By comparison, SKN in the year 2020 had a population of 53,192 and approximately 800 teachers. When considering the enormity of rewriting primary and secondary curriculum in all subjects, the most obvious need is human resources, In SKN, the population to support such an endeavor was dramatically less than Guyana, thereby adding more challenges. These hurdles included lack of teachers to write, frequent turnover in writing teams but also changes in leadership at all levels.

The lack of human resource depth in SKN was exacerbated by the onset of covid-19 in that the smaller populations needed to extend their expertise even further to cope with changes in teaching modalities and school /home responsibilities outside the writing task. Their capacity to pivot and leverage their expertise was commendable but exhausting to the limited administration.

CONCLUSION

The forward-looking conclusions from the studies will be categorized here under preparation, writing and impact on the system. It is understood that the limitations of this study are the country contexts, the human resources available and the onset of covid-19 which mitigated certain efficiencies in writing. Nonetheless, the reader may generalize to their own setting by considering similarities in their own contexts and making comparisons where appropriate.

Findings Related to Preparation

In terms of preparation, a curriculum and assessment framework is responsive to the community's aspirations for their children and is therefore foundational for the writers. It is important to help writing teams see that is not only appropriate but desirable to integrate community and culture into the curriculum. When talking about the underlying philosophical perspectives (e.g., constructivism, inclusion, differentiation, integration) it is prudent that writers understand what these terms mean. We found it be very productive in terms of literacy development to spend time developing the importance of classroom discussions and social construction of knowledge. In the preamble to writing, the teams should be given lots of practical exercises in writing curriculum with group feedback sessions for sharing and critiquing group products. Because context-rich curriculum is desirable, it is fruitful to provide writing teams with tangible examples of how literacy, numeracy, social issues and science can be integrated seamlessly for highly authentic lessons. In backward design approaches (McTighe & Thomas, 2003), writers experienced challenges with formative assessment because checking for indicators of understanding were not necessarily a part of traditional deductive teacher approaches. Writers need to see more examples of how funneling discussions (Herbel-Eisenmann & Breyfogle, 2005) elicit background knowledge and build

student communication vocabulary. In a similar vein, it was important to provide writers with a range of summative assessment strategies such that literacy was promoted; particularly research, reading, writing and oral communication skills. Because access to supplemental curriculum is improved, the potential of technology to empower learning should be explored with writers noting carefully where limitations are evident. In our work the use of flash drives, HDMI, digital televisions and specialized phone and computer adapters addressed issues of the digital divide (Gorski, 2005) particularly within the extensive and varied geography of Guyana. Overall, it was important at the onset to establish that the process of writing curriculum is iterative. In these projects it was necessary to get through all subjects and grades within a reasonable and funded schedule, so returning to completed curriculum was not possible in the immediate timeframe. The overall intent of the consultant-led process was that capacity be built within the writing teams to revisit curriculum regularly in a systematic review/upgrade on a predetermined schedule of renewal.

Findings Related to The Process of Writing

The process of writing in many ways involved reminding/reiterating foundations of understanding previewed in introductory workshops. Below is a summary of recommendations to enhance the efficiency and productivity of the writing process. While the template (Figure 1) seems self-explanatory, it was important in retrospect, that the entire writing group understand the meaning of each labeled section. This may well have been better explained with more exemplars especially with respect to *grade level guidelines*. Writers should be encouraged to add and modify learning outcomes as per their country's context while adhering to the thrust of international standards. This is important in order to promote ownership of the curriculum as a reflection of country culture and educational aspirations. Effective communication between the team and the consultant is important. The model adopted, was to have only the writing team lead share team curriculum with the consultant. This nicely mitigated potential confusion of multiple curriculum copies being shared. The consultant would necessarily provide timely feedback through the lead writer and supplement where necessary with team meetings to clarify aspects of the writing process. This model is clearly contingent on good relationship building between teams, team leads and consulting expert. In the beginning of the writing, it was useful to embark with singular outcomes and as consultant give an abundance of constructive feedback with examples. As writing teams became comfortable with the fundamentals of style and content, it was possible to ramp up to larger tasks of multiple ELOs. As the teams progressed with the writing it was important to frequently remind them of the curriculum and assessment framework as way of continually grounding their writing. From a practical perspective, it was also critical that writers consider the ultimate *users* of the curriculum, the teachers themselves. To that end, teams were encouraged to write the teaching strategies as a running script (with adequate detail) in a teacher friendly format, so that even untrained teachers could adequately function in the classroom. This too was linked with tangible examples within teaching strategies, of formative assessment that teachers could see were an intrinsic part of ongoing classroom instruction. Because some writers expressed a difficulty incorporating local culture (due primarily to lack of printed and online materials), it seems useful to encourage writers to seek out community elders to include authentic cultural components in the curriculum. For the physical act of writing of the curriculum, feedback

suggested two efficiencies. First, that entire groups of writers should have scheduled and protected time to meet face to face in a single space to promote both social construction of the process as well as enhanced integration of the curriculum. In smaller country contexts, where human resources are limited, team leaders may often be leaders in the government departments as well. It is preferred that the writing time be carefully guarded with no interruptions from other responsibilities within government. Further that subject expertise be the driver of compiling teams as opposed to willingness to participate.

Findings Related to Impact on the System

The process of taking the curriculum to the public necessarily involves a government commitment to professional development of teachers. The obvious trainers for this process are the writers themselves. While the curriculum is new and the piloting process always involves reshaping and appropriate modifications, it is critical that writer/trainers maintain a positive attitude towards the potential of the curriculum and offer a unified understanding of the foundations of the curriculum itself. It is not simply a matter of presenting the curriculum document to teachers. It is incumbent on writers to show teachers how to use the curriculum document as a teaching tool; this necessitates the consultants demonstrating with tangible examples how the guide can be used in a very practical sense by teachers.

AUTHOR'S NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. The authors declare that the data and content of the article are free from plagiarism.

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