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Towards a Successful Development of School-Based Instructional Supervision Materials to Support Effective Competency-Based Curriculum Implementation in Zanzibar

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Abstract

The implementation of the Competency-Based Curriculum (CBC) among teachers in Tanzania and Zanzibar in particular remains an issue despite its functioning in schools for nearly seventeen years. In the absence of a supporting guide, school leaders feel less prepared to assist their teachers in implementing the CBC. For this reason, School-Based Instructional Materials (SB-ISMs) were developed by researcher in collaboration with potential users of the SB-ISMs (section leaders and head teachers) and experts. The goal was to provide school leaders with the means to support their teachers as they implement CBC. This article presents the main comments received from users and experts regarding the SB-ISMs developed. The practicality, effectiveness and validity of the developed content was evaluated by 33 section leaders, 15 head teachers, and 5 experts in the area of design-based research, educational management, and curriculum development through semi-structured interview guide. The generated data were analysed using inductive thematic analysis protocol. The users' and experts' comments about the SB-ISMs revealed four major themes namely; ensuring authentic content and reflective activities in the materials, having a logical sequence of SB-ISMs, using context-based facilitation skills and descriptive style of materials presentation, and using practical and hands-on activities for competence development. The involvement of a variety of experts and users contributes to the successful development of intervention materials in education. Therefore, it is recommended that the Government, through Ministry of Education, Science and Technology, whenever, it needs to develop any curriculum guide to be implemented in any educational institution, it is reasonable to involve experts and those who are going to use it in the real school milieu.

Keywords: *competency-based curriculum, implementation, prototyping, school leader, supervisory guide.*

Background

The previous two decades have served as an alarm signal for education authorities around the world to reconsider the best way in which education systems could produce young people who will cope with life in the twenty first century (Anderson, 2017; Ruth & Ramdas, 2020; Sullivan, & Burce, 2014). For that reason, several nations engaged in reforming their curricular by shifting from content-based to competency-based curriculum (CBC) which emphasizes acquisition of key competencies for society transformation (Kasirye,2020; Mulena & Kabombwe, 2019). Practically, CBC adopts a learner-centred pedagogy, formative assessment approaches, and stresses the development of competencies and application of knowledge in real life context so that learners master and manipulate their environment confidently (Sifuna & Obonyo, 2019).

Volume 1. Issue 1. December 2024 ISSN: 3008-1254

In essence, the CBC is rooted in USA. It began when the state departments of education began promoting competency-based teacher preparation in the middle of the 1960s as a result of concerns over insufficient teacher preparation programs and graduates' difficulties in finding jobs (Sullivan & Burce, 2014). Later, these ideas were adopted by a number of other European nations including France, Australia, Belgium, Switzerland, and Quebec (Anderson, 2017).

In line with the changes globally, South Africa in 1998 became the first African country to adopt the CBC in an effort to alter people's mindsets and provide them with the employability skills they need to deal with difficult situations in the twenty-first century (Komba & Mwandanji, 2015). The Republic of Cameroon embraced the competency-based approach in 2012 which was then approved in 2014 (Ngala, 2016). The shift into competency-based approach was an attempt to do away with content-based curriculum inherited from their colonial masters. Specifically, the CBC was to help the people be well-versed in the two official languages (French and English), thoroughly steeped in their traditions, and open to a world dominated by information and communication technology. The goals were to help these kids acquire competencies and essential information that would either enable them to further their schooling or position them for a seamless entry into the labour market, in addition to fostering their intellectual, civic, and moral development (Akala, 2021).

East Africa was not left behind in the efforts of introducing CBC in their educational systems. For example, countries like Rwanda embraced the CBC innovation in 2015 according to Rwanda Education Board (2017), and Kenya implemented the same in 2016 (K.I.C.D, 2016), the major goal being to prepare the graduates for the challenges of the workforce and develop their problem-solving skills. Tanzania and Zanzibar in particular, are no exception when it comes to the educational reforms aiming to improve quality education provision. The country introduced CBC in 2005 to replace the content-based curriculum that emphasized the acquisition of content knowledge rather than developing students' ability to use the acquired knowledge and skills to become problem solvers in their societies (Mwandanji & Komba, 2015). In this regard, CBC was seen as a potential measure to produce competent graduates who would be future experts in various fields hence contributing to the country's economic development. Indeed, the country's effort to move into CBC was a viable decision in the context of achieving global competence (Ruth & Ramdas, 2020). However, several scholars (see Nkya, Huang & Mwakabungu, 2021; Kangalawe, Machyo, & Nduku, 2019; Muneja, 2015; William, O-Saki, Mselle, & Gabriel, 2014) have observed that classroom teaching in Tanzania still uses the conventional teacher-centred approach predominantly characterised by lecture methods in which chalk-and-talk predominates. In the chalk-and-talk kind of teaching, students are still assumed to be passive listeners and receivers of knowledge whose learning activity is only coping notes from the board (Makunja, 2016). Research findings have established that one of the reasons for the ineffective implementation of CBC in schools to some extent, is a result of inadequate supervision of teachers by their school leaders (headteachers and section leaders) (Ali, 2015; Nyambo, 2017; Siamoo, 2013). In this context, enhancing the capacity of school leaders to supervise the implementation of CBC was felt reasonable.

Researcher is mindful of several interventions undertaken by the governments and other educational stakeholders both in Tanzania mainland and Zanzibar to facilitate effective implementation of the CBC. Some of the notable interventions include Boost for Primary Education, Secondary Education Quality Improvement Project (SEQUIP), and the latest initiative is Enhancing Quality of Secondary School Education Project (United Nations Office for Project Services [UNOPS], 2022). For instance, Enhancing Quality of Secondary School Education Project is coordinated by Good Neighbours in Zanzibar whose focus is enhancing quality of secondary school education by building science laboratories and procuring equipment and supplies for secondary schools both in Unguja and Pemba Islands. The cited project also organises capacity building workshops for teachers on curriculum issues. As it can be seen, the focus of majority of these projects has been on teachers and with less focus on school leaders and CBC aspects. This necessitated the need to conduct this study to enhance school leaders' capacity of supervising the CBC implementation through the design and development of educational materials.

Volume 1. Issue 1. December 2024 ISSN: 3008-1254

From the foregoing, it is clear that the school leaders are the primary curriculum advisors for their schools in charge of helping teachers to improve the quality of teaching and learning in classrooms (Ashum & Acquah, 2021). Underscoring the role of school leaders in supervising the curriculum, an agreement among scholars (see Jonyo &Jonyo, 2019; Metulo, 2014; Mkulu &Ngole, 2020; Sabola, 2017; Islam, Usman & Yousaf, 2018; Tesema, 2014) suggest that school leaders are key to developing teachers' competence and confidence in implementing curricula, which in turn enhances students' positive learning outcomes. Related research evidence elsewhere indicate that the school leaders can influence effective implementation of curriculum by motivating, encouraging, facilitating teamwork and peer training, and advising teachers on the best practices to implement curricula more effectively (Chaudhary, 2015; Waruingi, Mbogo & Mambo, 2022). From the discourse pertaining to the role of school leaders on curriculum implementation, it is fair to argue that school leaders are responsible for monitoring and guiding curriculum implementation by ensuring that teachers prepare schemes of work and lesson plans correctly according to the requirements of CBC (Lynn & CurryCorp, 2017; van Griethuijs, Kust, van Woerkom, Wesselink, & Poell, 2019). These supervisory competences - supervising effective constructions of competency-based scheme of work and lesson plans have never been realistic among many public secondary school leaders in Zanzibar (Ali, 2015; Nyambo, 2017). The implication here is that school leaders continue to provide inadequate support to teachers regarding CBC implementation.

In addressing the CBC supervision problem, the School-Based Instructional Materials (SB-ISMs) were collaboratively developed to enhance school leaders' capacity to supervise CBC (see Appendix 1 for a summary of the desired intervention). Specifically, the SB-ISMs aimed to support school leaders to supervise competency-based instructional planning, including lesson plan and scheme of work, competency-based lesson delivery and competency-based assessment. Eventually, the developed intervention material was appraised by users and experts for its quality with particular focus on the relevance, effectiveness and usability.

The main objective of this article, therefore, is to report on the comments of the experts and potential users (school leaders of the SB-ISMs) during the development of the SB-ISMs. The lessons learned from this study will go a long way in enabling organisations and other researchers in developing guides to support school leaders in supervising the implementation of the revised curriculum, notably CBC.

Research Design

This study was informed by a phenomenography design anchored on qualitative research approach to address the research objectives. The choice of this design is based on the desire of the researcher to explore users and experts' lived experiences of and perceptions on SB-ISMs (Khan, 2014; Nixon & Odoyo, 2020). Based on their experiences, the desired SB-ISMs were improved.

Population of the study

This study was carried out in Zanzibar in West B District and Urban District both located in the Urban West Region. A total of 30 schools was selected, 15 from each District. The schools were conveniently selected based on their readiness and availability to be studied. A preliminary study conducted by the researcher in 2015 established that the two districts showed interest in taking part in the study because the training programme would update school leaders on the modern supervisory skills for CBC implementation.

Sample and Sampling Procedures

The section leaders (N=33) were purposively involved in this study because they are considered as information rich since they are instructional supervisors and hence become in charge of ensuring that teachers are effectively implementing the existing curriculum. The study also purposively involved developmental study experts (N=3), educational management expert (N=1) and department of curriculum development (N=1). The experts' ideas were highly demanded in enriching the content and

Volume 1. Issue 1. December 2024 ISSN: 3008-1254

for improving the relevance (usefulness) and practicability (usability) of the designed intervention materials.

Data Collection Methods

Data collection was performed using semi-structured face-to-face interviews (SSFFIs) with participating section leaders, head teachers, and experts. For each of these categories, SSFFIs lasted approximately 50 minutes and they were directed by a semi-structured interview guide. The use of SSFFIs was preferred due to the researcher's intention to have unique experiences of each participant freely which would have been impossible to get through focus group discussion. Moreover, the use of semi-structured interviews was felt appropriate based on its flexibility in allowing discovery or further elaboration of information that may not sound clear to the researcher (Elhami & Khoshnevisan, 2022). Putting this strength in mind, follow-up questions were asked to obtain clarification, examples, and more details. To ensure relevance of the interview guides, qualitative research experts reviewed the instrument, and their feedback was carefully incorporated. Specifically, the experts emphasised that the questions in the interview guide clear and free from overlap.

Data Analysis Procedures

The data collected for this study were analysed using an inductive thematic analytic approach. This approach was chosen because it allows themes to merge naturally from the data without being constrained by a pre-existing coding framework, making the coding process entirely data driven (Christou, 2023). The data analysis was made by following Braun and Clarke (2006) analytical procedures. The authors highlighted six phases of thematic analysis, which include: data familiarisation, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and finally, report production. Moreover, NVivo and Microsoft Word programs supported data organisation, coding, and theme identification. In reporting the emerged findings, the data were presented as summaries and narratives, and illustrated with examples and quotations, capturing the respondents' perspectives and experiences.

Ethical Aspects

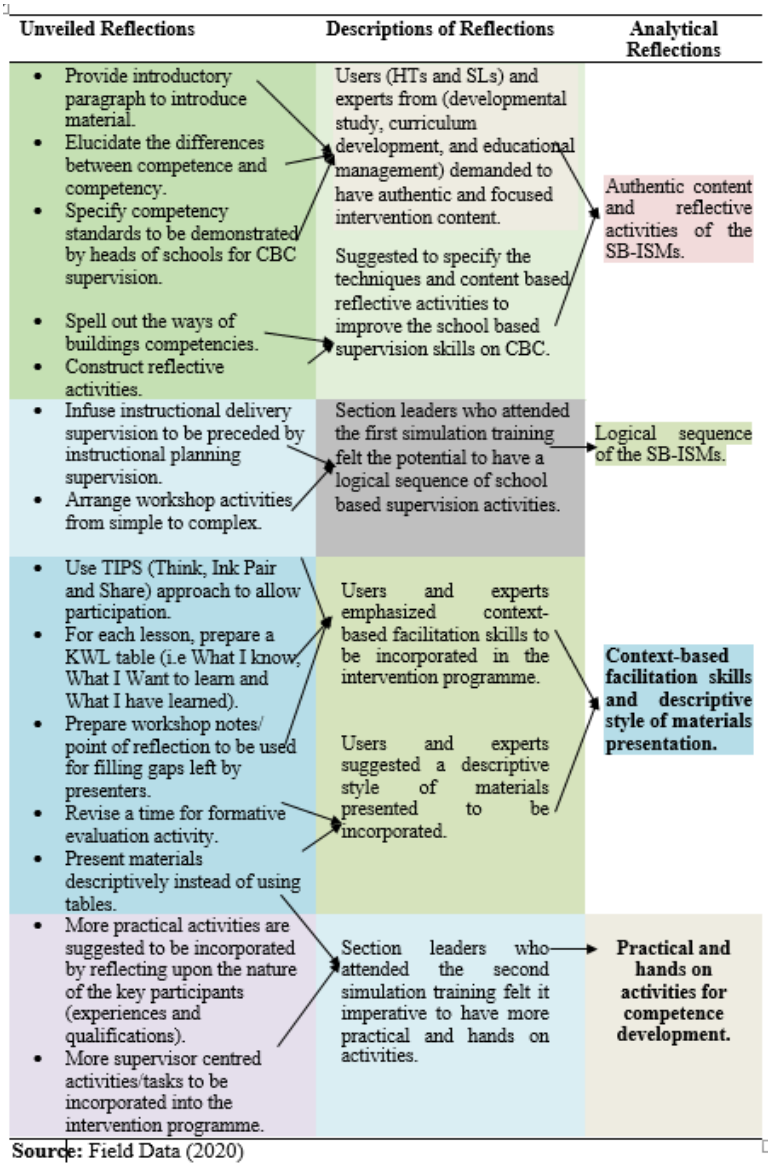
Like any other scientific investigation, research ethical procedures were well observed in the course of performing this study. At the outset, approval for the conduct of this study was sought and granted by the Directorate of Research and Publications, University of Dodoma. Informed consent from participants was also gained. Confidentiality and anonymity were taken care of beforehand while participation remained voluntary. To observe anonymity, letters were used to represent the actual names of participants.

Results and Discussion

This study purposed to report the users' and experts' comments on the designed intervention materials. With this in mind, the prototype zero of the materials had to be appraised by the head teachers and section leaders who are the prospective users of the materials at the school level. It was hoped that involving head teachers and section leaders in the development of the desired materials would result in increased ownership and acceptance of the materials thereby facilitating easy usability of the materials. The same materials were appraised by other experts with considerable experience in curriculum development, developmental studies, and educational management. Moreover, simulation training of the prototypes was made to section leaders to consolidate the materials. The emerging comments from the formative evaluations by users and experts are presented in Table 4.4. The related details are given thereafter.

Table 4.1 Users' and Experts' comments for Improving SB-ISMs

Volume 1. Issue 1. December 2024 ISSN: 3008-1254



Source: Field Data (2020)

Authentic content and reflective activities of SB-ISMs

In an effort to enrich the quality of materials, participants suggested inclusion of authentic content and reflective activities in SB-ISMs. Specifically, they demanded an introductory paragraph to the materials to guide users on how to use them. Furthermore, participants noted that the materials needed to be divided into sub-units, with each sub-unit providing introductory remarks describing the objectives of the unit. The introductory part should inform the readers of the purpose of both the materials and the sub-unit to avoid confusion. The developmental research expert 1 is quoted below:

> I have gone through your materials carefully and came up with one major recommendation to improve the materials. I do not know how the lesson plans are intended to be used but I suggest to have a paragraph to introduce the materials (Interview with developmental research Expert I, 4th November, 2019).

This quotation suggests that an introduction for each module or unit of the intervention materials is critical in enabling the readers to have a general understanding of the respective unit (Hansen & Tengnäs, 2021). Section leaders suggested that workshop activities should be reflective, encouraging participants to

Volume 1. Issue 1. December 2024 ISSN: 3008-1254

elicit their previous experiences on the matter at hand before learning new experiences from the facilitator side. Developmental research expert 2 was in agreement as quoted below:

> I would suggest the inclusion of reflective workshop activities that provoke the participants or learners to share their experiences or practices on the subject matter at hand. In fact, reflective workshop activities go in line with CBC implementation since even the CBC itself emphasizes learners' interactivity (Interview with developmental research expert 2, on 4th November, 2019).

The above narrative indicates that reflective activities are important in the intervention materials due to their potential in facilitating a sharing of past experiences and knowledge regarding the subject at hand. This in the end invites new ideas and development of new knowledge and skills (National Council of Educational Research and Training, 2009).

The experts further added that the difference between competence and competency and how to build them should be made more apparent in the intervention materials. They emphasized that the materials should tell when competence is used instead of competency and vice versa to avoid ambiguity to the readers. Categorically, it was advised that specific competency standards were required to be demonstrated by school leaders (section leaders) for CBC supervision. In this respect, it was suggested that the materials should show specific skills required by the school leader to supervise the implementation of CBC. The section leaders and more so experts thought that this is nuclear of the whole proposed intervention programme. The educational management expert's remarks in this respect are illustrated by this quote:

> I think it is good to delineate specific competency standards to be demonstrated by school leaders in supervising CBC. Obviously, the epicenter of this programme is coming up with the key elements or standards that school leaders should possess for supervising implementation of CBC. In my view these standards are those which you found school leaders lacking during your baseline survey. These standards, therefore, need to be featured in your intervention materials (Interview with educational management expert, 4th November, 2019).

Also, a curriculum development expert echoed these sentiments remarking that:

> You should always remember to include the basic supervision qualities that school leaders should have to be capable of supervising the implementation of CBC in schools. Without these supervision qualities, your intervention is likely to be illogical (Interview with curriculum development expert, 6th November, 2019).

The above quotations suggest that it is felt significant to make conceptual clarifications of some important terms for the readers to have an in-depth grasp of the intervention materials and for enhancing usability. Bugler, Marple, Burr, Chen-Gaddini, and Finkelstein, (2017) concur that accuracy and visual appeal, alignment to standards and depth of knowledge, ease of use and support, engagement and ability to meet participants' learning needs determine the effectiveness of the desired intervention materials.

Logical sequence of the SB-ISMs

Participants felt it necessary to ensure a logical sequence of the school-based supervision skills on CBC. In organizing the content of the materials, they recommended that instructional delivery supervision is to be preceded by instructional planning supervision. They cemented this suggestion arguing that one always starts with planning how instructional activities are going to be executed in the actual classroom context before they are executed in the real context. In regard to this, section leader A narrated:

> In my view, your material has to be coherent and logical for easy understanding. I think the material can help school leaders to supervise CBC. For example, last week, I ordered my

Volume 1. Issue 1. December 2024 ISSN: 3008-1254

> teachers to collect instructional documents, namely lesson plans, schemes of work and lesson notes for assessment. I used these workshop materials to assess their instructional ability. Frankly speaking, the materials are useful. These materials would be a good tool for many school leaders to supervise the instructional process in this era of the implementation of the CBC (Interview with section leader at school A, 10th November, 2019).

The same was echoed by head teacher A who remarked that:

> In my opinion, the materials have been well organised in a way that one would gain understanding easily. The content coverage is adequate and relevant. I can use these materials without any trouble. Only that some improvements need to be made on the coherence of some contents (Interview with head teacher at school A, 11th November, 2019).

A close interpretation of the quote above leads in a conclusion that the materials developed were helpful and accepted by the users. One of the areas where the participants condemned the materials was its use and coherence. Moreover, it was aired that workshop activities ought to be arranged from simple to complex. Such an arrangement would facilitate easy understanding of the materials for all section leaders and other school leaders who will practice the materials in their schools (Bugler, Marple, Burr, Chen-Gaddini & Finkelstein, 2017)

Context-based facilitation skills and descriptive style of materials presentations

Both section leaders and experts noted that the desired materials should contain context-based facilitation skills and a descriptive style of presentation. In this direction, it was commented that it is good for the facilitator to prepare notes for a workshop in advance (possible answers for each activity). The main reason for the suggestion was that the notes would serve as a point of reflection for the facilitator to crosscheck whether what is presented by the participants matches with the state-of-the art or intentions and expectations of the facilitator. However, they cautioned that the facilitator's notes and activities should not be presented together to avoid hampering critical thinking. Also, it was advised that formative evaluation should be allocated more time as it is a significant part of the programme. Emphatically, a curriculum development expert in his words confirmed:

> I would propose that your facilitation skills should be context-based and the presentation of the materials should be descriptive. It is good to see, however, that the materials have taken a good shape such that one could read and understand easily. I am of the view that the materials now present the intended objectives. I have seen that at some point, activities of the workshop have taken sufficient time but I wonder why formative evaluation takes 40 minutes. I think you need to re-evaluate this part (Interview with curriculum development expert, 15th November, 2019).

These observations indicate that the experts think that the timing for formative evaluation and in this case activities to be carried out through Know, Want to know and Learned (KWL) table need to be increased. This is to allow facilitators to collect prior knowledge of the participants about a subject under discussion before moving to the next lesson (Foorman, Dombek, & Smith, 2016). Moreover, while discussing the materials with the experts for improving the prototype two of the intervention materials, experts had extra feelings on the layout of the materials. In this, the experts were of the view that the materials cannot have a proper flow if presented in tables. As such, they advised for a descriptive form of presenting the intervention materials. Consistent with this comment, developmental research Expert 2 had this to say:

> The materials' presentation style needs revision. I have seen your layout and the programme structure being in units: introduction, activities, programme procedures and assessment. I am suggesting for the improvement of the layout and structure to create a good flow of the programme components; i.e. the introduction, assessment, task one and its related notes,

Volume 1. Issue 1. December 2024 ISSN: 3008-1254

> task two and the related notes, task three and the related notes. I hope this will help you get away from the table you are using which to me sounds awkward (Interview with developmental research expert, 15th November, 2019).

From the critical observations done, the experts suggested that the materials should be presented in a descriptive structure. It seemed that they were not satisfied with the tabular presentation of materials. The experts advised on the use of descriptive or narrative style presenting the content of the intervention to enhance clarity and usability (Bugler, Marple, Burr, Chen-Gaddini & Finkelstein, 2017).

Besides, some experts added that it was a good idea to be guided by Think, Ink, Pair, Share (TIPS) approach while executing the intervention programme to the participants. This implied that for any idea to be presented to the workshop, the participants should first critically think in their groups about the presented concept before writing their thoughts on the piece of flip chat or manila sheet. Participants have to discuss these ideas in their respective groups. Finally, one of the group members will present the issues discussed before others for further discussions. When asked to justify the use of TIPS in this context, experts expressed that the approach helps to create interactivity during the execution of the intervention programme. It was also added that for each unit of the materials, KWL table (what I know, what I want to learn, and what I have learned) should be used as a basis of formative evaluation. The remarks of developmental research expert 3 in this direction are illustrated below:

> I think you can use the KWL table for formative evaluation. This means that you assess what your workshop participants know on the subject at hand before the workshop, what they want to learn from your workshop and what they have learned from your workshop (Interview with developmental research expert, 15th November, 2019).

An analysis of the arguments by these respondents would mean that supporting the supervision capacity of school leaders should be led by a tool that can enable them to share what they already know, new things they want to learn and assess what they have learned. This can be made possible with the help of the KWL (Alsalhi, 2019; Mofreh, & Aseeri, 2020).

Practical and hands-on activities for competence development

Before getting the final version of the desired intervention materials, they remarked that SB-ISMs contained adequate content and activities for the intended purpose. Besides, it was observed that the workshop resources are enough considering the nature of the progarmme and participants. However, section leaders advised to have practical and hands-on activities for competence development. In the views of the section leaders, the rationale for having practical works along with hands-on activities is to enable participants to convey their past experiences on the supervision of the implementation of the CBC. In this context, one of the users (section leader B) had this to say:

> Practical and hands on activities should always be one of the key components of your intervention materials. Without these, you may no longer build the capacity of section leaders on supervising the CBC. Interestingly, the workshop resources or materials are relevant. I think, your materials are now fit for the intervention programme. However, I remind you not to forget to have as many hands-on and practical activities as possible in your intervention materials (Interview with section leader at school B, November, 22nd 2019).

The quote above indicates that the section leaders who are also the prospective users of the materials were satisfied with the content of the third prototype and the materials could be implemented in the schools. Nonetheless, they advised on the addition of more hands on activities to make the materials effective to the target users (Kibga, Sentongo & Gakuba, 2021).

Volume 1. Issue 1. December 2024 ISSN: 3008-1254

Conclusion and Recommendations

This study was grounded on presenting the comments of the users and experts on the designed intervention materials which were to be used by school leaders in supporting effective implementation of CBC. The users' and experts' comments focused on the need to include authentic content and reflective activities in the materials, having a logical sequence of SB-ISMs, using context-based facilitation skills and descriptive style of materials presentation, and using practical and hands-on activities for competence development. Based on the findings, the study feels safe to conclude that involving various experts and intended users of the guide contributes to the successful development of intervention materials in education. Therefore, it is recommended that the Government, through Ministry of Education, Science and Technology, whenever, it needs to develop any curriculum guide to be implemented in schools, it is reasonable to involve experts and those who are going to use it in the real school milieu.

Study Implications

The findings emanated from this study emphasize the importance of involving experts and end-users such as school leaders in the development of curriculum-related materials. This collaborative approach ensures that materials are practical, relevant, and aligned with the needs of the intended users. The recommendations for involving experts and end-users aligns with global best practices in curriculum development, It suggests that Ministry of Education Science and Technology should adopt participatory methods in creating instructional materials, leading to more effective implementation and user satisfaction. The study also highlights the value of incorporating feedback and evidence during development process. This implication calls for a systemic approach to designing educational interventions where iterative feedback loops are established to refine and improve the materials.

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Volume 1. Issue 1. December 2024 ISSN: 3008-1254

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Volume 1. Issue 1. December 2024 ISSN: 3008-1254

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