Challenges facing teachers in the teaching of design and technology education in Botswana's primary schools

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Abstract

In this paper the background to the introduction of design and technology in Botswana's schools is examined. The introduction was flawed as it left the foundations years weak, that is design and technology was first introduced at senior secondary school and subsequently at junior secondary. In 2006, the subject was introduced at primary schools level. This approach posed a lot of challenges especially to primary school teachers in terms of professional development. design and technology at primary school level is offered as one of the eight modules making up the Creative and Performing Arts (CAPA). Primary school teachers were not involved in the development of the CAPA curriculum. An action research case study was conducted in Gaborone primary schools to establish the extent of the challenges facing the subject and how they can be addressed. This paper reports on the findings that were made at the workshop for teachers of CAPA. The findings indicate that teachers are ill-prepared to teach CAPA and it is only through extensive in-service training that such challenges can be addressed.

Key words

Curriculum, Creative Performing Arts, Design and Technology, In-service training, Primary Schools, Botswana

Introduction

Design and technology has undergone transformation in recent years in Botswana. This transformation has been at tertiary and secondary school level excluding primary schools. This made the foundation very weak because students need to be exposed to different technological concepts and careers at an early age. Despite a recommendation by the Revised National Policy on Education (RNPE) white paper of 1994 that design and technology should be introduced as part of other practical subjects at primary school level, it was not until 2006 that this recommendation was implemented. design and technology is one of the modules that makes up the Creative and Performing Arts (CAPA) at the primary school level. Despite this positive development in the educational system, issues of involving stakeholders (teachers) in the design and development of the CAPA syllabus were overlooked together with devising programmes of teachers' professional development in equipping them to effectively teach the subject.

The debate and concerns of primary school teachers' inability to teach CAPA and issues surrounding the resources required to teach the subject were topics of discussion in Parliament in late 2007. The parliamentarians raised concerns that teachers in primary schools were faced with a mammoth task of teaching CAPA which has been launched in schools without any resources provided and any in-service provision. One of the constraints cited was the breadth and depth of the subject which seems to be covering a wide array of content across different practical subject disciplines such as art, design and technology, home economics, physical education and business studies. It is against this background that lecturers from the University of Botswana, Tlokweng and Lobatse Colleges of Education conducted a workshop to get first-hand information on the challenges facing teachers in teaching CAPA at schools and on how best they can be assisted.

This paper discusses the findings of the workshop which led to this research paper. The paper outlines the following: the background of design and technology in Botswana, the creative and performing arts primary school programme; its aims and objectives at different levels of the school curriculum in Botswana and the research methods used. The research findings and activities undertaken during the workshops are discussed, and concluding remarks provided.

Introduction of design and technology in Botswana's schools

Design and technology was first introduced in Botswana secondary schools in 1990 to replace the traditional technical subjects of woodwork, technical drawing and metalwork which were offered as independent disciplines. This was done after a recommendation by Fox (1988:4.42) that

> "A new name should be chosen for one or other of these distinctive educational categories. It is suggested that in Botswana schools for 6-18 the new subject be called Design and Technology Education."

Fox (1988) had observed that the traditional technical subjects were taught as separate subject disciplines. Therefore, suggested that learners at the secondary school level would gain most from this subject of the National

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Curriculum if the learning and teaching of these respective subject disciplines can be integrated into one subject called design and technology.

When the government implemented this recommendation, Design and Technology was only introduced at senior secondary school and tertiary level. Tertiary institutions mainly educated teachers to teach design and technology in secondary schools. This posed problems because students did not study the subject at either junior secondary school or primary school level. The foundation was very weak because there were few students who opted for the subject at senior secondary school level. It was in 1996 when the first comprehensive Three-year design and technology programme was offered at junior secondary schools. The subject was offered as a pre-vocational programme relating to the world of work and was benchmarked against the United Kingdom. Design and technology in principle was supposed to be offered as a core subject to all students at the junior secondary level (National Development Plan 8, 2000). Some schools implemented this initiative by ensuring that all students in their schools studied design and technology. Due to lack of physical infrastructure and other resources the attempt failed in subsequent years and the schools reverted to the old practice of offering the subject as an option. What led to this change in implementation was that in early 2000 the Government of Botswana decided to declare war against HIV/AIDS and funds were redirected to the epidemic, which stalled other developments. To-date, all junior and senior secondary schools offer design and technology as an optional subject, although the strategy is to offer it as a core subject at junior secondary level.

Even though design and technology was offered in all Botswana secondary schools, the foundation still remained weak because it was not done at primary school level. However, the Revised National Policy on Education (RNPE) (1994) recommended that a wide range of practical subjects be included in the primary curriculum in order to help students develop an understanding and appreciation of technology, manipulative skills and familiarity with tools, equipment and materials. The Ministry of Education did not act on this recommendation until 2006 when the Creative and Performing Arts was introduced in primary schools. It took the Ministry of Education more than ten years from the time of the RNPE of 1994 to implement this recommendation. First, because of the discourse regarding the direction it had to take, that is, should it only be an integrated subject of art, craft and design, and design and technology or should it include more than two practical subjects. Second, most

specialists from the subjects from which it was to be formed were resentful and protective of their individual subject areas. The content areas to be covered by the new proposed programme were seen to be threatening to both curriculum panellist and subject advisers.

CAPA is a subject composed of modules. These different modules comprise of content drawn from art and craft, design and technology, home economics, business studies, physical education, music, drama and dance subject disciplines. The main objective of the subject is to develop students' creativity, critical thinking, practical skills, problem-solving skills and basic knowledge related to the arts, technology and the environment (CAPA syllabus: 2006). This enables students to acquire skills in designing, performing and realising using a wide range of materials and processes. CAPA supports a multi-disciplinary approach to learning. Thus integrating different disciplines helps students to combine their logical, scientific, linguistic, artistic and social knowledge to make their lives and interaction with the world meaningful. It bridges the gap between primary and secondary education, thus, providing a sound foundation for conglomerate disciplines that are offered at later stages of the formal education school curriculum as different entities and subjects.

Research evidence suggests that students were exposed to these subjects late in the schooling system (Revised National Policy on Education, 1994). Therefore the Ministry of Education vision of providing quality world class education would be incomplete without CAPA. To develop holistic students, they need to be exposed to both theoretical and practical skills at an early age. These skills must be made relevant to students and society's culture. As Chadwick (1993) observes, "children understand science more easily through seeing real life applications of technology all around them. But it is the learning by doing approach of designing and making which often enables children to understand science concepts at a surprisingly high level" (Chadwick, 1993:54). Although Chadwick's debate was related to the linking of the teaching of science and technology in the English National Curriculum, the same observation and comments can be made of CAPA. Learning in CAPA is better placed if the students have a hands-on approach during the classroom activities.

From a critical perspective, CAPA is so heavily loaded with different modules all combined to form one subject, and this makes its' teaching very difficult because primary school teachers have not been trained in all these subjects. Furthermore, some of these subjects, e.g. design and technology, are not currently being taught at colleges of education training primary school teachers. The four

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colleges of education responsible for primary teacher education up to the diploma level are Lobatse College of Education, Tlokweng College of Education, Serowe College of Education and Francistown College of Education. The authors suggest that these modules could be sub-divided into small manageable groups. For example, physical education, music, drama and dance could form one subject called *performing arts*, while design and technology, art, craft and design and business studies could be called *visual arts*. In this regard, the subject content could be more easily aligned, manageable as well as easily integrated.

The problems of implementing a new Primary Curriculum are not only affecting Botswana. It is common when a new subject is introduced in schools as part of the school curriculum. For example in the UK when implementing the science and technology National Curriculum at primary school level, teachers had a problem that affected its implementation. Chadwick (1993:54) argued that Head teachers were reluctant to spend in-service budgets on technology until the confusion was sorted out. Teachers also had received little training in the area of technology. Teachers' lack of confidence therefore was amongst some of the factors slowing down the implementation of the science and technology National Curriculum implementation. In addition, teachers were unable to make overlaps in the curriculum.

Creative and Performing Arts Syllabi
The CAPA syllabi are divided into two levels that is the lower and upper primary. The lower primary includes standard 1 to 4 whilst upper primary covers standard 5 to 7. The lower primary syllabus is organised into four areas which are then sub-divided into topics of different modules. The areas being:

(i)   health and safety (safety in the school workshop and sports fields);
(ii) communication (different visual media used in artwork);
(iii) listening, composing and performing (basic concepts and principles of music, dance, drama and physical education) and
(iv) design and making (basic concepts of design and technology through the problem-solving approach).

For the upper primary level, a fifth area of entrepreneurship has been added to the afore-mentioned four areas. This area introduces students to basic skills required to start and run a successful business. The lower and upper syllabi are assessed through various modes such as practical tasks, assignments, tests, quizzes and

examinations (CAPA syllabi, 2006). Worth mentioning is the fact that the subject has not yet been summatively assessed as part of the primary school leaving Examinations, marking the end of the primary school education. The resource constraints, teachers' lack of understanding of CAPA concepts (internalisation) and lack of ownership of the CAPA programme factors are some of the issues at hand not making it possible for full implementation of the programme to the level of assessment. No physical resources in terms of infrastructure and equipment has been has been provided in primary schools to enable them to teach the subject. Although some teachers have been taught some of the subject disciplines content covered by the different modules of CAPA in Art, Music and Physical Education at tertiary level, they are unable to integrate concepts they learnt in their classroom practices when teaching CAPA. Therefore, teachers have demonstrated little understanding of CAPA as a composite subject combining different content areas and concepts from different modules.

Both CAPA syllabi offer a lot of flexibility to accommodate project teaching and integrating all the different modules. The recommended contact hours for CAPA from the Ministry of Education are five hours per week but some schools only offer it for one and half hours per week. This might be an indication that some schools give less importance to CAPA as opposed to other subjects in the curriculum. This can be traced to the old misconception that practical subjects are appropriate for the less intelligent students (Moalosi, 1999).

Aims of Creative and Performing Arts
The CAPA syllabi (2006) articulate that on completion of each syllabus, students should have developed:
1. Psychomotor skills in the use of materials, tools, instruments, equipment and implements;
2. The ability to compose, design and make products;
3. Awareness of the effects of art, science and technology on society in everyday life;
4. An understanding of simple technology applicable to real-life situations;
5. Critical thinking, inquiry, creative, initiative, interpersonal and problem-solving skills;
6. Safe working habits and appreciation of healthy working environments;
7. Basic entrepreneurial skills, work habits, attitudes and values necessary for business activities;
8. Knowledge, skills and values that contribute towards individual development;
9. A spirit of self-reliance and self-sufficiency.

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Lower Primary Syllabus Content
This section will discuss the syllabus content of the Design and Technology component only, and not all other modules making up CAPA. *Table 1* outlines the topics covered within each standard and the general objectives related to each topic. The general objectives for standard one are fairly basic and more content is added on each topic as students progress over the years. The coverage of the syllabus follows a spiral curriculum approach. Ellis and Stuen (1998) argue that this approach is based on the premise that it is crucial to identify the key concepts, skills and values that learners should experience and to teach them each year at increasing levels of sophistication. As new knowledge and skills are introduced in subsequent years, they reinforce what is already learnt and become related to previously learned information. What the learner gradually achieves is a rich breadth and depth of information.

There is a lot of theory covered in the lower primary syllabus and children at this age learn more by doing. Learners need to be allowed to be adventurous and enabled to enjoy learning (Carmen, 2008). Otherwise, the more content intended to be covered by the teacher, the higher the possibility of teacher talk. Subsequently, the more the teacher talks, the more passive students become in learning and the less motivated they become about learning the subject. The emphasis should be on projects which will cover the outlined technology areas. In support of these sentiments, Carmen (2008) argues that in a technology-based curriculum, students learn best by doing, with an emphasis on problem-solving. Therefore, this kind of curriculum should be activity-based; task oriented and a project-driven approach to learning should be adopted to provide students with knowledge, skills and experiences in the subject of their choice.

Upper Primary Syllabus Content
Table 2 on page 31, outlines the syllabus content of the upper primary level. The upper primary school level in the context of design and technology builds on what students have learned at lower primary level. Basic concepts of business are introduced to students and students are encouraged to infuse these concepts into their design and technology activities. Furthermore, students at this level are facilitated to engage in real life complex design issues and to provide an end-product relating to the provided desirable solutions identified in the research portfolio. The portfolio being a product or sheets of paper outlining the problem-solving process students followed in their attempt to provide solutions to a need. Although mechanical in nature, the sequence is the one desired by the syllabus; from problem identification through to product realisation and evaluation. The technological concepts are also increased in breadth and depth enabling students to explore their relevance to day-to-day life and acquire basic knowledge about them.

Standard 1 – 4	
Topic	**General Objectives**
Materials	• Explore and use different materials. • Explore the characteristics and uses of materials. • Make informed decisions about the choice of materials.
Structures	• Study and examine basic principles of structures. • Experiment and apply the principles of structures. • Apply the concept of triangulation and reinforcement.
Mechanisms	• Experiment and apply the concepts of levers. • Observe and apply the principles of linkages. • Demonstrate and apply the basic concepts of wheel and axle system in problem-solving activities.
Design and making process	• Acquire knowledge and appreciation of design. • Explore the basic aspects of design. • Recognise a design need and develop a possible solution. • Demonstrate the manipulative skills of producing a simple product.

Table 1. Lower Primary Syllabus Content

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Standard 5 – 7	
Topic	General Objectives
Needs and Wants	
Individual and household needs and wants Importance of production Resource and production	• Investigate the composition of individual and household needs and wants • Understand the importance of production in the satisfaction of needs and wants • Explore the relationship between resources and production
Satisfaction of needs and wants	• Understand the satisfaction of needs and wants
Design Process	
Design process	• Explore and apply basic principles of the design process
Technology	
Structures	• Apply the principles of structures in problem-solving
Mechanisms	• Apply the principles of the crank mechanism in problem-solving • Apply the principles of cam and follower mechanisms in problem-solving • Apply the principles of pulleys in problem-solving
Materials and Making Processes	
Craft materials	• Make informed decisions on the choice of craft materials
Measuring and marking out tools	• Apply techniques of measuring and marking out materials
Holding tools	• Use the principles of holding materials in place when working
Cutting and shaping tools	• Manipulate materials using cutting and shaping tools
Joining and forming tools	• Join materials using different methods
Finishing	• Finish materials using different methods
Entrepreneurial Skills	
The entrepreneur	• Understand the functions of the entrepreneur • Examine the problems faced by new entrepreneurs
Entrepreneurial skills	• Examine the entrepreneurial skills
Researching business	• Develop skills in research about business
Business	• Appreciate the role of business in providing for needs and wants of people
Productivity	• Understand the importance of productivity
Budgeting	• Develop skills of preparing a budget

Table 2. Upper Primary Syllabus Content

RESEARCH

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Research Method

An action research case study was conducted in Gaborone City primary schools. A workshop was organised to enable teachers to raise their concerns with regard to teaching CAPA in schools. The workshop lasted for four days. Action research is problem centred, participant centred and action oriented. It involves participants in diagnostic, active learning, problem-finding and problem-solving (Reason and Bradbury, 2006). This approach enables researchers and participants to collaborate in the diagnosis of a problem and in the development of a solution based on the diagnosis (Bryman, 2001). Creswell (2002) identified three main components of action research: ownership, change capacity and leadership. By using action research, teachers develop a sense of ownership of the ideas and the process of change. They tend to master the new practice and integrate formal and informal leadership.

The collection of data took place both during the formulation of the diagnosis and evaluation of the problem. The data included pictures, videotapes, charts and interviews. The Gaborone primary schools were all chosen because of their close proximity to the researchers and financial constraints. For each of the 29 primary schools, two teachers were sampled to participate in the CAPA workshop. That is senior teachers for practical subjects and those for sports and culture. The understanding was that these teachers would in turn pass on their new found expertise to colleagues in their respective schools.

Teachers were divided into five different groups using both cluster sampling and random sampling. The clustering process involved categorising teachers into Practical subjects, and sports and culture. Then from each category teachers were further randomly selected and placed into groups forming groups 1 to 5. The 4-day workshop was conducted on a rotational basis so that by the end of the fourth day all teachers should have attended one 2-hour session for lower primary and another for the upper primary for all CAPA modules. Each module had 12 participants. This number was manageable especially in assisting individual teachers with the hands-on activities. There were two facilitators for each CAPA module and each module chose the content to be covered in one of the two sessions. The facilitators were lecturers from the University of Botswana and two from Tlokweng and Lobatse Colleges of Education.

The workshop presentations were purposely divided into individual modules rather than an integrated approach so that participants could be given greater depth on the content of each module. Also a deliberate decision was made by the facilitators to build confidence in teachers in each module. The danger of exposing participants to a wide but shallow spectrum leaves teachers with less content and it becomes problematic if teachers are confronted with difficult questions from students.

For design and technology, the facilitators chose a topic on *'structures'* for the lower primary and the *'design process'* for the upper primary level. With regard to structures, participants were introduced to the following areas: definition, classes of structures, types of structures, beam designs and strengthening structures. At the end of each sub-topic, participants were given hands-on activities to do, for reinforcing what they have learnt e.g. sorting out given objects in terms of shell and frame structures and then classifying them in terms of natural and man-made structures, and experimenting with different beams in constructing bridges. After undertaking all these activities, participants were given a consolidation task on this topic whereby they had to design any structure of their choice using paper and masking tape only. The materials were purposely selected to demonstrate that there are a lot of resources teachers could use in their communities: both remote and urban areas, as they complained about lack of resources in schools.

Students at upper primary level are required to design products using problem solving approaches and it is important that they apply the principles of the design process in designing such products. Therefore, the design process was chosen for the aforementioned reason. Different stages of the design process were introduced to participants. The presentation was divided into these phases: (i) explaining each stage of the design process, (ii) giving examples of each stage and (iii) participants were also given an opportunity to apply the newly acquired knowledge to solve a given design problem (e.g. grandmother is always losing sewing needles due to failing eye sight). Participants were given the chance to go through all the stages of the design process and at some stages they worked in teams to instil in them a sense of co-operation, teamwork and brainstorming.

On the last day, all the five groups were given a consolidation task to integrate what they had learnt in different modules. All groups were given the theme of *'wedding'*. Participants were to link it to the relevant specific objectives in the syllabi. This task was important because CAPA is taught as a single subject in schools rather than as different modules. Teachers were also required to explore different ways of approaching the theme.

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CAPA Challenges Facing Teachers

During the initial development of the CAPA syllabus, teachers were passively involved and no initiatives were put in place to prepare them for the challenges of CAPA as a new subject in the curriculum. First, teachers had no competencies in any of the eight module areas forming CAPA except for the Curriculum Development Officers, subject advisers (Senior Education Officers from Secondary Education and In-service Education Officers) and Teacher Educators from Colleges of Education. Some of the Curriculum Development Officers and associates had studied the specific subject content areas to a Masters Degree level. Hence, some teachers had inferiority complexes and could not fully and effectively participate in the activities of curriculum development of CAPA. Second, the integration of the subjects posed a threat and challenge to teachers as they were the change agents in schools to implement the syllabus. While debating its design and development, teachers were also busy thinking and, tacitly critiquing and reflecting on the real classroom practice and situation. This therefore, stifled their level of thinking and amount of input they could make. Therefore, teachers adopted a wait and see approach and were expecting a systematic curriculum direction, provision of resources, and professional development by the Ministry of Education, in particular the Department of Teacher Training and Development. Teachers did not own the new initiative, and hence some ended-up sidelining the teaching of CAPA in schools.

Due to non-active participation of teachers in developing the CAPA syllabus, teachers at the workshop expressed the following challenges and these are expressed verbatim:
- (a) The syllabus content is heavily loaded.
- (b) The specific objectives of some modules are difficult to understand (e.g. music and design and technology).
- (c) There is lack of proper laboratories for different modules of CAPA.
- (d) Lack of teaching materials and resources (books, worksheets, tools, materials and equipment).
- (e) There is a need to impart the right skills at an early stage of the children's development hence the need to equip teachers with the appropriate skills.
- (f) Integration of CAPA is problematic.
- (g) Delay examining CAPA at Standard seven, that is at the primary school leaving examination level, until teachers have received proper in-service training.
- (h) Teachers are not teaching CAPA in some schools and some teachers teach it selectively. That is they teach the components they feel comfortable handling.
- (i) CAPA as a subject is too congested and there is a need to break these modules into different standalone subjects.
- (j) Currently, there are no in-service courses for CAPA.
- (k) There is a problem of how to assess CAPA.

The above are some of the reservations expressed by the 60 teachers who participated in this workshop.

Evidence from the literature (Barnes, 2005) indicates that changes in the technology curriculum have been successful only when initiated by classroom teachers. However, Kahn and Ullah (2008) give a broader view that a rich meaning-centred curriculum requires a close collaboration of all stakeholders in educational reform such as teachers, students, administrators, parents, researchers, business community, curriculum specialists and technology developers. In implementing any educational reforms, the attitudes of teachers determine the success or failure of any innovative curriculum. Teachers must agree with the underlying philosophy of the curriculum. Changing a teacher's philosophy requires their development which is a career long process. Givens (2000) argues that without teacher development there is no curriculum development and conversely, where a curriculum has changed, there has been teacher development. Good teachers never stop learning, growing, and searching for better ways to teach (Gehrke, 2006).

The challenges aforementioned pose a mammoth task to the Departments of Primary Education as over 800 schools in the country are facing the same problem and challenges. These challenges cannot be ignored and initiatives could be put in place to address all these issues. The pre-cursor workshop was conducted in order to respond to some of these challenges. Extensive in-service courses could therefore, be organised country-wide otherwise teachers will lose interest in the subject and failure to implement the new curriculum may jeopardise the future viability of the subject area. The well thought through Government initiative which is in line with international trends of providing sound primary education for a literate, numerate and technologically literate society may be stifled by lack of action: lack of in-service training, poor implementation and orientation processes as well as poor resources. In addition, the initiative that is moving towards addressing the vision 2016 could be frustrated. The document, *Vision 2016 Towards Prosperity For All* (2004) (referred to as Vision 2016) challenges Botswana to work towards seven broad dimensions: (a) an educated and informed nation, (b) a prosperous, productive and innovative nation, (c) a compassionate, just and caring nation, (d) a safe and secure nation, (e) an open,

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democratic and accountable nation, (f) a moral and tolerant nation and (g) a united and proud nation.

Participants Response to the Design and Technology Presentations

The purpose of conducting the design and technology session was to assist teachers to teach effectively topics they experienced difficulties in teaching in their respective schools. Participants realised that they use structures everyday and the only difference was the technical name given to such products or systems. They gave more examples of different structures found in rural areas which could be used to teach such topics in rural schools. Examples included calabash, clay pots, ant-hills and baskets.

The design process was the most challenging since it was new to participants. They enjoyed going through the application exercises they were given, such as formulating a design brief, specification, conducting research, sketching possible solutions and developing chosen solution. Since this was the first formal exercise which required participants to sketch their ideas, the task was a bit difficult due to lack of grounding in sketching skills. Most of the sketches were in two-dimensions. Participants were advised to use modelling materials to compensate for this inadequacy. As part of the integration approach to the subject, they were also encouraged to apply the sketching and drawing skills they learnt from the art and craft presentation. During these activities, it was difficult to get them to move to the next task because of the interest the

activities generated. Participants thought that they were the ones who will be doing all the work in the design process but it was clarified to them that they will act as facilitators. The design process is a learner-centred activity.

The open-ended design tasks, ability to work in teams and to critique, and general group presentations aroused participants' interests. The learning experiences participants went through enabled them to be reflective of their day-to-day classroom practices, explore further ways of teaching the subject and the relevance of the resources used. It was the pedagogical approaches used: learner-centred activities, practical activities and real life nature of the workshop activities that enabled teachers to be very active. Most teachers left the workshop eager to enter their classrooms and to implement what they had learnt.

Integration Exercise

When CAPA was introduced in schools, the teaching approach recommended to teachers was supposed to be integrative. Since teachers lacked background in this approach, they taught each module separately thus defeating the initial aim of the subject. Having been introduced to all CAPA modules, the challenge was to try and integrate the teaching of these modules. This was done by giving participants the theme *'wedding'* to integrate it in all the modules. All the five groups linked the theme to the specific objectives in the syllabus. For example, in Music participants sung traditional songs for the wedding, choreography and performed ululations. In Physical Education they performed warm-up exercises,

Figure 1. Group 1 integration task

movements, socialisation and traditional dancing. Participants indicated that Art and Craft could be used in making patterns for decorations, printing wedding cards and decorative lettering in the cake. For Design and Technology, participants stated that it could be used to conduct research on wedding to inform what should be done. Students can design invitation cards, design and decorate the interior of the wedding place, design rings, use environmental friendly materials and design traditional ear rings. For Home Economics, participants expressed that it could be used to design and make the wedding attire, cake, decorate fabrics, cook wedding food

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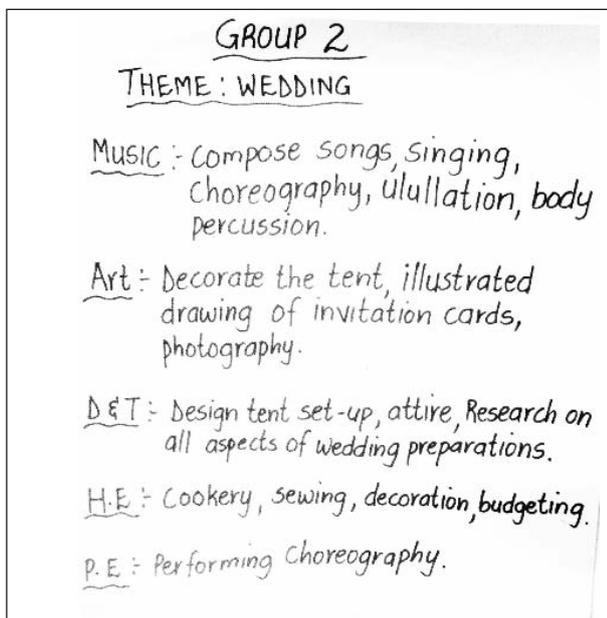

Figure 2. Group 2 integration task

using varies cooking methods and it could also assist in coming up with a balanced diet. Lastly, Business Studies could assist in drawing up a budget for the occasion, source quotations from varies catering companies, assist in record keeping and explore ways of opening up a wedding consultancy company. *Figures 1 and 2* show some of the examples produced by participants during the integration exercise.

The nature of the theme: open-ended and the overarching nature, provoked teachers to be creative; thinking about possible solutions of the activities of the theme, planning their making and continually evaluating the activities and contributions of their group members. Teachers were very actively involved, exchanging views, drawing ideas and modelling the outcome before settling for their best answers for presentations. Most teachers' level of awareness was raised through the workshop activities throughout the week and they all left the workshop feeling enriched.

Workshop Evaluation by Participants
At the end of the workshop, participants were given the opportunity to evaluate the workshop in terms of relevance, generation of interest, and performance by facilitators, building confidence and proposing future recommendations. The evaluation was based on the Likert scale and participants indicated their levels of agreement or disagreement on the statements given in the evaluation sheet. This exercise was done by 47 participants who returned the evaluation sheets.

The results indicate that 77% of respondents were interested in teaching CAPA prior to attending the workshop. This is supported by 87% of respondents who indicated that the topics covered during the workshop were relevant to their teaching and professional development. About 64% of participants pointed out that they were familiar with the topics covered in CAPA. The material covered was too difficult for the participants as indicated by 68% of respondents. This is due to the fact that some of the topics were quite new to the participants since they neither covered them during their initial teacher training nor in any in-service course. This level of difficulty made some respondents (87%) feel that they still need more help and practice in order for them to use the technology or techniques learnt during the workshop. This calls for follow-up workshops on topics which will be identified by participants as problem areas.

On a positive note, 94% of the respondents indicated that the content covered during the workshop has enabled them to gain more confidence to experiment and teach different CAPA modules. This confidence need to be maintained and boosted by conducting follow-up workshops. Moreover, 98% of respondents pointed out that the workshop facilitators did a good job in terms of conducting the workshop. The same percentage felt the workshop was well organised and it was valuable to them. Finally, 98% of respondents indicated that they would recommend such a workshop to their colleagues since it greatly contributes to their professional development.

Conclusion
The workshop came at the right time when teachers have experienced first hand problems in teaching CAPA and they were provided with tools and skills to overcome these problems. The consolidation exercise equipped teachers with the skills on how they can integrate the different CAPA modules in their teaching. At the end of the workshop, participants were expected to apply the techniques and skills they had learnt to make teaching and learning CAPA enjoyable. As Woolfolk (2001) asserts, learners have different learning preferences, and hence learning from doing can make students fully enjoy the subject and raise their participation.

The top-down curriculum approach has a lot of weaknesses because it lacks teachers' ownership. Any curriculum initiative should be owned by teachers and it appears that the primary school teachers have no ownership of the CAPA programme. Teachers felt CAPA has been imposed on them and the Teacher Training and Development Department in the Ministry of Education and

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Skills Development, which is tasked with running in-service courses, is not effective in carrying out its mandate. This has resulted in teachers not teaching CAPA at all or teaching modules they are comfortable handling. Some of the challenges teachers are facing are due to lack of proper orientation on how to teach CAPA. The Teacher Training Development Department will need to work closely with teachers who participated at the CAPA workshop because they are going to act as facilitators at their respective schools and cluster to run workshops for their colleagues.

This research has demonstrated that teachers are facing challenges when attempting to teach CAPA at the primary school level. In terms of background training, teachers lack training in all components of the modules of the CAPA programme. The main problem is that the primary school teachers who may have had little training in some aspects of CAPA may be unaware of how to make the most of learning opportunities by linking the broad CAPA modules together. Lack of resources also causes some limitations in the teaching of the programme.

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