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Developing Learner-Centered Approach Instructional Materials St.Mary's University College's Experience

Desalegn Sherkabu
Ethiopian Civil Service College; Institute of Distance Education
sherkabu@yahoo.co.nz

Abstract

This study aimed at exploring the experience of St. Mary's University College TVET Programmes in developing Learner-Centered Instructional Materials. Data were collected using interview and focus group discussion. Five material developers and a focus group of 8 trainees were selected using purposive sampling technique. Seven sample course materials were observed using the same method. Data were analyzed using a strategy called matrix analysis. It was found that the materials stipulated broad aims that can meaningfully address the rationale of particular bodies of knowledge, attitudes and skills included. The course materials have a clearly set bullet-list of detailed unit objectives. The materials are made up of well set notes which can be made more focused to Learners' future work by modeling the Relevance strategy in the TVET curriculum guideline. The educationally significant exercises can be made more and more valid by encouraging application of theoretical knowledge. The series of pair, small and large group presentations as well as occasional individual presentations of Learners' works and the resultant continuous assessment of Learners' progress reflects the Modern Learner Centered Approach. The materials are broken down into units and sections. Concepts, theories and principles are logically sequenced from general to specific and from simple to complex. A good deal of precision can be achieved by plainly highlighting forthcoming points under discussion. The newness of the constructivist pedagogy to instructional material developers and the relative dependence on individual efforts of the latter are problems observed. Thus, it was recommended that St. Mary's Uni-College should facilitate a review of the materials. Instructors in the Uni-College need to carry out an in-depth analysis on the materials under use for further step up in the quality of their training provision through up coming review of the materials. The validity, significance, comprehensiveness and relevance of contents shall be the focus of both investigations by instructors and review activity. The learning opportunities like the apprenticeship plan shall be made part and parcel of not only the applied but also the written curricula for best implementation.

1. Introduction

1.1. Background of the Study

It is true that a nation achieves development only on the condition that it provides quality educational provision to its citizens. The desired access to quality education, as one burning issue in the education system of the country, has been an issue of serious concern for the last ten years.

At this point, it can be said that the Ministry of Education (MoE) had so far worked closely with the Higher Education Institutes of the Nation to bring the desired quality of training to technical and vocational education and training programmes of colleges. However, quality educational provision in Ethiopia, including St Mary's University College is under question. On one hand, not meeting this issue of quality poses not only a threat to our much longed for fast growth but also it is damaging to resources at hand.

On the other, quality of education is really a difficult issue to measure. This; however, should not mean that we cannot speak about the issue. Of course quality of education can be examined by looking into a set of quality indicators. A good indicator of quality instructional provision in college education is the presence and absence of well-prepared texts. The presence and absence of the said materials reminds us of the meaning of the concept of learning in formal education.

Learning can also be defined as an active process in which learners construct meanings as they interact with the course materials, their classmates and teachers (The Open University 2002). If the above definition, reflecting the constructivist's concept of knowledge, is to be met in our higher education programs, instructional materials need to be prepared in line with modern approaches of an instructional material development learner-centered approach. For advocates of the constructivist theory originated by Lev Vygotsky like J. S. Bruner and George Miller, learner-centered instructional material development should

follow the latter's popular idea of advance organizer- the intent of which is a bit-by-bit presentation of a body of text leading to a meaningful whole in the end (Bruner 2005).

St Mary's University College has been developing and using instructional materials for its students and for its TVET programs for the last few years. The experience is worth considering in that the institution is one of the leading private University colleges in the country. The point here is whether the TVET course materials under reference are really prepared in line with the requirements of learner centered approach (LCA) instructional material preparation to benefit learners the most. This is where the need for research lies.

1.2. Statement of the Problem

There is no question that the quality of educational provision in our higher education institutions MoE (1994), including St. Mary's University College, needs improvement. One way of bringing improved educational quality is through the application of important suggestions from research findings in the area. In other words, we need to continuously probe the issue to meet the desired quality. This particular study targets to investigate the efforts made by St. Mary's University College to develop its instructional materials as per the standard of the MoE curricula. To this effect, the investigator has set the following basic questions:

1. Do St. Mary's University College course material objectives clearly naddress the needs of learners?
2. Are the methods of the materials under reference presented in a way that they can engage trainees?
3. Do the course materials under reference show clear organization of the body of text?
4. Do the course materials under reference employ L-C-A assessment strategies?

5. What are the major problems that St. Mary's University College encountered in the course material development process?
6. What is the reaction of St. Mary's University College trainees towards their course materials?
7. What is the reaction of St. Mary's University College course material developers towards the course materials?

Purpose of the Study

This study aims to examine the experience of St Mary's University College in developing Learner-Centered instructional materials. It does so because in case the experiences deserve praise, all other colleges offering TVET will get an important basis for improving the quality of their educational provision. In this regard, if the experience shows letdown, the study will point out this and suggest solutions.

1.4. Significance of the Study

The full analysis of this paper is believed to:

- Provide the university college under reference with a genuine appraisal deserving of its efforts;
- Provide educators and other concerned bodies with evaluative information on the quality of educational materials currently in use in the university college;
- Provide all other institutes in the country with opportunities of sharing experience in instructional material preparation;
- Provide a related review of literature in the area of instructional materials preparation for TVET programs; and
- Initiate other researchers to undertake further research in the area.

1.5. Scope of the Study

This study focuses on examining the experience of St. Mary's University College in developing learner-centered instructional materials. Although the experience can have implications to all other related Institutions in the nation, the findings and conclusions that will be reached will only be directly applicable to St. Mary's University College.

1.6. Limitations of the Study

This study, if not for time constraint, would have been better informative had it also examined the material development processes in other private and public colleges and universities.

5.2. Definitions of terms

Reaction: what trainers and trainees feel about and in fact how much they took from the course materials which are important, demanding, attractive or appealing, etc.

Learner Centered approach: Varieties of modern instructional methods and strategies that provide learners with relatively better opportunities through direct involvement and through giving them much of the responsibility of learning to themselves rather than the instructor.

2. Review of Related Literature

In this section of the paper, the writer summarizes the pedagogical principles that underlie good instructional materials that are prepared inline with the LCA.

2.1. Pedagogical principles

Before discussing what the major pedagogical principles that course developers need to know, Pedagogy is the science of teaching. It came to be a science through time by taking several principles that contribute to effective learning. It took these principles from the field that education built itself upon. These include psychology, philosophy and sociology. These principles are mainly adapted from Aggarwal (1996) and manuals on instructional principles and methods by the researcher Desalegn (2005). However for the most part the writer owes these compilations to personal reading of books on educational Psychology and Pedagogy of the Oppressed by the famous Brazilian Professor, the late Paulo Freire. Teaching learning principles have implications for selecting approaches to curriculum development, syllabus design, teaching and learning, testing and assessment as well as on the how of the organization of teaching (Aggarwal 1994). Thus teacher educators and those who are involved in instructional material productions should closely watch these principles at all times. This is because the principles provide general rules of shaping teaching - learning processes, investigating methods and materials of instruction also serve as a basis for methodology, help to facilitate and ensure effective learning, Serve as a basic guide for the teacher to plan and organize contents, select and apply appropriate methods and materials of instruction, etc., and Serve all levels of school instruction.

2.2. LCA and Course Material Development

According to Burke and Carey (1994), a highly learner-centered instructional material is one presenting a short unit of learning which could be linked to its other parts to form a coherent program, and that each part should have a clearly defined aims and expected outcomes that should specify content in terms of knowledge, skills and understanding should refer to appropriate teaching and learning styles and explain the methods of

Table 1: Common Pedagogical principles

Principles	Theoretical basis	Implication for Teaching
1. The principle of linking instruction with life	-students learn more when they understand & see the relevance of their subject in their day to day life	-Teachers should begin from the interest and maturity level and academic background of Students. -Create situations and give examples relating to the local environment -Begin from what the students know -Use real examples, -Encourage students to explore their environment
2. The principle of systematic instruction	-the arrangement and organization of the contents and activity of instruction in appropriate learning order to suit pupils understanding is shown.	-Necessary for effective teaching -Learning -Well organized materials are easily understood -Students learn better if the presentation moves from heading to sub- heading
3. The principles of integration	Pupils better learn when subjects are presented integrated or at least when conscious connections between them	-Follow teaching steps -Use logical well organized presentation with clear language & examples -Encourage students to use concepts and skills that they learned in a subject to study their other subjects.
4. The principle of comprehensibility of instruction	-Students bring complete behavioral change only when they develop the combination of all the three domains of knowledge	-Teachers should teach and test all the three parts of knowledge
5. The principle of motivation in learning	-Once students are motivated i.e. their interest is aroused, they are willing to concentrate & work	-Teachers should do their best to constantly motivate their students through a careful planning and preparation drawn from the nature of the learners, the subject matter teaching materials, strategies and the like.
6. The principle of activity learning	-Students must participate in all stages and steps of teaching	-Encourage active involvement and participation of learners especially in learning such skills as maths, writing, grammar, drawing etc
7. The principle of individual difference	-For teaching to be effective it must be adapted to the individual differences of children	-Teachers should understand the Ss' progress and give diagnosis & use varieties of methods & visual aids to interest the students.
8. The principle of stabilization	-Students knowledge attitude and skills could be made last long through bringing them back to their minds by systematic repetition, summarizing, exercising etc.	-Teachers should in any of the various ways stabilize their presentation to guarantee the success of student learning.

assessment to be used. In verifying the above definition by Burke and Carey, Jenkins and Walker (1994:19) wrote to say:

“... The basic principles of ... courses are well known and established: they involve the divisions of the curriculum into limited units or ... of learning which are then assessed at the end of that unit, with the student building up a degree or award through such learning being credited...”

From the above point, it is clear that the focus is on the need to present a body of knowledge little by little and with frequent follow up in the form of formative evaluation. This being the major point, the approach is also advantageous in many other ways.

Table2: LC Vs Traditional Approach course materials

Modern/LCA/ course materials	Traditional course materials
Two-way communication	One-way communication
Learner is actively involved	Learner is passive
Employs advance organizers	Interrelations little shown
Learner is guided	Self-directed learning
Dialogue	Lecture
Friendly and encouraging	Impersonal
Learner applies new knowledge and skills	Little application of knowledge and skills
Full of activities and exercises	Activities only at the end of chapters
Content is divided into small chunks	Content in chapters or large blocks
Assignment for marking	No assignment
Feedback provided on learner's progress	No feedback

The ability of materials to promote interdisciplinary connections through combinations of others in the series and dedicated interdisciplinary units of study is another. For example, according to walker (1994), when studying using the modular approach, the learner is not usually made to re-attend a course that he had either studied it in another program or that he had experienced somewhere else. Students can also be supplied with modules that stress the practical applications of study through case study, project work and work-experience,

or modules which center on transferable skills such as information technology, financial management, and modern foreign languages (Williams and Horbins 1994).

The next few sub sections will be a brief discussion of using clear and meaningful statement of aims, structuring based on logical manner, using advance organizers, encouraging deep rather than superficial learning, and assessment strategies.

2.2.1. Using Clear and Meaningful Statement of Aims

At no point in the learning process should students be unclear as to what they have achieved or how this will contribute towards goals to be achieved. According to Ausubel (1968), the provision of a broad frame work along the lines indicated will in fact facilitate the assimilation of the more detailed learning to follow with the framework becoming an integral part of the cognitive structure.

Similarly behaviorist theory (Tyler, 1949, Mager 1962; Popham, 1969) suggests that the goals to be achieved should be clearly identified. Students should also be provided with help and guidance to achieve their goals, and their achievements should gain appropriate recognition. Students need to see that they are making progress and need to feel that the goals ahead are achievable if they are to make further progress.

For some writers like, Melton (2002) statement of aims that module writers need to write at the beginning of each unit are broad statements of aims advising the learners what the expected competence are. He suggests that only broad statement of aims might be useful. On the other hand, for the behaviorists specific objectives are more effective in facilitating learning when placed close to a study session. Students can determine whether they have achieved these. Still according to Walker 1994 LCA course materials must have explicit aims, and must specify intended outcomes.

2.2.2. Structuring based on logical manner

This is about creating a logical framework of the instructional material under development by only including the various features that facilitate learning. These include the development of introduction to the module and the units, the presentation of content in a stimulating and well-structured manner (with the help of activities, projects, case studies, diagrams, illustrations, etc.), and the addition of a conclusion with a summary and checklist. In addressing issues of organization, the new curriculum of the MoE, year 1-3 programs are referred to be middle level TVET programs and it is suggested if organized by occupation titles, duties and tasks. Each occupation then had its tasks and duties included in major, supportive and common courses. For example, an occupational title: beginner accountant for year one TVET trainees aims at training students who have completed general secondary education (Grade 10) as Beginner Accountant in the Middle level TVET Program.

The modules for major courses are designed in such a way that the trainee will spend 30% of the allotted time in gaining theoretical knowledge and 70% in doing practical works, which will be given during the one year training program.

For each job area, recommended project work and apprenticeship training time has been allotted in order to help the trainees improve their practical skill. In general, trainees will spend most of their school time in practical work rather than on theoretical education.

The main courses, there are supportive courses and common courses, which are more of theoretical knowledge and designed to help the trainees follow the training or meet the exit profile, as far as the knowledge aspect of the training is concerned.

After completing the year one training program as Beginner Accountants, trainees are expected to create their own enterprises or be employed in any establishment in the country. Those who meet the requirements might have the possibility to continue their training in year two, and then year three TVET programme, which are designed to produce Accounting Clerks and Junior Accountants respectively. During the continuing two years, the following additional main courses will be given:

Perhaps, it is questionable if the curriculum itself need have to stop by limiting students to three year training.

Employing advance organizers provides ample opportunities to the writer in forming both vertical and horizontal integration among the body of text under presentation. It does this by helping the learner to identify topics to be addressed and the relationships between them. The intent is to provide students with a meaningful and well-organized framework for the assimilation of more detailed knowledge. With the absence of this, students would only be introduced to concepts after concepts without knowing where this is taking them or why they are studying the concepts concerned. According to Walker 1994 learner centered methodology (LCM) course materials must specify (where appropriate, any prior learning which is required).

2.2.3. LCM encouraging deep rather than superficial learning

According to Walker (1994), LCM course materials must make clear the methods of learning and the context in which learning activities take place; should provide for differentiated learning experience; and may be subject-specific, occupation specific, cross-curricular, or combination of these. What is required particularly in college education is what is called a “deep approach” to learning that is where students concentrate more on understanding the overall messages that is being conveyed and assumptions on which it is based Marton and Salijo (1976) and Temechegn (2004). According to these writers, self

instructing learners commonly adopt a surface approach to learning – tending to concentrate on memorizing facts and detailed information without reflecting on the underlining assumptions and arguments. The Open University of United Kingdom (UK OU) has made considerable efforts to encourage a deeper approach to learning through the building of activities and projects and courses (Melton 2002).

However, this writer strongly argues on the where and how to use activities. Accordingly, in recommending the use of activities, and projects to encourage deep learning, it is recognized that students often have quite distinct preferences as to how they learn. Some may prefer reading text, watching TV, or small group discussions etc. This reminds professional teachers about different learning styles. Whereas there are students who learn by doing more effectively, there are those who prefer listening to reading a body of text or important books for quick mastery of a body of knowledge. Materials can be activity based. However, it is also recognized that students can develop new learning styles (Bargar and Hoover, 1984; Hyman and Rosoff, 1984; Joyce, 1984) thereby increasing the variety of ways in which they might learn, but where students are expected to develop new ways of learning they need to be given appropriate guidance and support.

2.2.4. Assessment in learner centered (LC) Approach

In relation to course material preparation for college education, Walker (1994) noted that assessment in using the LC Approach: should be in relation to outcomes made explicit to students, staff and employers, should be based upon a range of strategies through which a student can demonstrate what he/she knows, understands or can do, should be based up on a range of evidence appropriate to a given activity, should include review and reflection, and lead to the identification of future goals and targets, should facilitate the formative

recording of achievement; should be supported by appropriate quality assurance; and should enable students to gain credits for their attainments.

On the other hand, the four main contexts through which the modular approach can enhance learners' capability are: the extent to which the students use the assessment to improve the quality of future assignments the extent to which the assignment is not focusing narrowly on one aspect of performance (say, for example, on simple recall of facts) the extent to which assignments are fair and relevant and the presence and absence of an assessment framework to ensure the coherence and progress in students' learning (Leask 1994). He further noted that students identify the assessments in modules that are in the middle of program (formative), positively for they keep them on track by clearly showing their progress. In the modular approach, learners like feedback close to activities and questions for different reasons. For example, they are said to create the opportunities for learners to investigate and thus consolidate their knowledge. Some of the common assessment strategies in the LCA are given by Leask (1994) as: production of resource packs; essay (usually on problematic education issues); teaching experience plans and evaluation; laboratory manual completion; staff and peer assessment of seminar work; display (using it or visual aids); presentation of a sequence dance or gym; formal examination (with a variety of types of questions); short tests; analysis of case studies; group displays; test with viva; seminar notes; logs or diaries; seen questions; investigations practical assessment; oral presentations.

Not common as some of the above methods sound in the Ethiopian higher education culture, others are really convincing and have been used frequently too. For example, essay or composition in language classes and group presentation and formal examinations are common assessment strategies. What we learn from the above lists of strategies other than the need for variety is that activities or questions that are well built on case or situation

analysis, based on visits, promote learning through investigations that are to be compiled by learners.

If learners are to probe deeply into the issues involved in their study, instructional materials need activities and projects to engage learners in the process of learning. Projects tend to be much more open-ended than activities with students being given considerable freedom to determine their own goals and the means of achieving them. However, even in projects where students are given a considerable freedom to determine the nature of their assignments, the process can be carefully structured. In this way, for example, students are expected to develop their thinking in stages-obtaining feedback even on their initial outline plans.

3. Methodology and Design Of The Study

In this section the methodology, subjects, sampling techniques, instruments of data gathering, and methods of data analyses employed in the studies are presented.

3.1 Methodology of the Study

This qualitative descriptive study attempts to examine the endeavors of modular instructional material preparation in St. Mary's University College. The study investigated the modular approach being implemented by the university college against sound Pedagogical principles. Thus, this study attempts to evaluate instructional materials from three perspectives: trainees (i.e. as important determinants of a program), trainers (i.e. instructors who participated in the module development process), and the materials themselves (i.e. the modules under close examination of the researcher). Accordingly, data were collected using interview and focus group discussion. A focus group discussion was held with five material developers and 8 trainees who were selected using accessibility-

sampling technique. Seven sample course materials were observed using the same method. The collected data were finally analyzed using qualitative matrix analysis.

3.2. Sampling of Subjects

The subject modular materials under investigation were chosen on the basis of purposive and accessible sampling technique. Modules that the librarians presented to the researcher as those developed as per the TVET curricula requirements of the MoE were taken for close investigation. This is because the materials are made available to students only through the library's immediate referencing service. A sample module was observed from each of the eight departments below. In brief, the sample informants listed in the table below include eight trainees. These eight trainees of the 10 + 3 diploma program were randomly chosen from 2nd year trainees.

Table 3: Sample of Course materials in their types

Dep't	Course title	Course Division	Further Detail
Law	Law of Contracts	Main course	Business Year 1: Banking and
IT	Multimedia and Virtual Reality Modeling with Authoware	Main	Business Year 1: IT Y1
Management	Introduction to Management Accounting	Main course	Business Year 2: Accounting Year 2
Management	Introduction to Marketing	Supportive	Business Year 2: Banking and
Marketing Management	Entrepreneurship	Common	All fields
Cross Department	Civic and ethical education: MI 10+3	Common	All fields
IT	Basics of Data Structure and Algorithm	Supportive	Business Year 3: IT Y3

3.3. Instruments of Data Gathering

The data gathering instruments used were interviews and observation checklist.

3.3.1. The Interviews

The interviews are prepared for the material developer trainers and the trainees. These two sets of interviews are attached. See Appendix A and B.

3.3.2. The Observation Checklist

The checklist indicated in annex D is just used for checking whether the basic principles of modular instructional materials have been met in the modules that St. Mary's University College developed. The points included in the checklist are taken from a set of principles for examining a modular approach to the curriculum. According to Walker (1994), in 1992, the modular information network produced the principles after its decades of experience over the modular approach for higher education.

Methods of Data Analysis

This evaluative study has employed a qualitative description for both an in-depth treatment of issues discussed in the study. This qualitative description was used to analyze data, such as the researcher notes from focus group discussions with trainees, and data from open-ended interviews with trainers. Accordingly, the study followed an analytical approach of describing, interpreting, evaluating or appraising. Such matrix analysis was chosen for this study because it was suggested as an important strategy for reducing a large amount of qualitative raw data to manageable size for discussion (Goetz and Lecompte, 1994 in Savenye 1994; and Averill 2002).

Here the researcher used his own critical reflection and thematic and matrix analysis. A matrix is defined as a set of terms arranged in rows and columns that within which, or within and from which, something originates, takes form or develops (Agnes, 2000 as cited in Averill, 2002). The qualitative descriptive matrix in this study is used to display categorized data in individual cells, just to observe what appears.

4. Presentations and Analysis of the Data

This part of the paper treats presentation and analysis of the data gathered from trainees, trainers (module writers), and the researcher's critical reflection on sample modules in St. Mary's University College.

4.1. Presentation and Analysis of the Response Obtained from Interviews, from Focus Group discussion, and from the Researcher's Critical Reflection

In this section the researcher used thematic and matrix analysis along with his critical reflection. The data-planning matrix below was used to display the research questions along the row headings, with a set of equivalent questions along the column headings.

Presentation of researcher's notes on the instructional objectives

Do St. Mary's University colleges' course materials have clear objectives? Are there course, module and unit objectives in the materials? How appropriate are these when seen from an instructional point of view? Course objectives are stated in the course materials. For example, the course objectives for the course entrepreneurship go as follows. Upon successful completion of this course:

- Trainees of TVET will have to be aware of entrepreneurship and self employment options as a choice for their future career;

- Trainees will have to develop positive attitude towards entrepreneurship and self employment;
- They will develop entrepreneurial competencies that enable them to create venture and job opportunities for others also;
- They will be motivated to identify viable business ideas of their own;
- They will develop their own business plan for selected specific projects.

The objectives are well distributed across the knowledge domains. The emphasis given to the traditionally less treated knowledge domains-attitude and skills is encouraging.

Table 4: Summary tables on qualities of course and instructional objectives

Course title	Course objectives	Chapter/unit/lesson objectives	Comment
Law of Contracts	Well stated	Well stated	But should not be repetitive
Introduction to Marketing		Well stated	
Basics of Data Structure and Algorithm	Interesting		

The second groups of examples are the objectives for the course Introduction to Marketing. They have been well stated in specific and measurable behavioral terms as follows. At the end of this chapter, the trainees will be able to:

- Define marketing properly;
- Identify the core concepts of marketing;
- Point out the importance of marketing precisely;
- Identify the various demand states and the relative marketing tasks;
- Analyze marketing in respect to its various environmental factors.

4.1.2. Presentation of Researcher’s notes on course contents and methods

Are the course contents and methods of the materials under reference presented in a way that they can engage trainees? Are there enough activities in the newly developed instructional materials? The activity method of teaching is common in the following instances.

Table 4.1: Summary table on inclusion of activities

Course title	Activities on page	Review questions	Comments
Law of Contracts	Pages: 4, 7, 16,24,29,41,43,58,62.		
Multimedia and Virtual Reality Modeling with Authware	Missing	Interesting ones at the end of each unit.	The presentation is more a series of text.
Introduction to Management Accounting	Activity 3 Chapter 1 Page 17, Why...? Give examples... Activity 3, chapter 2 Page 32: Classifying given data, Activity 4 page 36: Preparing an income statement, Activities 5-10: Compute....		
Introduction to Marketing	Almost none and this is worrying. Only on page 183		Rich in in-the-middle of text questions.
Entrepreneurship	Pages 44, 91 and 127.		Wonderful ones
Civic and ethical education: MI 10+3	Group and individual exercises on pages:30,32,50,51,58,61,63,79,81,85,89. Class discussion Page 34,37, 43.		
Basics of Data Structure and Algorithm	Application questions on the theories presented on pages:29-32, 51-52, 60, etc.		

4.1.3. Presentation of researcher’s notes on the clarity and organization of the body of text

How are the materials organized? Do the course materials under reference show clear organization of the body of the text? Are the activities in the newly developed instructional materials educationally significant?

Table 4.2: Summary table on inclusion of in-the-middle of text questions

Course title	Activities on page
Law of Contracts	Pages: 14, 19, 30, 31, 40, 46, 51, 54, 64, 65, 66.
Civic and ethical education: MI 10+3	Almost on every page

Table 4.3: Summary table on logical breakdown of contents

Course title		Comments
Multimedia and Virtual Reality Modeling with Authware	Pictures are used on pages: 38-39, 41, 43. Usage of heading is good.	The introduction at the beginning is not clearly shown if it is for chapter unit or... References are all internet.
Introduction to Management Accounting	Chapters, sections, sub sections, references, prose texts, bullet-listed texts, icons for activities and indices as well as	
Civic and ethical education: MI	Units, sections, subsections, in-text-questions, maps, but no glossary, no reference.	
Basics of Data Structure and Algorithm	Diagrams, illustrations, charts and tables.	Summaries, glossaries and references are missing.

4.1.4. Presentation of Researcher’s notes on the appropriateness of the assessment strategies

What assessment techniques are involved in the materials prepared? Are these in line with the LCM? How successfully are the assessment strategies being used by instructors? How frequently are learners being assessed?

Table 4.4: Summary table on assessment techniques involved

Course title	Assessment	Evaluation
Law of Contracts	In the middle of Text Questions; Self assessment questions	Final exam for the in school training Project
Multimedia and Virtual Reality Modeling with Authoware	Interesting review questions	Final exam for on the in school training Project Apprenticeship
Civic and ethical education: MI 10+3	ITQs Review questions Pages:28,48,69-72	Final exam for on the in school training Project Apprenticeship
Basics of Data Structure and Algorithm	ITQs Review questions	Final exam for on the in school training Project Apprenticeship

Students are evaluated using individual and group project works and final examination. They are also evaluated by their apprenticeship training host institutions. Teachers have grave doubts on the validity and reliability of apprenticeship marks of trainees filled by host institutions. The reason is that trainees have been found to receive highly inflated marks where almost every student scores the highest possible. Students also complain that whereas those who were sent to certain institutions score highest marks from apprenticeship, others failed to score high marks and that makes the evaluation unfair and

invalid. Students also complain on both the unreliability and invalid nature of the grading scheme of the apprenticeship program. This would be worth considering especially when seen from the problem of the actual apprenticeship tasks given to students as compared with its theoretical purpose.

Presentation of Researcher's Notes on the Challenges that St. Mary's University College Course Material Development Process Faced

What major problems did St. Mary's University College course material developers encounter? What mechanisms did you use to solve the problems? What related training did you receive to text book development? Who worked with you in developing the modules? An interview made to individual teachers indicated that teachers believe the materials to be very good. They express the qualities of the materials in terms of points like, simple English language, and proper level of demand that they pose to learners.

4.1.6. Presentation of Researcher's Notes on Trainees' Reaction towards the Course Materials

What is the reaction of St Mary's University College trainees towards their course materials? What things do you St Mary's University College trainees want to change if you are to rewrite the same materials? During the focus group discussion, students have raised the following points, that the classroom instruction provision is far better than that in other colleges in the country; that the college arranges visits and educational tours; that either the university college facilitates apprenticeship or students themselves look for alternatives; that apprenticeship and educational visits fail to meet their purpose; that the university college should arrange discussion forums with students so that they can address their problems like apprenticeship service and lack of sufficient play ground areas for students during their free time.

According to top management member of the institute, following the TVET curricula had been difficult because of the resistance from teachers in those other than the Secretarial Science Department. According to the same source the university college had even taken the initiative and prepared the HRM TVET program. Its representatives had worked closely with MoE throughout the TVET Curricula presentations. They had raised several questions on workshops-questions relating the need for conducting formal needs assessment and if there is a room to allow 10 + 3 graduates to join degree programmes. Absence of proper answers to these questions and criticisms over the TVET curricula caused a loss of confidence by the University College in the sustainability of the TVET program. It had already prepared new texts before it was told to strictly implement the TVET curricula. This had a cost implication and thus it did not write new texts.

On the other hand, the sample modules front cover-page had a note “Prepared as per TVET curricula of MoE.” However, the materials actually followed the old trend of preparing College level supplementary materials. As a result, major area courses couldn’t indicate the type of Occupation and Job corresponding to the particular course title. It is this that could have led towards making the contents highly relevant by way of breaking the course into self-contained modules for the trainings during each of the three years.

5. Summary, Conclusion and Recommendations

5.1. Summary of the Major Findings of the Study

This section of the paper tries to summarize the major findings of the study. The modules in use by the TVET course materials of the university college had clearly set objectives for the course material, for modules and units. It was found that the materials stipulated broad aims that can meaningfully address the rationale of particular bodies of knowledge, attitudes and skills under offer to the trainees. The course materials have a clearly set bullet-list of detailed unit objectives that address the learners.

The materials are made up of well set notes and educationally significant exercises which can be made more and more valid by encouraging application of theoretical knowledge. For example, they can be made more focused to trainees' future work by following the TVET curriculum guideline. The series of pair, small and large group presentations as well as occasional individual presentations of trainees' works and the resultant continuous assessment of trainees' progress reflects the Modern Learner Centered Approach.

The materials are broken down into units and sections. Concepts, theories and principles are logically sequenced from general to specific and from simple to complex. A good deal of precision can be achieved by plainly highlighting forthcoming points under discussion.

The series of individual and group assignments, the project work, and the final exam along with the apprenticeship marking system coincides with the requirements of LCA.

The little confidence that the university college had to the TVET curricula that resulted from the rumors and certain findings contrary to it had been among the living challenges of the university college in relation to efforts of stepping up the qualities of the course materials.

Students think that they find education in the university college enjoyable except that apprenticeship programs relate little to the theory thought and that the evaluation is discouraging. They also comment that the university college had no play grounds for youth.

The newness of the constructivist pedagogy to instructional material developers and relative dependence on individual efforts are problems that course developers note

Conclusion

This paper has attempted to explore the experience in developing LCA Instructional Materials of St. Mary's university college TVET Programs. Based on the thorough analysis made on the information collected, the early experience of employing LCA of material preparation by the university college is worthy of appreciation. The materials which were prepared even before the coming into force of the TVET curricula showed a good deal of effort towards making learners at the center of the lessons. The qualities of objectives formulated the flow of the contents, the varieties of LCA and assessment strategies are all encouraging. Up coming review activities on the materials can be geared towards further stepping up of the relevance and validity of contents by employing the good lessons from the TVET curricula of MoE.

Recommendations

Now that time had come, literatures were reviewed, data were collected and analyses were made. The preceding sections were on the findings obtained and conclusion reached. The suggestions and recommendations here in below.

St. Mary's University College should facilitate a review of the materials so that the well-stated objectives can even be more fitting by taking the good lessons of relevance and thus validity from the TVET curricula.

St. Mary's University College should keep on producing course materials that employ varieties of LCA.

St. Mary's University College should keep on producing course materials that had a logical sequence that encourage learners.

The university college should make efforts towards interrelate the apprenticeship learning opportunities to the lessons in the material and in fact towards the follow up of the implementation.

The university college students have an amazing level of appreciation to their university college; they want it to facilitate extra curricula activities for learners by getting a playing ground.

Course developers of the university college need to carry out an in-depth analysis on the materials under use for further step up in the quality of their training provision through up coming review of the materials by close comparison of them with the TVET curricula. The validity, significance, comprehensiveness and relevance of contents shall be the focus of both investigations by instructors and the review activity

The university college while conducting further review activities should facilitate conditions in which course material preparation be team works.

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