Academic Staff's Views and Practices of Modular Course Delivery: Graduate Program at Addis Ababa University in Focus

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Abstract: This study aimed at assessing the academic staffs' views and practices of the modular course delivery of the master's program at Addis Ababa University. More specifically it aimed at answering questions like; what are the attitudes of the staff towards the currently introduced modular curricula and block teaching? What are the major strengths as well as weaknesses of the modular course delivery as perceived and practiced by the academic staff? The study employed a survey method and was also supported by qualitative data collection procedure. Accordingly, 123 academic staff members who teach at the master's level participated in the study. The result revealed that most of the academic staff either have negative attitude or are uncertain about whether or not the current modularized curricula really is a move away from the traditional task-based teaching learning approach to process-based and integrated system of teaching learning. The study also noted instructors' uncertainty or negative attitude towards the adequacy of the duration of the study period (18 months) of the master's program , the relevance of the pedagogy module to their students, whether the current modular system can create more valid ways of assessing students' performance and achievement. The result indicates that a large number of staff are in favor of modular curricula but they are against block teaching especially in the fields of natural science. The study concludes that the majority of the staff do not believe that the recently introduced modular system could achieve its intended learning outcomes.

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Introduction

Addis Ababa University has introduced a radical change in the teaching and learning process of its Master's program since 2009/10 academic year. This reform emerged out of the wider Business Process Reengineering (BPR) reform the university is implementing. The reform required all academic departments and/or academic programs running Master's Programs to modularize and deliver their curricula via block teaching mode. The BPR document stipulates that the module shall be divided into three general parts: interactive teaching and learning, self learning by the student and collaborative learning among students. The interactive teaching and learning is accorded 40 percent of the time (6 days of block teaching 3 to 4 hours day) and the instructor is expected to meet the students and: a) introduce the module, its objectives, anticipated outcomes, approaches to the course, student and instructor responsibilities, available resources and the likes, b) introduce the major topics, identify major issues, highlight major findings, arguments or theories and discuss the current state of knowledge on the subject matter, c) encourage and provoke student involvement and inquisitiveness through both structured and unstructured discussions, and d) provide students with topics and guidelines for self learning along with assignments and activities (such as book reviews, fieldwork, case studies, project work) and any other appropriate tasks that can help students to meet their learning goals.(Addis Ababa University , 2009_b).

The independent–learning (self-learning) is given another 40 percent of the time In this part students are expected to learn independently based on the materials, guidelines and assignments that they had been given. They are also expected to complete their assignments and tasks, submit their works and/or make presentations of their works in the classroom. At this stage the instructors are expected to: a) assess the submissions of each student, identify where students have difficulties and provide feedback, and b) provide topics and problems and organize students into collaborative groups for the next set of activities. The third part, collaborative learning consists of 20 percent of the time (3 days block sessions 3-4 hours/day). In this part the

expectations are that: a) students meet the instructors in small groups to undertake group discussions based on the topics of the course and assignments, dialogues/debates, paper presentations or book reviews following a purposeful guideline provided, b) instructor poses relevant questions and problems for discussion to help students understand what they have learnt, c) instructor facilitates and moderates the discussion in ways that would clarify difficult concepts and lead towards the learning goals , and d) at the end of delivery of all courses in a module, students meet their advisors and discuss the relevance and contribution of the modules to their learning goals (Addis Ababa University, 2009a).

Based on the above stated framework, a procedure manual for "Modularization and Block Teaching" has been prepared and disseminated to all colleges/schools/institutes in the University (Addis Ababa University, 2009c). Accordingly, all academic departments and programs running the Master's Programs were instructed to revise their curricula and change them to modular programs to be delivered via block teaching. This approach is a radical departure from what AAU had been practicing for decades. As such it might contain opportunities as well as challenges and problems.

Statement of the Problem

Although there are a plethora of uses of the concept in literature, a module can be described as an independent educational unit of limited scope provided with a series of educational and learning activities, which lead to a well described final level (Klingstedt, 1971). It is seen as a useful programming unit with a predetermined scope and duration. Modularization can have advantages or disadvantages to both students as well as instructors. The advantages for students include that it allows everybody to proceed at his/her own pace, gives opportunity to choose one's own learning mode (Burns, 1971) and allows students to identify their strengths and weaknesses (Klingstedt,1971). Moreover, in the modular approach students do not have to re-study large amount of subject content since they can be tested immediately after completion (Goldschmid and Goldschmid, 1973).

The intensive teaching format (Block teaching) is known to have several advantages for the students. According to research results elsewhere students tend to prepare better for intensive teaching if they get their materials early on (Burton et.al, 2002); students' time management skills improve (Grant, 2001), and students feel increased motivation, commitment, and engagement during programs conducted in intensive formats. On the other hand, self-discipline has to be demonstrated in pursuing independent study. The shift from the lecture method (passive) to modular instruction (active) might be difficult for some students. Moreover, the block teaching can cause some fatigue, stress and nervousness among some students (Petrowsky, 1996). For the instructors the modular approach is advantageous in that staff work can be reduced by means of self-study components with emphasis on the accompanying written materials. The concentrated teaching sessions also provide more free time for other activities, such as research and fieldwork (Goldschmid and Goldschmid, 1973). On the negative side, the block teaching might be stressful (Petrowsky, 1996; Grant, 2001) and some instructors might find it hard to maintain energy. Intensive teaching formats require careful organization, adequate preparation and varied teaching approaches (Daniel, 2000) for which some instructors may lack the skill as well as the good will. Instructors tend to prefer to teach in the traditional time frames because the teaching time is less intense (Burton et al, 2002). There is little time during the intensive schedule itself to organize and confirm activities (Grant, 2001). There is little opportunity to adjust material or respond to student feedback (Burton, et.al 2002), and that instructors cannot deal with outside issues during the intensive schedule (Grant, 2001).

As briefly shown in the preceding paragraphs, the modular approach has advantages and disadvantages. Successful implementation requires commitment from all those involved. As Stagelebauor (2008) notes "change in practice requires change in behaviors, skills, attitudes, belief and, frequently, ways that people work with one another". Particularly the initial stage requires strict follow up. This study, therefore, aims at assessing the strengths, weaknesses, and outstanding problems related to the modular

curricula and its delivery via block teaching as viewed and practiced by the academic staff of the Addis Ababa University. It tries to answer the following basic questions:

1) What are the attitudes of the academic staff towards the modular curricula and block teaching mode of delivery?
2) What are the major strengths and weaknesses of the modular course delivery as perceived and practiced by the academic staff?
3) What are the outstanding problems encountered in implementing the modular course delivery?

An Overview of Modular Curriculum and Block Teaching

Modular curriculum, as the names indicate is a curriculum that is modular. Hence, the idea of modular curriculum cannot be viewed and understood dislocated from the wider and inclusive concept and meaning of curriculum. Similarly, block cannot be defined and conceptualized out of the wider meaning and conception of teaching and/or instructional process. Block teaching is a teaching that is blocked. The relationship between modular curriculum and block teaching is analogous to the relationship that exists between curriculum and instruction. Different scholars in the field of curriculum studies have given various meanings and/or definitions of the term 'curriculum' based on their educational value system and orientation. Bobbitt (1918, p.42), perhaps the earliest and the first writer in the area, perceived curriculum as: *"…series of things which children and youth must do and experience by way of developing abilities to do things well that make up the affairs of adult life; and to be in all respects what adults should be."* Saylor, Alexander, and Lewis (1981) defined curriculum as a plan that provides sets of learning opportunities for persons to be educated. Accordingly, they view curriculum as a plan for learning. There are always some elements to be considered in preparing this plan for educating persons. Taba's (1962, p.10) view and definition of curriculum is more operational in that it gives criteria for providing sets of learning opportunities for curriculum development. She defined curriculum by listing its elements as follows:

> All curricula, no matter what their particular design, are composed of certain elements. A curriculum usually contains a statement of aims and of specific objectives; it indicates some selection and organization of contents; it either implies or manifests certain patterns of learning and teaching, whether because the objectives demand them or because the content organization requires them. Finally, it includes a program of evaluation of the outcomes.

All definitions and meanings given to curriculum, explicitly or implicitly, denote the 'What' part of learning and not necessarily the 'How' of learning. This implies that ‘what to teach’ and’ how to teach’ are two autonomous but highly related dimensions in curriculum discourse. Accordingly, we often talk about *Curriculum and Instruction*. Curriculum refers to the 'What' and Instruction to the ‘How’ of teaching and learning. That is, *Instruction* is a means by which the curriculum is changed into practice. Instruction is the techniques that teachers use to make the curriculum available to the learners. In short, *curriculum* is program and *instruction* is method. As a corollary of this axiom, it can be established that *modular curriculum* is a program whereas *block teaching* is a method. A method, in this context, is a means and/or mode of delivering a given program of education to students or learners.

Modular curriculum is a type of curriculum design which emerged as a result of dissatisfaction with the traditional designs. Modular curriculum design emerged in response to the changing needs of modern global society and a developing system of mass participation in higher education. While 'course' is the unit of learning in the traditional curriculum design, 'module' is in a modular curriculum design. A module is a self-contained unit of learning within the wider modular curriculum of a program. The expected result of undertaking a module is set out as a number of learning outcomes, which define the level of study and the number of credits to be gained. These learning outcomes are described in terms of a series of achievements. Lecturers concerned with the module design the learning outcomes and

decide on a suitable way of making sure that the outcomes can be achieved. Usually this involves formal teaching such as lectures, seminars, practical sessions, tutorials and fieldwork. This will also normally include elements of less formal learning carried out by students working independently or in small groups. Block teaching could be considered if it is appropriate and effective method of delivery to achieve the outcomes of a given module but not as a rule. Characteristics of modules include but are not limited to the following:

- complete units in themselves;
- definable boundaries;
- specific purpose;
- ways of linking to other modules;
- appropriately sized to meet specific outcomes;
- generic and fit in many different programs;
- specialized and serve specific functions; and
- be linked in different orders to build a complete set of outcomes.

The breakdown of delivery hours will vary from modules to modules, partly as a result of different amounts of learning expected of them and also because some subjects require a higher amount of formal contact between instructors and students than others. By and large students are expected to present coursework in the form of assignments, practical reports, and study portfolios and so on, as well as to sit for examinations. In this way, it can be established whether or not students have achieved the required learning outcomes for that module.

Modules come in a variety of sizes, delivered either over the full academic year or semester or a term or in a block of four to six weeks. The rationale and purpose of modularization stretches far beyond methods of teaching and or scheduling the academic year and/or school days. It is about producing educated and trained person, the contemporary society and the global market demand. On the other hand, the nature of the desired outcomes encoded for each module to be achieved, presumably, dictates the type of delivery method(s) to be employed. It is therefore under such

context, nature and purpose of modules that block teaching competes for appropriateness.

In the UK, for instance, modular systems have been created through a fragmented and inconsistent process of piecemeal development. They were developed by deconstructing the traditional curriculum models of higher education rather than by building a new system from bottom up. Most developments in the modular curriculum were initiated by the polytechnics. The polytechnics had no traditions, but they did have a shared mission based on the common control and ownership by local educational authorities. They had the need to serve the community in general and the local community in particular. Their importance to the business environment was emphasized (Betts and Smith, 1998).

Mass participation in higher education sector has brought a call for diversity and intensity of higher education curriculum. A modular system of higher education curriculum is largely a response to the very growing sectors of business, industry and consumers choice in general. It emphasizes more explicate outcomes in relation to each small part of the Degree, rather than the more broadly defined 'Course' in general. As opposed to most traditional curriculum designs, modular design gives greater student autonomy in constructing the programs and greater range of entry gates and exit points. Virtually, a modular curriculum had its origin in the USA during the nineteenth century. This is apparent when Theodossin (1996, p. 5) states:

> In the latter part of the nineteenth century pressures grew to replace the uniform classical curricula with something more suited to contemporary needs. At a philosophical level, there was a growing acceptance of student-centered learning and of John Dewey's advocacy of self realization achieved through study fitting the individual's interest. There was also increasing demand of courses of a practical nature relevant to the real world.

Modularity enables the design of the curriculum to meet students' needs, thus moving the curriculum from the supply side (what universities want to deliver) to the demand side (what students and their employers identify as what they want).

As opposed to the assessment and evaluation practices inherent in most traditional curriculum designs of higher education, modular system requires a more open and explicit approach to all areas of the assessment process from the explicit outlining of module outcomes to the establishment of clear criteria for their assessment. Moreover, teachers are required to consider how to structure teaching and learning activity in order that outcomes might be achieved and measured through assessment. Modular programs, which emphasize continuous assessment and therefore diversity of assessment practices, encourage institutions to move away from the traditional rigid examination which fails to access or assess, in any direct measure, many of the professional skills. Generally, a modular curriculum design encourages revolutionary methods of assessment directly linked to the learning outcomes identified within the module (Betts and Smith, 1998).

At the heart of modular curriculum design is the potential for flexibility. That is, it deliberately and inherently provides an opportunity within an institution to make use of a module across a range of different Degree courses, to build new courses quickly from an existing stock of modules and to provide differentiated paths within a Degree program. However, the levels of flexibility and students' choice are not fully open and free. Flexibility requires greater standardization, consistency of policy and regulation at university level.

The issue of resourcing and quality of the modules is another dimension to the organization of modular curriculum. In order to operate the system effectively, a university needs to locate the module organizationally in one place and organize its resourcing and management. The main resource for a module is the staff who teaches it. Modules need to be prepared for each course by individual course teacher or course team and register at the university level. Each module is managed by a Module Leader who, with

his/her colleagues (Course Team), devises the learning outcomes and the method of delivery and assessment of the learning outcomes. Students should consult the Module Leader if they require information about how the module is to be organized, or are unclear about anything related to the module.

The modular curriculum often is implemented and managed collectively rather than by separate and often powerful heads of departments or deans of faculties. By so doing, the effective management of modular system strengthens the philosophy and culture of the university and undermines more diffused process of management. Furthermore, the full potential of modular approach will not be realized if such cooperation and harmonization fails to materialize.

Once the modular curriculum is designed and modules are prepared the next logical step is to implement them by choosing the appropriate mode of delivery and/or method of teaching. A modular curriculum could be implemented using several competing ways of delivery and/or schedules. Semester-based scheduling, term-based scheduling, and block scheduling are among the possible modes or ways of scheduling or delivering the modular curriculum. Block teaching therefore is nothing other than one way or method of delivering the program of curriculum. Block teaching could be viewed and understood as the re-organization of the academic year into approximately 12 ‘blocks’ of 4 weeks each or 10 'blocks' of 4 to 6 weeks each , instead of two semesters of 16 weeks each. There is no significant and necessary change in the content of the curriculum with block teaching. There is also no loss of curriculum time during block teaching. Changes to the curriculum are kept to a minimum. That is, the nature of the curriculum in the semester or block schedules is largely kept the same. However, the work loads of students with block teaching change. Subjects are now taught in blocks of 4 weeks or 4 to 6 weeks instead of spreading them over the weeks or a semester over a 16-week or a semester. Students who used to take 5 to 6 courses per semester will now take at most 2 modular courses per block. This may not translate into a lighter workload but it gives the

student an opportunity to focus on the 1 or 2 modular courses at hand and give their best time to in the projects assigned. On the other hand, a move from course system to module system, and accordingly the allotment of credit to modules was one of the confusions observed in the process of reengineering graduate programs at Addis Ababa University.

An Overview of Credit Vs ECTS Systems

It seems that there is confusion between a Credit system and European Credit Transfer and Accumulation System (ECTS) of course and/or module values in higher education. The former is the tradition of American universities and the latter is currently widely accepted practice of virtually all universities in Europe. A credit system is a systematic way of describing an educational program by attaching credits to its components. The definition of credits in higher education systems may be based on different parameters, such as student workload, learning outcomes and contact hours. The tradition in our context however is that it is calculated on the bases of teachers' teaching time necessary to cover a course in a specific period i.e., in 16 weeks or in a semester.

The school of Graduate Studies of the Addis Ababa University instructed all Master's Programs to convert their previous Credit system into ECTS system. It instructed 89.5 ECTS to be the maximum requirement for all masters programs with the assumption that 1 ECTS could vary from 25 to 30 learning hours. It also assumes that 2237- 2685 hours of students work load will suffice for the award of Master's Degree.

This conversion, however, was not an easy task for most master's programs at the Addis Ababa University. Developing equivalence between the earlier 30 Cr. hr of the masters program and the newly proposed 89.5 ECTS has been also found problematic for most departments. Accordingly serious discrepancies among the masters programs and critical deviation from the proposed number of ECTS have been observed. For instance, some of the programs just divided 90 ECTS to 30 Cr. They used the ratio 9:3 which implies an equivalence of 3 Cr.hr course to 9 ECTS module or vice versa.

More specifically, 1 Cr.hr course is considered and converted into a 3 ECTS module. Others just converted a 3 Credit hour course into 7 ECTS module.

The European Credit Transfer and Accumulation System (ECTS) is a learner-centered system based on the transparency of learning outcomes and learning processes. It aims to facilitate planning, delivery, evaluation, recognition and validation of qualifications and units of learning as well as student mobility. ECTS is widely used in formal higher education and can be applied to other lifelong learning activities as well.

In the European context, ECTS is based on the principle that 60 Credits measure the workload of a full-time student during one academic year. The student workload of a full-time study program in Europe ranges in most cases from 1500-1800 hours for an academic year, whereby one Credit (one ECTS) corresponds to 25 to 30 students' working hours. Accordingly, students' workload indicates the time students typically need to complete all learning activities (such as lectures, seminars, projects, practical work, reading, self-study, supervised learning and examinations) that will help students reach the intended educational and / or learning outcomes (European Commission, 1998).

Generally the idea and practice of ECTS vis-à-vis modular system seem to be contextualized instead of consuming as it means and works in Europe. In European universities, Credits are awarded to individual students (full-time or part-time) after completion of the learning activities required by a formal programs of study or by a single educational component and the successful assessment of the achieved learning outcomes. Learning outcomes are sets of competencies, expressing what the student will know, understand or be able to do after completion of a process of learning, long or short. Credits are allocated to all educational components of a study program (such as modules, courses, thesis, project, dissertation work, etc.). They reflect the quantity of work each component requires to achieve its specific objectives or learning outcomes in relation to the total quantity of work necessary to complete a full year of study as well as a program of study successfully.

Hence, ECTS credits are a numerical value (between 1 and 60) allocated to course units or components of a module to describe the student workload required to complete them. They reflect the quantity of work each course unit or component of modules requires in relation to the total quantity of work necessary to complete a full year of academic study at the institution. These include lectures, practical work, seminars, tutorials, fieldwork, private study - in the library or at home - and examinations or other assessment activities. ECTS is thus based on a full student workload and not limited to contact hours only. ECTS credits are a relative rather than an absolute measure of student workload. They only specify how much of a year's workload a course unit or a module represents at the institution or department allocating the credits. In ECTS, 60 credits represent the workload of an academic year of study and normally 30 credits for a semester and 20 credits for a term, of course in the context of European universities.

Hence, the major difference between the ECTS and Credit system is that ECTS is based on student load and Credit system on contact hour. ECTS is more oriented towards the students (the time required for students to meet the intended learning outcomes) where as the Credit system towards the faculty (the time a faculty member needs to teach). The following is the conversion used between ECTS and US College Credit:

1 Credit Hour = 1.67 ECTS
2 Credit Hours = 3.34 ECTS
3 Credit Hours = 5 ECTS
4 Credit Hours = 6.67 ECTS

However, this conversion needs to be contextualized if it is to be adapted in our context. That is the time a full time student is expected to invest learning within a given academic year determines the value of ECTS to be allocated for each module and components of modules.

Methodology

The study was designed to determine academic staff's views and practices of graduate modular course delivery system. While the study employed the survey method, it was also supported by qualitative data collection procedures. It generated both quantitative and qualitative data. Both primary and secondary data sources were used for the study. The primary data sources included deans, department heads, and instructors who teach at the master's level. Relevant literature, university documents on modular delivery and selected modular syllabi prepared by colleges served as secondary data sources. All colleges, faculties and institutions running the masters programs in all campuses of Addis Ababa University were covered in the study. An effort was exerted to secure instructors who were involved in the graduate programs from each college, institute and school. About 150 copies of the questionnaire were distributed to the instructors involved in the program. Out of 150, 126 copies of the questionnaire were returned. Three copies of the questionnaire that were not properly completed were excluded from the analysis. This means data obtained from 123 instructors were considered in the study.

Data Collection Instruments

Two types of data collection instruments i.e., questionnaire and interview, were prepared and used for the purpose. A comprehensive survey questionnaire was prepared and administered to instructors who teach at the graduate program level. Furthermore, an in-depth interview guides were prepared for deans, department heads/graduate program coordinators, and instructors teaching at graduate levels. The in-depth interview guides were prepared in such a way that they would give opportunity for the researcher to explore deeper into the understanding of the research participants about the strengths and weaknesses and the pros and cons of modular delivery of graduate modules.

Data Collection Procedure and Analysis

The survey questionnaire was administered to the instructors by the researcher and selected research assistants. On the other hand, interviews were made with deans, directors, and department heads. A total of 23 in-depth interviews were conducted. All of the interviews were audio recorded with the consent of each informant. These qualitative methods of data collection helped to triangulate the main findings of the quantitative survey and provided an additional angle to explain the results of the survey. After collecting the completed questionnaire all the questionnaires were coded and entered into SPSS for completed data cleaning. Then the survey data were organized and analyzed. Frequency distributions and percentages were mainly used to describe the general information of the study participant and discuss the meaning of individual items included in the survey tools. Composite scores or indexes were determined for the various attitude and perception items. The data obtained from the interviews were analyzed based on the themes identified. Extracts were taken from transcripts of interview data and used to demonstrate, wherever needed, the respondents' ideas using their own words.

Results and Discussion

Academic Staff's attitudes to the Modularized Master's Curricula

The attitude of people involved in a reform process is often considered to be a decisive factor for the success and/or failure of implementation of the reform in general. To this end, the academic staff were given 25 statements and asked to indicate their levels of agreement or disagreement to each statement using a five point scale. Accordingly, the mean score of the responses of 123 academic staff is found to be 79.15 which is a little higher than the neutral point 75. Thus, it can be said that the academic staff of the Addis Ababa University largely have positive attitude towards the currently introduced modularized Master's Curricula. The statistical distribution of the responses with a mean score of 79.15, indicates that some of the staff have more favorable attitude toward part of the modularized curriculum and

unfavorable to other parts of the same program. There are also staff members who have neither positive nor negative attitudes towards the modularized curriculum.

The qualitative data generated through interviews also indicate the presence of largely positive views in many of the institutes and schools although there are some serious reluctance and/or resistance and unfavorable attitudes in some colleges or programs. There is a tendency among the staff of virtually all schools and institutes to view the modular program as generally positive. A department head in the College of Social Sciences and Humanities, for instance, had the following to say: '*I was one of staunch opponents of the scheme when it was initiated. After we modularized and started teaching however I have discovered that it is the best method for our graduate programs. It provides enough long time for discussion. It encourages more student self-learning than spoon-feeding by the teacher.'* On the other hand, it appears that there is some level of disinclination in some schools and institutes included in this study. According to the view of one interviewee, there seems to be a tendency to believe that modular program has been put into action with the intention of shortening the program duration. The interviewee further indicated that the *"attempt to cut the amount of time the graduate program requires in the absence of the necessary human power and other essential inputs has negative effect on the level of students mastery of the body of knowledge."*

A further categorization of the responses of the academic staff obtained through the survey into smaller and specific constructs portrays the existence of attitudes in both extremes. Statements clustered in Table 1 below, for instance, refer to instructors' views of and attitudes to the quality of the modularized master's curricula in terms of its potential as well as appropriateness in creating out of classroom learning opportunity for students. It also deals with the adequacy and quality of the contents implied by the modular curricula to be handled outside classroom.

Table 1: Modular Curricula: Out of Classroom Learning Opportunity

	Statements	N	Unfavorable		Uncertain		Favorable	
			f	%	F	%	f	%
1	The modularized curricula provided opportunities for students to get to know and work with their teachers outside the classroom	123	42	34.1	34	27.6	47	38.2
2	The out of classroom activities of the modularized curricula provide students with different learning activities	121	26	21.4	29	24.0	66	54.5
3	The out of classroom activities of the modularized curricula have wider scope in terms of coverage of a subject matter	123	38	30.9	28	22.8	57	46.3
4	The out of classroom activities of the modularized curricula have high quality	122	41	33.6	50	41.0	31	25.4
5	The master's curriculum of my department is dominated by nominal out of classroom students activities	118	19	16.1	38	32.2	58	49.1

About 46% of the respondents believed that out of classroom activities have the potential of providing different learning activities and experiences that provide for a wider coverage of the subject matter. However, most of these respondents are not happy about the quality of these out of classroom activities implied by the curriculum. To this end, about 49% of the respondents believe that the proportion of out of classroom activities of the modularized curricula is too much. They also said that the quality of the activities is questionable and its quality is questionable.

Similarly, the data in Table 2 depicts the academic staff's views of and attitudes to the quality of the modularized curriculum in terms of coverage of subjects, capacity for independent learning and critical thinking,etc.

Table 2: Modular Curricula: Independent Learning, Critical Thinking and Practical Work

	Statements	N	Unfavorable		Uncertain		Favorable	
			f	%	F	%	f	%
1	The current modularized Master's curricula offer a good range and variety of subjects.	119	29	24.4	34	28.6	56	47.1
2	The courses / modules offered at my department or program help develop students capacity for independent and critical thinking	121	24	19.8	26	21.5	71	58.6
3	The courses /modules taught in my department or program offer useful knowledge and / or develop useful skills	121	16	13.2	27	22.3	78	64.5
4	The courses / modules in the current master's curriculum do not provide adequate and meaningful opportunity laboratory and/or practical activities	121	39	32.2	29	24.0	53	43.8

The majority of the academic staff members believed that the modules offered help develop in students a capacity for independent and critical thinking (58.6%) and provide useful knowledge and skills (64.5%).With regard to the range and variety of subjects offered most of the respondents have positive or neutral attitude. About 43% of these respondents are not content about the opportunity for their students to do meaningful laboratory work in this modular system. Only 32% of the respondents believe that the modules in the current Master's curricula provide adequate and meaningful opportunity for laboratory and or practical activities while others do not. Many are of the opinion that the modular approach stifles the opportunity for extensive reading and research. This is apparent from the reply obtained from a professor in the College of Social Sciences and Humanities. He responded to one of the open-ended questions in the survey as follows: *'University education can never be satisfactory or useful through the current modular form of curriculum. It does not give chance to students for a much*

wider reading and research particularly in interdisciplinary and transdisciplinary approaches. It narrowed down the University education.'

The data in Table 3 below shows the academic staff's views about the modularized curricula vis-à-vis its usefulness and appropriateness for the students' future employment and career.

Table 3: Modular Curricula: Future Employment, Problem Solving and Personal Development

	Statements	N	Unfavorable		Uncertain		Favorable	
			f	%	f	%	f	%
1	The courses/ modules taught in the master's programs of my department prepare students adequately for their future employment and careers	123	23	18.7	29	23.6	71	57.7
2	The current masters programs of my department have the potential and quality to produce graduates who are able to solve personal and social problems	121	20	16.5	36	29.8	65	53.7
3	The courses / modules currently taught in my department enhance students' personal development	122	20	16.3	30	24.6	72	59.0

The staff largely felt that the modules in the current master's programs potentially could prepare students for their future employment and career (57%). Similarly about 53% of the respondents believed that the current modular approach has the potential for producing graduates who are capable of solving their personal as well as social problems. 59% of the respondents also replied that the modular approach has the potential to enhance students' personal development.

The academic staff's views of the quality and appropriate of the modularize curricula is presented in Table 4 below.

Table 4: Views of the Academic Staff on the Modularized Curricula

Statements	N	Unfavorable		Uncertain		Favorable	
		f	%	F	%	f	%
1. The pedagogical module or component of the modularized curriculum is highly relevant to students of my department or program	121	35	28.9	34	28.0	52	42.9
2. The current modular curriculum encourages a move away from task based and highly segmented arrangement of work to a process-based and integrated arrangement	114	26	22.8	44	38.6	44	38.6
3. The current modular curriculum enhances an efficient use of time and resources	119	29	24.3	25	21.0	65	54,6
4. Modular master's programs are purposeful and more efficiently organized to produce more value with less time and resources (less is more**)**	117	34	29.0	33	28.0	50	42.7
5. The current modular master's programs are more specialized and focused	116	25	21.5	20	17.2	71	61.2
6. Given the current national priority, modular master's programs are preparing learners for a career of tertiary level teaching and research	118	31	26.2	36	30.5	51	43.2
7. A maximum of 18 months is adequate to produce quality graduates of the master's programs who fit the purpose by way of modular curricula block teaching	116	39	33.6	26	22.4	51	43.9
8. The length of course work and time allocated for research has no clear bearing on the capacity of graduates to teach or to conduct research	115	37	32.1	29	25.2	49	42.6

Most of the academic staff either have negative attitudes or are uncertain about whether or not the current modularized curricula really is a move away from traditional task-based teaching/learning approach to process-based and integrated system of teaching learning. The majority are not optimistic in this regard. On the other hand, the majority of the respondents (54.6%) think that the current modular curriculum enhances an efficient use of time and resource and that it is more of specialization (61%). Regarding the duration of the study period (*18 months)* of the master's programs only 43.9% of the staff considered it adequate while the rest have either negative view (33.6%) or they are uncertain (22%) about it.

The data in Table 4 above also depicts that only 42.9% of the academic staff have positive attitudes towards the importance of the Pedagogy module. The rest have either unfavorable view (28.9%) or they are uncertain (28.0%). On the other hand, the majority of these staff are again either negative (26%) or uncertain (30%) about the potential of the current modularized masters curricula for preparing candidates for a career of tertiary level teaching. Only 43% of the academic staff members are optimistic that the current modular approach can prepare candidates for tertiary level teaching and research as per the current national priority of our higher education system. Statements clustered in Table 5 generally refer to the academic staff's perception of assessment and evaluation as well as their feelings about graduation requirements.

Table 5: Modular Curricula: Assessment and Requirements for Graduation

	Statements	N	Unfavorable		Uncertain		Favorable	
			f	%	f	%	f	%
1	Modular curriculum creates an opportunity for valid assessment and evaluation of students' performance and achievement	117	31	26.5	35	29.9	51	43.6
2	The current modular curricula require students to either write a thesis or do a project work as a requirement for graduation	108	28	25.9	36	33.3	44	40.7
3	It is appropriate to leave the decision whether or not students should work on thesis for academic units, or programs or departments	114	39	34.2	15	13.2	60	52.6
4	Passing comprehensive exam or preparing PhD proposal as a requirement for graduation could be acceptable option in some departments or academic units	116	32	27.6	27	23.3	57	49.1
5	Students' assessment in the current modular master's programs includes assessing their skills and knowledge necessary for teaching	118	26	22.0	36	30.5	56	47.5

Assessment and evaluation of students and the overall teaching learning program in the modular system is expected to move towards student-centered and continuous assessment. Only 43.5% of the respondents believed that the current modular system can create more valid ways of assessing students' performance and achievement. The remaining (26.5% and 29.9%) of the respondents respectively have either negative attitude or are uncertain about the issue. Most staff also seems discontent about the three options of requirement for graduation. That is 52.6% of the respondents have the position that the decision, whether or not students should be required 'Thesis' for their graduation, shall be left to their respective departments or academic units. To this end, the majority seem

unhappy about the predetermined options prescribed other than doing a master's thesis as a requirement for graduation. The qualitative data also corroborates this position particularly in most natural science and health programs. One of the interviewees from the College of Health science, for instance, has the following to say regarding the option for graduation:

> In our current program we demand all candidates to do thesis for the sake of quality. We don't have a non-thesis option. We believe that all graduates of pharmacy must do thesis. We believe that masters of pharmacy must do researches in industries or higher learning institutions. Hence, we consider research (Thesis) as mandatory for our masters program. We don't negotiate in this regard. We don't accept any other option that avoids thesis from requirement to receive a Masters degree in pharmacy.

This is not the view of only an individual interviewee: There are also similar interview data from almost all programs which offer only-thesis option. There is a strong conviction on the part of most academic staffs involved in this study that a master's thesis is the main indicator of quality for their masters programs.

Academic Staff's attitudes to Modular Delivery via Block Teaching

It is important to examine the distinctions and relations between the respondents' views of and attitudes toward the modularized curriculum of the master's program and their views of and attitudes toward block teaching as a mode of delivery for the modularized curricula. It could be possible for the staff to have favorable attitude to the curricula and unfavorable attitude to block teaching. Table 6 presents the views of the academic staff about block teaching as a mode of delivery for the modularized curricula:

Table 6: Academic Staff's Attitudes towards the Modular Delivery

S/N	Statements	N	Strongly Disagree		Disagree		Uncertain		Agree		Strongly Agree	
			f	%	f	%	f	%	f	%	f	%
1.	The delivery of the modular curriculum in terms of interactive teaching-learning, self-learning and collaborative learning is not appropriate for the course I teach.	118	13	11.0	12	10.2	19	16.1	27	22.9	47	39.8
2.	The division of the delivery of the modular curriculum in terms of interactive teaching – learning, self-learning and collaborative learning does not take into account the nature of the course	119	17	14.3	23	19.3	17	14.3	21	17.6	41	34.5
3.	Block teaching is not appropriate for quantitative courses like quantitative analysis and courses in natural sciences	114	22	19.3	21	18.4	41	36.0	14	12.3	16	14.0
4.	The delivery of current modular curriculum has moved away from task-based and highly segmented arrangement of work to process-based and integrated arrangement	113	10	8.8	12	10.6	42	37.2	35	31.0	14	12.4
5.	The delivery of modular curriculum enhances an efficient use of time and resources	120	14	11.7	18	15.0	18	15.0	34	28.3	36	30.0
6.	Modular delivery can make faculty deployment easier	118	21	17.8	35	29.7	41	34.7	6	5.1	15	12.7
7.	Teaching 3 to 4 hours a day is stressful for teachers	119	17	14.3	16	13.4	14	11.8	30	25.2	42	35.3
8.	Modular course delivery facilitates a more coherent organization of content of the subject matter	118	8	6.8	16	13.6	28	23.7	44	37.3	22	18.6
9.	Modular course delivery promotes self-learning through seminars, discussions, and presentations	119	6	5.0	10	8.4	20	16.8	48	40.3	35	29.4
10.	Covering courses through the modular approach provides instructors more free time for research and other activities	119	20	16.8	16	13.4	11	9.2	39	32.8	33	27.7
11.	The time allotted for interactive teaching has failed to take into account the nature of the subject matter (course)	119	24	20.2	31	26.1	32	26.9	18	15.1	14	11.8
12.	The delivery of modular curriculum requires careful planning and strong commitment from instructors	120	6	5.0	3	2.5	7	5.8	26	21.7	78	65.0

The mean score of 120 academic staff who participated in the study and properly responded to statements in Table 6 is found to be 40.06, which is a little higher than the neutral point 36. Hence, it can be said that the staff of the University who participated in this study in general have favorable or positive attitude towards the mode of delivery of the modules in the current master's programs. A detailed examination of data in Table 6 brings to light many important points. For example, 62.7% of the respondents believed that the delivery of the modular curriculum in terms of interactive teaching-learning, self-learning and collaborative learning is not appropriate for the course they teach; 52.1% believed that the division of the delivery of the modular curriculum in terms of interactive teaching–learning, self-learning and collaborative learning does not take into account the nature of their course and 60.5% believe that the teaching 3 to 4 hours a day is stressful for teachers. The vast majority of the staff (86.7%) also strongly agreed or agreed that the delivery of modular curriculum requires instructor careful planning and strong commitment. Thus, the staff, on one hand, consider block teaching as inappropriate to their respective subjects, while on the other they perceive it to be demanding. Table 6 also shows that the majority of the staff (58.3%) are of the opinion that the delivery of modular curriculum enhances an efficient use of time and resources; 69.7% of them believed the delivery promotes self-learning through seminars, discussions, and presentations; 55.7% think the delivery facilitates a more coherent organization of content of the subject matter and (60.5 %) believe that it provides instructors more free time for research and other activities. Many staff who are in favor of modular curricula argue against block teaching.

There are more negative views and attitudes towards the modularized curricula in general and block teaching in particular among the staff of the College of Natural Sciences than in all other colleges and schools. The following interview transcript, out of many similar views of some teaching staff, depicts the case under discussion: 'I can assure you that block teaching is not an appropriate choice of delivery for physics and mathematics. These fields need relatively longer time for real learning to take place. Students should be given adequate time to digest the content they are taught each day.' Another senior academic staff from the College of

Natural Sciences has also the following argument for the inherent inappropriateness of a block teaching mode of delivery for natural science fields:

> In science students can't do all theoretical works and practical activities in one month. We always have series of laboratory activities. Hence, both students and teachers need time. How can we engage students the whole day every day? They are human beings. It is unrealistic to attend ….First of all, we didn't understand the whole idea and procedure of modularization and block teaching, and secondly we are not convinced about the applicability of the modularization to science fields.

The above quotations and their implications tell us a lot about the views and attitudes of the staff regarding block teaching as the only option of delivery in the masters program. A large number of staff from natural science departments are inclined to accept modular curricula but they argued against block teaching. The inherent potential and appropriateness of modular delivery for master's programs and the way it is being practiced currently at the AAU needs to be examined and viewed separately. There are staff who really are in favor of the potential advantage and contextualized flexible implementation of block teaching in their masters programs. These staff have reservations regarding the way things are going on now in their masters programs. This is apparent, from the following extract taken from one of the senior staff involved in teaching as well as managing the master's programs in his/her department.

> I don't have the view that block teaching is not applicable to science. Take mathematics for instance and laboratory experimentation which really require preparation of learning environment rather than mere lecturing. You can't learn mathematics without doing mathematics. That is learning by doing. In science and mathematics students should be given more freedom and opportunity to do things independently with the help and facilitation of the teacher. I think this is the message and application of modularization and block teaching. The modular approach can better help science and mathematics students to construct and develop their own knowledge and skills largely independently provided that all the necessary inputs and context are created and put in place for them.

It seems that the question, whether or not the modular curricula could be delivered using approaches other than block teaching mode of delivery, has turned out to be an issue among the teaching staff of the postgraduate programs. One can, therefore, ask whether block teaching mode of delivery is an inbuilt element of the modular curricula. According to one of the interviewees who participated in the development of the BPR reform proposal for AAU, block teaching is among the options of delivery which is believed to bring the desired change and quality to the master's program. It is not the only and absolute option. It is after assessing and examining other options that the modular approach and block teaching delivery was chosen. Also experiences of other countries (developed and developing counties) were considered in the decision made to recommend the block teaching-based modular approach in the local context.

Block teaching is believed to be effective for proper and productive time management and cost effectiveness. This is understandable from the extract quoted underneath from the data obtained from a senior professor who was involved in the modularization process at department level. The professor was also involved in teaching using the modular curriculum of the postgraduate program.

> We can modularize the curriculum and deliver through 'semesterization'. The reason for block teaching is just to maximally benefit from the advantage inherent in a block teaching mode of delivery. On the other hand, departments that are not comfortable with the advantage of block teaching can take other option. It has to be optional depending on the context of the program and field of study. It is a matter of comparative advantage. I think it is logical to examine advantages and decide on options. Rigidity and imposition of regimented rules may have unprecedented disadvantages and damages. It doesn't work. There has to be room for flexibility. There has to be professional freedom for adjustment of the reform each academic department and/or program within the big idea and implementation of modular system. The advantage of block teaching is also that it facilitates independent learning and self confidence.

The people who do not want to understand the overall idea of block teaching seems that they think the teacher teaches for too long hours a day for a month in the same way they do in the traditional course and semester arrangement. Perhaps they failed to understand or accept their role as facilitators for student learning. In fact, the teacher is not required to engage in extended and long lectures. The teacher has to guide students towards the achievement of the predetermined learning outcomes of the modules. In other words, it is a question of paradigm shift in educational philosophy. It is this change of philosophy that some teachers do not seem to be ready to accept. According to the observation of one of the interviewed senior teaching staff "*most teachers who strongly argue against block teaching are those who are very much in favor of the traditional pedagogy that considers the teacher as the exclusive source of wisdom. They believe that knowledge is ready made thing to be given to learners."*

The Practices of Modular Delivery via Block Teaching and Staff Reflections

There are two main reasons why it is important to focus on implementation. The first is that, we do not know what has changed (if anything) unless we attempt to conceptualize and assess it directly. We cannot view policies or innovations as something that enter the system or emerge from the system and produces a desirable outcome. Without knowing what is in the 'black box' of implementation, we do not know how to interpret the outcomes (or their absence). Without closely analyzing the dimensions of the process of implementation, we may not find clear answers to questions like; *is failure due to implementing poor ideas, or due to the inability to implement good ideas? Is success due to a well-implemented innovation, or is it due to some extraneous factor?* In short, without implementation data we cannot link a particular change to learning outcomes (Solomon, 2006, pp.53-80). The delivery of the modular curricula, as practiced and reflected by the academic staff is therefore the means used to examine and understand the issue under discussion.To this end, the staff were given 6 broad statements of activities and procedures presumed to be followed during the block teaching delivery. They were asked to decide whether or not the given statements of activities and / or procedures are applied in their modular delivery of the master's programs. Accordingly, the responses of the respondents are summarized, organized and presented in Table 7.

Table 7: Academic Staff Reflection on their Practices of Modular Delivery

	Do the following activities and procedures apply to the way you actually deliver a course / module in the Master's program?	N	Yes		No		Not Sure	
			f	*%*	*f*	*%*	*f*	*%*
1	My course /module delivery at the masters program is purposely and systematically subdivided in to three general parts: interactive teaching learning, self- learning by students, and collaborative learning among students	113	81	71.7	10	8.8	22	19.5
2	I taught strictly about 40% of the module in the classroom using block teaching of 3 to 4 hours a day for about 6 days.	113	66	58.4	24	21.2	23	20.4
3	I provided students with guidelines and assignments so that they learn 40% of the module independently	116	88	75.9	13	11.2	15	12.9
4	Students completed their assignments and tasks (40% of the module) and submitted their work and made presentation of their works in the classroom for about 6 days, 3 to 4 hours a day	112	59	52.7	30	26.8	23	20.5
5	Students were divided into small groups and undertook group discussions of the contents of the module and assignments under my facilitation. This covered about 20% of the module	114	65	57.0	29	25.4	20	17.5
6	At the end of the course/module delivery I met students and discussed the relevance and contribution of the course/module to their learning goals	109	53	48.6	42	38.5	14	12.8

The aggregate mean score of all respondents has been 14.33 which is significantly above the uncertainty (neutral) score on the scale (12). This means the majority of the respondents currently teaching the modular system are largely doing the way it has been recommended for the master's programs. About 71.7 % of the respondents indicated that the module they are offering has been purposely and systematically subdivided into three

general parts: interactive teaching learning, self- learning, and collaborative learning. Furthermore, about 75.9% of them claimed that they have provided their students with guidelines and assignments so that the students could learn 40% of the module independently.

However, it does not mean that those who are delivering the modules as per the guideline are doing things perfectly. It only means that they have already entered the system and are trying to do the way they understand the program within the context of the university. On the other hand, the data showed that there are still programs that are not modularized. There are also programs that are nominally modularized but the delivery is semester-based arrangement. This is more evidenced from the interview data secured from deans, department heads and teaching staff. One of the interviewees, for instance, has the following to say, when asked, whether or not all master's programs in his college are modularized:

> Yes, nominally they are modularized. We are not comfortable with the way a module is prescribed to be subdivided into students' and teachers' parts. We are not sure whether the prescribed approach can apply in science the same way it applies in social science fields. In chemistry, we always give lecture and then direct students for further exploration and problem solving. What is new now? What is the idea of the so-called "independent learning"? The practice of giving lecture, assignment, group work and project had been there always in our previous system**...**To be frank with you; we simply changed the tag of the previous course into a new tag, and named it module. We did nothing else.

He then went on arguing the inappropriateness of the modular delivery for natural science as follows.

> How can a student grasp and apply properly advanced knowledge and skill in a very short period of time. It is hardly possible in [Science] and similar highly scientific and sophisticated courses. Perhaps, it may be possible in some relatively soft fields of studies in the areas of social sciences and humanities but not in natural science**. .....**There must be flexibility of applying this approach of modularization. It should be implemented contextually based on the nature and requirement of the discipline instead of trying it across the master's programs in the university.

The review of the modularized master's curricula of some of the programs also indicated that there are some programs that are not yet modularized. Even many of the curricular documents that are claimed to have been modularized are observed not to have followed the guidelines stipulated by the school of graduate studies. There are many activities which are inappropriately practiced.

Staff Attitude to and Practices of Assessment and Evaluation

The modular approach to teaching and learning has important implications for the traditional practice of student evaluation. The traditional written final examination alone could no more be a valid instrument to evaluate students' performance and achievement. The modular approach therefore has a potential advantage to change our assessment tradition into modern, competency based, and continuous assessment. Betts and Smith (1998, p.8) argue that modular approach is a way for valid and innovative assessment and students' evaluation when they state:

> Modular programmes, which emphasize continuous assessment and therefore diversity of assessment practices, encourage institutions to move away from the traditional examination which fails to access or assess, in any direct measure, many of the professional skills. [Modular approach] programmes encourage innovatory methods of assessment directly linked to the learning outcomes identified within the module.

Accordingly it implies that teachers are required to consider how to structure teaching and learning activities in order that outcomes might be achieved and measured through assessment. Students in the modularized programs at both undergraduate as well as postgraduate levels become aware very quickly of the rules governing the game and are therefore able to challenge the taken-for-granted mores of institutions. According to the AAU's BPR document, instructors need to conduct continuous assessment and evaluation during the semester by keeping a record of each student's performance, participation, efforts and general progress. Furthermore, upon completion of the module the Course Team (CT) or instructor is required to prepare comprehensive examination that covers all aspects of the module (BPR report, p.92). In order to verify the above, the academic staff were given 10 statements and asked to indicate their level of agreement or disagreement. The overall responses of the staff are summarized and depicted in the following table.

Table 8: Academic Staff Attitudes towards Assessment and Evaluation

	In the modular approach :	N	Strongly Disagree		Disagree		Uncertain		Agree		Strongly Agree	
			f	%	f	%	f	%	F	%	f	%
1	the evaluation process simultaneously assesses knowledge, attitudes, and skills	119	9	7.6	11	9.2	29	24.4	45	37.8	25	21.0
2	the evaluation process suffers from lack of validity because no mechanism has been introduced for assessing collaborative learning	119	18	15.1	31	26.1	35	29.4	26	21.8	9	7.6
3	the assessment period is too short for instructors to know the students	118	30	25.4	31	26.3	17	14.4	28	23.7	12	10.2
4	students have a stake in the evaluation process	120	15	12.5	15	12.5	43	35.8	27	22.5	20	16.7
5	students get proper feedback about their learning	120	10	8.3	9	7.5	34	28.3	46	38.3	21	17.5
6	the evaluation process helps learners develop better understanding about their learning progress	117	6	5.1	8	6.8	32	27.4	43	36.8	28	23.9
7	teacher-student conflicts are minimal particularly relating to grading	120	11	9.2	13	10.8	33	27.5	39	32.5	24	20.0
8	the evaluation process is objective	117	3	2.6	17	14.5	17	14.5	48	41.0	32	27.4
9	the evaluation process is transparent	118	6	5.1	10	8.5	15	12.7	42	35.6	45	38.1
10	better accountability in grading is the characteristic of modular curricula	118	6	5.1	6	5.1	51	43.2	36	30.5	19	16.1
	Mean Score = 33.30											

The aggregate mean score of the responses of the academic staff was 33.30 which numerically is higher than but statistically very close to the neutral point on the scale (30). Accordingly, it can be concluded that the staff of the Addis Ababa University in general are inclined to have of favorable attitude to the assessment and evaluation reforms imbedded in modularized Masters

Curricula. However, the fact that there is statistically insignificant difference between the mean value (33.30) and the neutral point on the scale (30) shows that the number of staff who have negative attitude is not significantly less than those who have positive attitude . This has been observed in the interview data when some instructors tended to associate the unusual high rate of failure of their master's students to the evaluation scheme. To this end, one senior staff has the following observation and reservation about effectiveness of the assessment and evaluation scheme.

> After we completed first semester through block teaching, students were evaluated on each module. Accordingly, out of 64 students 24 failed in their semester cumulative results. This is a big number. We have never experienced this many students' failure in a semester. This is the first time when almost half of the students in the program failed to get the minimum pass GPA.

The interviewee associated this failure of students neither to their inability to learn nor to their poor academic background. He put the blame on, the inappropriateness of block teaching. He then went expressing his reservation and dissatisfaction as:

> On the basis of the information I have from students and staff as well as my students' evaluation result, I haven't seen the advantage of this approach towards improving students' performance and achievement .I taught two modules and evaluated students in both modules. This year's students' performance and achievement is less than that of the previous years. I am not satisfied with my students' performance and achievement in the two modules I completed.

At this juncture, one has to ask whether the problem lies in the delivery system or in the kind of assessment and evaluation employed. Most of the teaching staff seem to have been trapped between the new requirements of pedagogy, assessment, evaluation and their strong and rigid belief and life

long tradition. To this end, the revolutionary nature of BPR in general and of the modular delivery in particular can better be understood from words of Betts and smith's (1998:5) cited below: *… Modular system represents a fundamental and revolutionary change to the curriculum. It cannot be grafted on the existing institutional practices piecemeal. It sits uncomfortably within the existing national structure. The move towards [modular approach] requires changes in organizational systems, procedures and frame works.'* At this stage we need to be clear that a modular approach is incompatible with the traditional system of assessment and evaluation. Therefore, a lot needs to be done to bring a radical shift in the assessment, evaluation and grading system that currently at work in the university.

Staff Views and Practices Regarding Human and Material Resources

Instructional facilities encompass materials through which teaching and learning processes are carried on. They also include the physical environment of the classroom. The success of curriculum implementation is often restricted by lack of facilities, equipment and teaching resources in the teaching learning organization. As Pratt (1994, p.258) described it, one of the major factors in successful implementation of innovation is whether useful, high-quality instructional materials accompany the curriculum. According to Pratt teachers should be provided with materials and any other necessary resources that help them teach effectively. Similarly, students should be provided and supported with resources necessary for the desired learning outcomes to be achieved. With this in mind, the staff members were given 6 broad statements related to the status and availability of resources and instructional materials for the implementation of the modular curricula. Accordingly, their responses are presented in Table 9 below.

Table 9: Staff's Views and Experiences Regarding Materials and Resources

	In the module (s) that I offer:	N	Yes		No		Not Sure	
			f	*%*	*f*	*%*	*f*	*%*
1	Module-related reading materials are available for the module	119	55	46.2	48	40.3	16	13.4
2	Instructional resources and aids are available to enrich provision of the module	118	36	30.5	64	54.2	18	15.3
3	Modular material is prepared to students to use in the learning process	120	53	44.2	47	39.2	20	16.7
4	Guest lecturers and other experts are invited to share their experiences on specialized topics	118	32	27.1	72	61.0	14	11.9
5	Field visits, student practical and other teaching strategies are integrated into the modular course	117	53	45.3	50	42.7	14	12.0
6	Modular material is produced to provide opportunities for efficient use of time	119	57	47.9	38	31.9	24	20.2

The aggregate mean score of all respondents on this scale was 11.72. This mean score is a little lower than the point of uncertainty (12) indicating that the majority of the staff are not happy about the availability of resources necessary for the implementation of their modular curricula. For instance, according to 40.3 % of the teaching staff module related reading materials are not available for the modules they are assigned to teach. Instructional resources and aids necessary for the proper implementation of the modules are also not available according to 54.2% of the teaching staff. It can therefore be concluded that the teaching staff are teaching under inadequate resource provision and in the context that is not compatible with the principles of modular delivery and block teaching. The interview transcript quoted below represents the views and concerns of many teaching staff in

the College of Natural Science. Many other schools and faculties may also share the concern.

> Currently there is a serious problem of resource and lack of conducive administrative context necessary for proper implementation of the modular master's program. There are currently all sorts of obstacles including even shortage of basic stationery items. Accordingly, it can be said that, as opposed to the aspiration of the BPR, the teaching learning process has been challenged and weakened more than before. Currently, teaching in this university is not in its ideal situation.

Resource is important and necessary not only for the modular system and block teachings but also it is essential in all other possible options.

Academic Staff Attitudes to and Views about the Outcomes of the Modular System

The academic staff involved in the study were given 6 statements and asked to show their level of agreement with disagreement for each statement using a five point scale. The overall responses are summarized and presented in the table below.

Table 10: Staff Views about the Outcomes of the Implementation of the Modular Approach

	The modular approach is:	N	Strongly Disagree		Disagree		Uncertain		Agree		Strongly Agree	
			f	%	f	%	f	%	f	%	f	%
1	meeting intended learning outcomes	113	13	11.5	32	28.3	45	39.8	12	10.6	11	9.7
2	promoting concomitant learning	111	5	4.5	42	37.8	45	40.5	11	9.9	8	7.2
3	enabling efficient use of aids, resources, and time	115	17	14.8	31	27.0	32	27.8	24	20.9	11	9.6
4	improving quality and student performance	115	11	9.6	23	20.0	45	39.1	21	18.3	15	13.0
5	encouraging life-long learning	115	14	12.2	26	22.6	48	41.7	17	14.8	10	8.7
6	Improving students' class attendance and participation	115	19	16.5	50	43.5	29	25.2	11	9.6	6	5.2

The collective mean score of the responses to the 6 items on the scale was 16.59. This mean value is lower than the neutral point (18) on the scale and significantly far from the possible maximum in the negative direction. It therefore indicates that the majority of the respondents do not have favorable attitude toward the expected outcomes of the modular system. They do not believe that the modular system could achieve its intended learning outcomes. This however does not imply that the majority of the staff possesses either extreme negative attitude to or is hostile to the modular system. It only implies that a significant portion of the teaching staff are not yet convinced that the modular system could really achieve the aspired learning outcomes. Put differently a significant portion of the academic staff are not yet sure whether or not the implementation of the modular system will be successful.

Conclusion

Attitudes towards the Modular Approach

The quantitative analysis showed that the staff largely have a positive attitude towards the modular program. However, the number of staff who have negative attitude is not significantly lower than the number of those who have positive attitude. The interviews conducted also showed that there are serious and sometimes pungent arguments against the modular program. The negative attitude is however not evenly distributed among the different colleges and schools. It seems more pronounced among the staff of the College of Natural Sciences. Generally however the newly introduced system is clearly faced with colossal reluctance. The source of this could be lack of understanding of the new system or fear of the unknown. Many instructors tend to see the block teaching in particular as less productive; excessively regimental and very much limiting in content, depth of analysis, ease of learning, cultivation of creative thinking and enhancement of knowledge. Instructors are the major instruments for curriculum implementation. They can do this only if they are convinced and committed. Changing the attitude of the staff with negative disposition towards the modular program in general and the block teaching in particular is of at most importance. Pushing forward with the program without doing this might lead to incalculable and inexcusable damages to the knowledge and skills of the professionals the university purports to produce.

Misconceptions about the Program

Many members of the academic staff tend to equate the modular program to block teaching. The most radical components of the program like interactive teaching, independent study, collaborative learning and continuous assessment do not seem to be well understood. The interactive teaching, for example, is based on the assumption that instructors are likely to cover less material; structure use of time very well; choose illustrative material and provide fewer but deeper topics. Instructors are also expected to employ a

variety of teaching methods, and establish a comfortable classroom environment. The comments made by some instructors with regard to interactive teaching include the following “bombarding students with volumes of facts, theories and techniques”; “the discomfort is like the drudgery of working in a factory “; “I could not find enough time myself let alone bring a guest lecturer”; “It is something like asking a child to consume the equivalent of a week’s lunch as a single meal.” These are but only few indicators of the prevailing misconception. The major paradigm shift in the educational philosophy is that the instructor is a facilitator and should guide students towards the achievement of the predetermined outcomes. However some instructors still consider themselves as the only source of wisdom and tend to pour knowledge to students’ mind and cover everything by themselves.

The Teaching - learning Process and Assessment

The study has indicated that there are still programs that have not modularized their curriculum and continued in the old system. Most of the instructors have, however, indicated that they have modularized their curriculum. A review of some of the modules has indicated that they do not meet the standards set by the graduate school. And this indicates lack of skills or acceptance on the part of the instructors. Besides, even those who have suitably modularized the curriculum do not seem to have properly adopted the teaching learning process and the mode of assessment.

Implementation without Preparation

The BPR document stipulates a number of activities to be carried out before the commencement of the module. Among these are: Course Team /instructor develops content material for the course/module, CT/Instructor uploads the syllabus and the content material for the course/module on the webpage of the Department/Program unit a month before starting delivery of the course/module. The Department/Program unit ensures that classrooms, adequately equipped laboratories and other support facilities are ready. None of the colleges (other than a few schools that had started the modular approach prior to the current change), had the opportunity and the ability to

carry out such preparations. The haste with which the program was implemented did not provide a breathing space for the academic units.

Radical changes such as the modular approach require a major system transformation. The institution has to provide commensurate resources the change demands and appropriate guidelines for operationalizing the newly introduced activities. Besides the shortage of necessary resources, the study has revealed a host of administrative and academic problems which need immediate attention of the concerned authorities.

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