

Assessing the Implementation of Modularization Approach in Adigrat, Axum, Samera, Woldiya and Mekelle Universities.

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Abstract: *The main objective of this study was assessing the implementation of modularization in Adigrat, Axum, Samera, Woldiya and Mekelle, universities. These universities are located in the northern part of Ethiopia and adapted modularization curriculum aiming at producing self contained and independent citizens. Thus, teachers' awareness, teachers' perceptions and factors that impedes the implementation of the curriculum were assessed. 10 teachers and 20 students from every department were selected by using simple random sampling as a participant for these study and university principals from every university were also participated. Open and close ended questionnaires were used to collect data both from teachers and students. Structured and semi structured interview was employed to collect data from university principals. The data obtained from the participant were analyzed both quantitatively and qualitatively. Finally, the results of this study indicated that teachers have limited knowledge about modularization and its implementations. In addition, lack of pre- and in-service trainings, large class size, lack of continuous assessments, and lack of assessment feed backs poor background of students, lack of incentives and teachers experience affecting implementation of the modularized approach. Accordingly, recommendations were given by the researcher.*

Keywords: Modularization, curriculum

1. Background of the Study

Module is a measured part (or course) of an extended learning experience leading to the attainment of a specified qualification(s), for which a designated number of modules is required, with the group of required modules known as a program. (Theodossin 1981).

Similarly, Goldshmid in van Eijlet et al. (1988) also defined a module as a self-contained, independent unit of a planned series of learning activities designed to help the student accomplish certain well-defined objectives. Similarly, Luckett (1997) defined a module as a coherent, self-contained unit of learning, designed to achieve a set of specific learning outcomes that are assessed within that unit of learning.

In the Ethiopian context, many reforms had been conducted in the education sector, especially in the higher education institutions (HEIs). Nowadays; institutions have used BPR (Business Process Re-Engineering) as an instrument to implement the reform. In the re-engineering of the teaching-learning core process, modularization was proposed as a best way for the implementation of curricula and production of competent global graduates (MOE: 2012). The main purpose and goal of modifying the curricula or introducing new curricula is the improvement of the teaching and learning process, as well as the quality of knowledge, skills and working competences, gained and mastered by student in the process of adoption of the curricula.

According to the guideline prepared by ministry of education, there are a number of reasons why HEIs opted for modularization. The primary reason is that the existing curricular are discipline based and the courses are fragmented. They are not organized around competences. Consequently, the HEIs do not produce competent graduates. Students who drop out from universities are

simply wastages because they cannot be certified in any of the competences as a result of fragmented courses. The second reason is that the existing curriculum does not say anything about student work load which is very important for students' success in their academic life. The third reason is that there is a loose connection between the world of education and the world of work because of the inherent problem of the existing curriculum.

According to the guideline for modularization to Ethiopian higher education institutions prepared by ministry of education in 2012, currently, many universities have already started implementing the modular approach following the result of institutional transformation studies (BPR).

Adigrat, Axum, Samera, woldiya and Mekelle University are amongst the universities that have started applying the modularization approach. Even though modularization has a recent history, the researchers believe that assessing its implementation was so important and timely so as to find out solution for the problems that may be encountered from the very beginning.

2. Objectives of the Study

Major objective

The main objective of this study was assessing the implementation of modularization in Adigrat, Axum, Samera, woldiya and Mekelle, universities.

2.1 Specific objectives

The specific objectives of this study were;

- 1) To explore teachers awareness on modularization.
- 2) To find out teachers perception towards implementing the newly adapted modular approach.
- 3) To identify factors that hinders /impedes the implementation of modular curriculum.

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4) To identify solutions for the challenges of the implementation process and illicit best experiences to be shared by the national universities as a recommendation.

3. Method

3.1 Data Sources

The study was relied on primary and secondary data sources. The primary data sources were acquired from university instructors, students and university officials of the five target universities of this study.

3.2 Data Collection Tools

3.2.1 Questionnaire

Questionnaire was used so as to gather more general information from teachers and students. The researchers had used two kinds of questionnaires. Both open and close ended questions were prepared.

3.2.2 Interview

Another major data collection instrument used was an in depth interview with university principals; particularly college deans.

3.3 Data Analysis Tools

Qualitative and quantitative data analysis tools were used. But this research mainly used quantitative data analysis by using simple percentages.

3.4 Sampling

All the universities that are located in the northern cluster were selected purposefully. In addition, 10 teachers and 20 students from each department were randomly selected to fill the questionnaires.

4. Data Presentation, Analysis and Interpretation

The Data presentation, analysis and interpretation consists three parts; teachers' awareness about modularized curriculum, teachers' perception towards implementing the newly adapted modular approach and factors that hinders /impedes the implementation of modular curriculum. The analysis under teachers' awareness and perception was carried out mainly by analyzing the data obtained from teachers' questionnaire and officials' interview. And the analysis under factors that hinders /impedes the implementation of modular curriculum was carried out by analyzing the data gathered from students' questionnaire.

4.1 Teachers' Awareness towards Modularization

Teachers were asked how they evaluate their knowledge about modularization, and most of the teachers responded that they have limited knowledge about modularization so far. And this hinders teachers why students take specific module and determine content, mode of delivery and assessment techniques as well. Teachers were asked if they have ever taken any courses or trainings related to modularization method that can help them its implementation, and 82 % of them responded that they have never taken any courses and trainings .Only 18% of then have responded that they have exposures with modularization. In addition officials were asked if the universities have prepared trainings and courses with regard to modularization, and they replied that they have organized trainings repeatedly .But they suggested that most of the trainings were given for university officials, especially for department heads.

4.2 Teachers' Perception

The researchers/investigators used close-ended questions. The analysis was made using simple percentages. The researcher rated the levels of scales from 'strongly agree' to 'strongly disagree' as well as from the 'most serious' to 'not serious'.

No	Item	Strongly agree	Agree	Undecided	Disagree	Strongly disagree
		%	%	%	%	%
1.	Learning occurs when learners are active and fully engaged in the teaching learning process	56	34		6	4
2	Teacher's role in the class room should be facilitating rather than controlling	36	22	19	11	12
3	Learning is self- motivated	42	24		25	9
4	Knowledge is constructed by the student himself/herself	32	28	11	13	16
5	Students learn better if given more chances to learn themselves other than teacher's domination.	38	40	9	8	9
6	Modularized approach enhances students self- confidence	24	27	21	19	9
7	Assessments and tests should be used as a method of teaching and learning rather than as administration	20	28	11	27	22

1) Teachers were asked to rate their level of their agreement if learning occurs when students are soundly engaged in the teaching learning process. Accordingly, most of the teachers, 56% strongly agreed and 34% of them agreed. Only little number of teachers expressed their disagreements.

2) Teachers were asked to rate their level of agreement whether the role of teacher should be facilitating or controlling learning. The out numbering (36%) responded strongly agree and 22% responded agree. The rest 42% of the respondents rated the item as undecided, strongly disagree and disagree.

- 3) Item3 was aimed in finding out to what extent teachers agree that learning mainly occurs from students' self-initiation. As it is possible to see from the above table, most of the teachers (66%) showed their strong agreement/agreement on the matter. However, 34% of the teachers indicated their disagreement. Therefore, it is possible to say that the dominant teachers are positive that learning is self – motivated.
- 4) Item 4 was prepared to find out teachers perception on whether knowledge should be constructed by the students themselves. The majority of the teachers (32%), (28%) showed their strong agreement /agreement. (11%) of respondents didn't say anything on the issue. However, the rest of teachers (29%), expressed their disagreement.
- 5) It was prepared to know teachers perceptions whether chances should be given to students or all the activities should be done by the teachers themselves. In this regard, almost all respondents (78%) generally agreed that chances should be given for students. Few of the teachers (9%) undecided on question. Insignificant number of students disagreed on the issue. In other words, almost all the teachers replied that the classroom should be dominated by the students and more time should be given for the learners activate in the classroom. Thus, it can be generalized that most of the teachers have a positive perception on the newly adapted approach i.e. modularization.
- 6) This was designed to obtain teachers 'attitude whether modularization enhances students' self- confidence. 24% and27% of the teachers showed their strong agreement/agreement but 21% of them could not decide on the point and 28% clearly showed their disagreement. Most of teachers expressed their positive attitude on the implementation modularization.
- 7) This item was designed to find out teachers' perception whether or not assessments should be used as a tool for a teaching and learning process. Here, only 48 % of the teachers answered that assessments and tests should be used as a tool for a teaching and learning process.11% of the respondents answered the undecided option. But, the remaining 41% of the teachers clearly showed their disagreements. This implies that most teachers in the target universities use assessments and tests to register students' results rather than using them as an instrument for the teaching and learning process.

4.3 Teachers' response about factors that affect the implementation of modularization.

The following table shows results obtained from the teachers' response about factors that hinders the implementation of modularization. The keys are rated as most serious, serious, moderately serious and not serious.

No	Description	4	3	2	1
1	Large class size	10%	45%	20%	25
2	Lack of adequate pre-service and in service training on modularization	59%	22%	11%	8%
3	Lack of resources (text and reference books, instructional materials	21%	12%	30%	37%

	laboratory equipments etc)				
4	Students' background	59%	32%	5%	4%
5	Teachers' resistance	23%	21%	20%	36%
6	Lack of incentives	54%	22%	10%	14%
7	Teachers' experience	32%	23%	19%	26%

As it is possible to see from the above table, teachers have been asked if large class size is a problem to implement modularization in their universities, and 10% of them believed that it is most serious problem.45% rated large class size as a serious problem .Therefore, more than half of the respondents suggested that large class size is a problem. Therefore it is too difficult to manage the entire students to be engaged in the classroom tasks. Thus, the availability of large number of students in one class might be one of the main factors that hindered the practice of modularized method. However as a few of the teachers said large class size was not a serious problem, the investigator could say that what majority of teachers reflected was more or less true and acceptable.

Most of the participants ,59% believed that lack of pre service and in service trainings are the most serious problems in applying modularization .and 22% of them have also replied that they believe it is a serious problem. Therefore as it is possible to understand from the above figure, there is lack of pre service and in service trainings with regard to implementation of modularization. The inquirer had also corresponding information about this issue from the officials s' interview and informal discussion conducted with the teachers. On the basis of that information, he could say that though the training was given once in a long time, it was not given frequently and specifically for all teachers at the right time. However, it is possible to say that most of the teachers are interested in having training with regard to modularization. With regard to lack of resources only 33% of the respondents believed that it is a problem for the implementation of the modularized curriculum. The out numbering teachers, 77% believed that resources in the universities are not the difficulties to implement modularization. On the basis of these responses, it could be inferred that there is still lack of resources to run teaching learning process very well. Teachers were asked to forward their opinion on students' background. The purpose was to get information whether students' background could be one of the factors that could affect the practice of modularization. Students' background was rated as a most serious problem by 59 % of the teachers and as a serious by 32% of the teachers. The rest 9% of the respondents rated students' background as moderately serious and not serious problem to apply modularization. Therefore it is possible to infer that students 'back ground is one of the problems that hinders to apply modularization. The result indicated that 23% of the teachers believed that teachers resistance is most serious problem to apply modularization .21 % rated teachers' resistance serious problem.20% responded that it is moderately serious problem, and 36% answered that it is not a serious problem Teachers were asked if lack of incentives is a problem in applying modularization, 54% of them replied that it is a

most serious problem and 22% of them rated it as a serious problem. The rest 24 % rated it as a moderately serious and not serious problem. As the above result indicates, 32% of the teachers rated teachers' experience as the most serious problem and 23 % of them rate it as a serious problem.19% of them as moderately serious and 26% as not a serious problem.

4.4 Factors that hinders /impedes the implementation of modular curriculum.

No	Description	Answer	
		yes	No
1.	Do you have enough reference materials in the library, laboratory equipments for your courses?	66%	34%
2.	Do your teachers give you tutorial classes?	58%	42%
3	Do your teachers apply continuous assessment?	56%	44%
4	Do your teachers usually use continuous tests whenever they want to evaluate your academic progress in any courses?	72%	28%
5	Do your teachers show you every assessment results on time?	43%	57%
6	Do you seat for mid semester examination for your courses?	86%	14%

- 1) 66 % of the students replied that they have enough materials in their libraries, laboratory equipments for their courses .Only 34 % of the students believed that they are lacking with instructional materials. Therefore, it is possible to understand instructional materials are not the problems that affect the implementation of the modularized curriculum in the universities.
- 2) Nearly 58% of the respondents replied yes which means their teachers gave them tutorial classes besides their regular classes. However 42% of the respondents answered no, that their teachers don't give them tutorial classes. Most of the students forwarded their agreement that their offered with tutorial classes by their teachers. Therefore, despite the rest 42% of the respondents, it is possible to say that tutorial classes are being addressed in most of the universities. But it should not be overlooked that there are some cases that teachers in the target universities are not giving tutorial classes as the modularized curriculum demands .and this can make students dropout from their courses and can make them wastages .because tutorials are the tools used to compensate the individual differences (pace of learning, intellectual ability, academic background learning styles and strategies, motivation, preparedness and other psychological factors.
- 3) 78 % of the students replied that their teachers apply continuous assessment, but 22% of the students answered that their teachers doesn't apply continuous assessment. Here, majority of the students showed their agreement that continuous assessment is being applied in most of the targeted universities .But it should not be overlooked that there are some indicators about failure in some cases. Generally, it is possible to say that there is a wider room in which students can be engaged in a continuous task.
- 4) Similarly students were asked if their teachers apply continuous tests, and 72% of the students replied that their teachers apply continuous test, whereas 28% of the respondents answered that their teachers doesn't use

continuous tests. Majority of the students agreed that continuous tests are being used in their class rooms. This implies that in most of the universities continuous tests are being applied.

- 5) As it is possible from the above table, students were asked if their teachers show them their continues assessment results on time, and only less than half (43%) of the students replied that their teachers show them their continuous assessment results on time, but the majority (57%) of the respondents responded that they are not able to see their continuous assessment results on time. Even though the previous results indicate that continuous assessment is being applied in most of the universities, this result implies that students are not able to find out their progresses in their courses because their teachers fail to give them timely feed backs. In such cases it even hard to identify students who demands tutorial classes. This is because of the fact that assessment in modularization is progressive in nature; *Student learning should be continuously assessed and timely feedback should be given so that it is possible to capitalize on the outcome of the assessment and take possible action (re teaching and re assessment) for better learning.* Luckett (1997).In addition, it is possible to understand that teachers are using continuous assessment to administer students' results rather than using it as a tool for a teaching and learning process.
- 6) To make sure if continues assessments are really being applied in the target universities students were asked if they Seat for mid semester examinations, and majority of the students (86%) responded that they don't seat for mid semester exams, whereas minority 14% of the students replied that they seat for mid semester exams. Therefore this result indicates that most of requirements that modularization demands are being applied .but still it should be emphasized there are some ways in which continuous assessment are being violated.

Furthermore, the researcher had asked the students to mention the number of assessments they are given to find out the number and frequencies of the continuous assessments.

1. Including final examination, for how many times do your teachers assess/ evaluate you for a given course?

16% of the respondents responded that they are assessed by their teachers less than 3 times within a course, and 28% of the students answered 3-5 times in a course. In the mean time 40% out of total replied 6-8 times and 16% answered greater than 8.summing up the above results, 44% of the students which is a significant figure answered that they are being assessed less than 5 times in a course. This strengthens the previous assumption that some teachers in some universities are using mid semester examinations or the load of the assessments ranges beyond 10 percent. But it should be underlined that most of the students' response indicated that continuous assessments are being given at least 6-8 times per a course.

Finally, students were asked to mention the number of students in their classes to find out if the sizes of the classes are convenient to apply continuous assessments.

2. How many students are there in your class?

61% of the students responded that there are more than 60 students are entertained in their class rooms. and majority of them replied that they exceeds 60 and even goes more than

60. This hinders teachers to apply continuous assessments and tests and even to give timely feedbacks. Students would not also figure out the where about of their progress. Even teachers cannot adapt varied teaching experiences such as varied teaching methods, activities and assessment techniques.

5. Summary, Conclusion and Recommendations

5.1 Summary

Based on the analysis of the data the following results were drawn.

- Teachers have a limited knowledge about modularized curriculum because of lack of adequate trainings
- But most of the teachers have a positive perception on the newly adapted modularized approach.
- Regarding the impeding factors for the implementation of modularized approach the findings of this study indicated that that inadequacy and lack of pre- and in-service trainings, large class size, lack of continuous assessments, and lack of assessment feed backs poor background of students, lack of incentives and teachers experience are the factors that hinders the implementation of modularization.

5.2 Conclusion

Generally it can be concluded that teachers in the universities have limited knowledge of modularization and requires an immediate trainings and courses with regard to its implementation. The teachers had a positive perceptions of the modularized approach. Lack of pre- and in-service trainings, large class size, lack of continuous assessments, and lack of assessment feed backs poor background of students, lack of incentives and teachers experience were seriously affecting the effective implementation of the modularized approach. In general, on the basis of the responses given from the participants from whom the data were drawn, it can be concluded that the implementation modularized approach was not partially in its good form it requires.

5.3 Recommendations

Based on the findings and conclusions so far made, the following recommendations are made;

- 1) As it is possible to see from the results of the study, teachers have limited knowledge about the modularization curriculum because of limited trainings and courses. Therefore it is recommended that the targeted universities need to prepare trainings with regard to modularization and its implementation.
- 2) The result of this research indicates that inadequacy and lack of pre- and in-service trainings, large class size, lack of continuous assessments, and lack of assessment feed backs poor background of students, lack of incentives and teachers experience are the factors that impedes the implementation of the modularized curriculum. Therefore the researcher of this project recommends the following;
 - Universities have to organize in service training that can enhance teachers' knowledge about methodologies.
 - The size of class rooms should be reduced, thus teachers can controls classes.

- Universities should encourage teachers to apply continuous assessments and encourage them to give their students an immediate feedbacks, therefore students can see the where about of their status.
- Universities should encourage teachers by offering different types of incentives as per to their achievements.

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