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Assessment of 'Fx' grading system and modular curriculum implementation in Samara University, Ethiopia

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Fx grading system is a newly incorporated grading system in the Ethiopian higher education curriculum. The system started to apply in 2013, as an element of the modular curriculum, with the intention to a give second chance for students. Currently, this grading system is being implemented in Samara University, Afar, Ethiopia. This study has been conducted using a cross-sectional approach that applying a combination of both qualitative and quantitative methods. The data have been collected from students and teachers as primary sources as well as university's registrar, departments and quality assurance office as secondary sources via interview, questioners, focus group discussion and document analysis. The data collected were analyzed by means of descriptive methods and interpreted using tables, percentages, charts, and graphs. Factors considered in the evaluation were challenges of modular curriculum, Fx grading system with its implementation, continuity of Fx grading system, and factors affecting Fx grading system implementation. The result of this investigation indicates that the contents of the harmonized modular curriculum dealing with Fx grading system, especially on the course content, course code, course ownership, mode of tutorial delivery, mode of assessment, departmental and college level supervision should be revised and modified for effectiveness of the grading system.

Key words: Fx grading system, modular curriculum implementation, Afar.

INTRODUCTION

Contemporarily, developments around the world have brought about increasingly challenging times for higher education. Higher education is becoming challenged by the pressures of mystification, increasing forms of accountability, inescapable competition, new stakeholder expectations, and rapidly changing environment (Taylor et al., 2013).

Education is a process by which human beings of different generations transmit their experiences, new findings, and values that are accumulated over the years,

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in their struggle for survival and development. It enables individuals and society to make all-rounded participation in the development process by acquiring knowledge, ability, skills and attitudes (Federal Democratic Republic Government of Ethiopian Education and Training Policy, 2002).

The emergence of new technologies along with the internalization of higher education can be expressed as the process of integrating an international, intercultural or global dimension into the institutional purposes, functions or delivery of post-secondary education (EUA, 2014).

Indeed, higher education system is a key building block for development of our democratic societies. Teaching and learning in higher institutions should encourage students to develop confidence in their own creative abilities, strong community engagement and a sense of ethical responsibility allied to their humility that comes from learning. Learning is a lifelong phenomenon that demands a lifelong curiosity and commitment. Teaching and learning in higher education is a shared process, with responsibilities on both students and teachers. Within this shared process, higher education must engage students in questioning their preconceived ideas and their models of how the world works so that they can reach a higher level of understanding.

The classical conception of knowledge as school based and discipline oriented should be broadened. Knowledge is an integrative capability. The acquisition of knowledge in itself is not the major aim of education and training. Higher education in Ethiopia has been implemented in traditional, classical conception of knowledge, for a long time. The primary method being used is lecturing which is the oldest teaching method identified as a method of explanation or clarification of contents to students verbally. It is a method where the teacher is more active and students are passive. The method is usually a one-way communication where the teacher narrates or presents on social or natural events, processes, procedures by citing authorities in the field of the subject while providing little opportunity for students to participate. It is criticized by scholars like Paulo Freire (1970) as baking method. It implies that the teacher deposits his knowledge, skills and values into the mind of the students without their active involvement, such a questioning challenging information being deposited.

All public universities in Ethiopia are currently implementing competence based education (CBE) curricula that affected the whole design of academic programs (modularization), assessment of students, and allocation of credits (EcTS) that has brought about a shift in thinking about students' and teachers' workload (Haftu, 2014).

Higher institutions should use modern and competent ways of teaching to achieve their countries development goal. Most modern methods use gapped lecture in which the instructor gives time for students to raise questions, to respond to questions and to comment after lecturing

for a while. Another modern conceptualization is the relation between education and the world of work through competence-based education. It is not difficult to see that competence relates to the world of work. Acquiring and developing competence is more than learning a set of skills. A common term describing the acquisition and development of competence is competence based education and training (CBET), where training is associated with the mastering of skills. In this form of approach, disciplines are practiced in modular activity.

Modularization as a form of curriculum delivery is originated in North America in the second half of the 19th century. In a modular frame work, a degree program is broken down into a series of modules which are effectively self-contained blocks of learning.

Module is designed based on the competence based model where competencies are considered as the capabilities that the students should have after they complete a certain module. It is a set of printed learning materials consisting of well-planned teaching notes and activities which have been carefully laid out for students to work on independently by their own pace. The basic characteristics of good modules are instructiveness, conversational nature, self-pacing and pedagogical sound (Green Paper, 1992). All components of a module such as learning outcomes, contents, teaching methods and assessment techniques are selected based on the competencies that students are supposed to develop up on completion of a given module. In modular approach, the assessment method of each course is predetermined and stated in each syllabus.

Assessment is the process by which the instructor collects information about students that he/she will use to make educational decisions about them. Assessments are not the decisions; rather they are sources of information to the decisions. The information you obtain from assessments can help you make these decisions with more accuracy and efficiency. In modular and competence based education, the assessment is continuous. Continuous assessment is a classroom strategy implemented by teachers to ascertain the knowledge, understanding, and skills attained by pupils. It is a means for collecting information to check students' attainment of the required learning outcomes, the progresses students have made, the problems they experienced in learning, and the effectiveness of your teaching methodologies (Dunne and Carre, 1999).

As a matter of general principle, continuous assessment in the form of tests, reports, assignments, presentations, etc., should be made for every module/course which counts for not less than 50% of the total module/course mark. The remaining 50% shall be allotted for a final exam at the end of module/course. In this approach, the grading system is fixed and includes 'Fx' in addition to the previous known grading system.

On a module/course with practical course, 'Fx' grade is allowed for re-examinations since student fulfilling the

required attendance should score at least 50% to pass that course. The re-exam is given within a week after the beginning of the next semester after being given tutorial lesson for a duration that takes one fifth of the total time given for that course. Then, the grade will be calculated according to harmonized academic policy. For a student who scores 'Fx' for the second time, the grade will be converted into 'F' for status determination and a student who did not take supplementary examination having 'Fx' within two weeks' time due to unjustifiable reason, the 'Fx' shall be converted into 'F' for status determination (Samara University Handbook, 2015).

The implementation of 'Fx' in Ethiopia's higher institutions is perceived differently. Some institutions argue that 'Fx' should be removed from the grading system; while others argue that it should be continued with a limited grade after 'Fx' re-exam. In addition, there are also some assumptions indicating 'Fx' grade is misunderstood and misused by some students and instructors. Hence, Samara University has taken the commencement and decided to assess the 'Fx' grading system and modular curriculum implementation in the university. These reasons are the motives behind this study.

Objectives of the study

General objective

To assess the 'Fx' grading system and modular curriculum implementation in Samara University.

Specific objectives

(1) To review the level of modular curriculum implementation in Samara University
(2) To evaluate the 'Fx' grading system implementation
(3) To investigate the impact of 'Fx' grading system on attrition rate and capacitating students
(4) To assess the attitude of students and instructors towards 'Fx' grading system
(5) To propose possible alternative solution on the continuity of 'Fx' grading system

METHODOLOGY

Organizational profile

Samara University is one of the public universities established by the Government of the Federal Democratic Republic of Ethiopia to provide higher education in the country through teaching, research and community service. It was established in 2006 in Samara town, the capital for Afar National Regional State. The university launched the teaching learning process in 2008 by three faculties and twelve departments enrolling 1867 undergraduate students.

Within five consecutive graduation periods, a total of 4,123 and

189 students have graduated in the regular and in the continuing education program, respectively. Currently, the university has diversified its programs to seven colleges and thirty nine departments. In the undergraduate regular program, the enrollment has grown to 4,594 while the continuing education and summer program have grown to 958 and 654, respectively. In addition to under graduate programs, the university has launched post graduate programs in masters of business administration and masters of public health programs by enrolling 159 students. As a result, the total enrollment has reached 6,365 both in undergraduate and post graduate programs.

At the beginning, there were 21 academic and 6 support staffs. Currently, the academic staff has expanded to 737 of which 681 are males and the remaining 56 are females. Besides, the number of support staff members has reached 751.

Study approach

The study has utilized a cross-sectional approach applying a combination of both qualitative and quantitative methods as mixing of these methods is often considered as the best way of handling research questions through triangulation. Therefore, in this survey study, endeavors were exerted to use both methods in order to generate information from the study subjects and utilize the benefits of each method. In addition, the study has used a descriptive study approach.

Data sources

Both primary and secondary data sources have been used for the current study. Primary data have been collected from instructors and students using interview, questioners and focus group discussion. Secondary data, on the other hand, have been collected from registrar, departments and academic quality assurance director offices as well as from different reports or documents in the university.

Sampling techniques

The sampling techniques used for the study was purposive sampling. Hence, the assessors judgmentally decided to collect the data from the mentioned agents.

For the questionnaire based assessment

(1) Three students who got 'Fx' grade were selected purposively from each department of all batches.
(2) Three students who did not score 'Fx' were taken randomly from each department of all batches.
(3) Three instructors who delivered the 'Fx' tutorial were selected purposively from each department.
(4) Three instructors who did not deliver the 'Fx' tutorial were selected randomly from each department.

For the focused group discussion

(1) Academic quality assurance director, and
(2) All department heads were included.

For the document review

(1) Registrar, academic quality assurance and all department head

offices were utilized for the document based evaluation.

For the interview

(1) Student representatives were consulted.

Data management and analysis

The primary data obtained from the questionnaire, interview and focused group discussions and secondary data from different documents and reports were organized and fed into Microsoft excel software for making the data ready and analyzed further. Descriptive methods including table, percentage, chart, and graphs were utilized to summarize both the primary and secondary data. Furthermore, data collected from interview, focused group discussion and document review were transcribed into word document and analyzed through triangulating with the data collected through questionnaires.

RESULTS AND DISCUSSION

Personal details of the respondents

To achieve the stated objectives, four types of questionnaires were prepared and distributed for all selected respondents. Those questionnaires included students who scored Fx and who did not scored Fx as well as for instructors who provided and did not provide Fx tutorial. Totally, 408 questionnaires were distributed and 356 which is 87.25% has been collected from all respondents.

Modular curriculum implementation and factors affecting its implementation

Challenges of modular curriculum

According to Crosier and Parveva (2013) guideline, there are a number of reasons why higher education institutions opted for modularizations. The existing curricula are discipline based and courses are fragmented. These curricula do not say anything about student workload which is important for student's success and also there is a loose connection between the world of education and the world of work because of the inherent problem of the existing curricula.

However, our finding showed that the harmonized modular curriculum implementation also have major challenges like course owner ship, course content, course sequence, course code, mode of delivery, assessment problem, clear and sufficient time allocation for practical credit hours and absence of updated references.

Regarding course ownership, some courses which belong to one department are coded as other departments. Thus, the courses are delivered to students without their required specialization which in turn affects

quality of education.

In relation to course content, some courses have missed the content which is important and mandatory to achieve the objective of the course. Furthermore, in some courses, the content which are not relevant to course were included and also there are courses sequence problems.

The other major problem of modularization is mode of delivery for the courses, especially in hard science course which are very difficult to deliver in block mode. This results in difficulty of implementing continuous assessment as well as inability of students to acquire the required knowledge from the given courses. Furthermore, there are limitations of facilities and resources such as lack of active and well organized laboratory rooms, absence of updated text books, and harmonized modules and laboratory manuals in the library. Large class sizes are also additional factors that affect the implementation of the existing modular curriculum.

Fx grading system and its implementation

Factors lead to scoring Fx grade

Personal factors: According to Marshall (2014), to reduce the attrition rate of the students, interventions such as enhancing students' vigilance to study, improving their personal communication skills, providing advice to them, supporting them when they are at risk, improving their quality of learning experience and increasing their engagement in practical tasks are found necessary. Our findings, as derived from responses of the majority of respondents (students who scored Fx (38.46%) and those who did not score Fx (47.79%)), the reason for scoring Fx by students was because of their poor preparation. On the other hand, the rest of respondents replied that the reason for scoring Fx by the students was due to illness, poor performance and cheating (Figure 1).

Mode of course delivery: As shown in Figure 2, students who scored Fx (65.06%) and students who did not score Fx (63.11%) responded that students mostly score Fx grade in parallel mode of delivery. In contrary, 7.23 and 7.76% of the students who have and have not taken Fx, respectively, responded that students mostly score Fx in semi block mode of delivery. As it was raised during focus group discussion, the most important reasons for scoring Fx in parallel mode of delivery were: inadequate students' attention to parallel courses as they are busy by block courses and loose grade provision of teachers in block mode of delivery by simplifying modes of assessments due to shortage of time.

Academic status of students: Teachers who gave Fx responded that Fx grade is mostly scored by low, medium and high achievers the share of which are 88.75, 10 and 1.43%, respectively (Figure 3). This result was

personal factors leads to scoring Fx
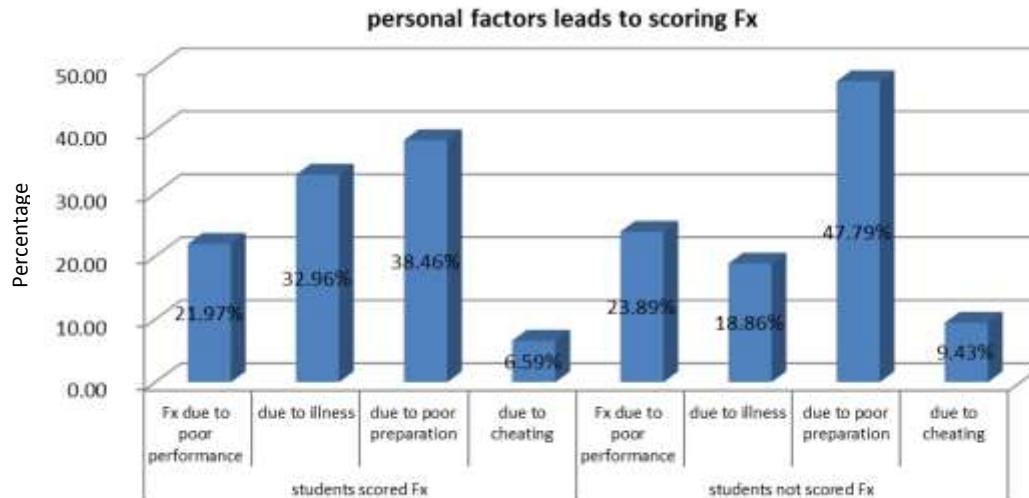
Figure 1. Personal factors leading to scoring Fx.
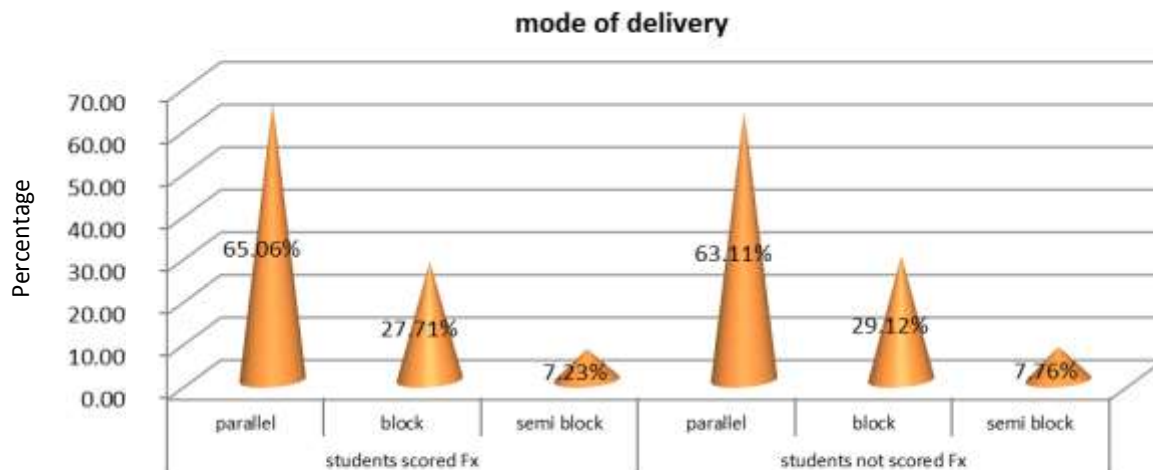
mode of delivery

Figure 2. Mode of delivery vs. scoring Fx.

Table 1. Number of students who scored Fx in each semester.

Status	2014 1st semester		2015 1st semester		2015 2nd semester		Total
	No.	%	No.	%	No.	%	No.
Fail Before FX	168	36.7	34	20.1	114	36.7	316
Pass Before FX	290	63.3	135	79.9	196	63.3	621
Total	458	100%	169	100%	310	100%	937
Fail After FX	64	13.9	14	8.2	59	19	137
Pass After FX	394	86.1	155	91.8	251	81	800
Total	458	100%	169	100%	310	100%	937
Total No. of students in each semester	4,232		4,452		4,132		-

similar with the information obtained from Samara University Registrar Office (2015). As shown in Table 1, on 2014 first semester 458 students scored Fx, out of these, 36.7% failed before taking Fx exam and the

Table 2. Student scored Fx in 2014 and 2015 in each college.

CET		CBE		CSSH		CNCS		CHS		CVM		CDA	
Department	No.	Department	No.	Department	No.	Department	No.	Department	No.	Department	No.	Department	No.
Civil	42	Accounting	44	Amharic	13	Biology	21	Nursing	9	cvm	6	ABVM	14
Chemical	26	Economics	20	English	6	Chemistry	23	Midwifery	9	-	-	Horticulture	20
Electrical	6	Mgmt	129	Geography	25	Physics	15	Health officer	8	-	-	Animal	4
Mechanical	14	-	-	Anthropology	28	Maths	18	-	-	-	-	Plant	31
Computer	59	-	-	Sociology	37	Statistics	20	-	-	-	-	Narm	23
It	27	-	-	History	8	Geology	28	-	-	-	-	-	-
Pre engineering	159	-	-	Civics	19	-	-	-	-	-	-	-	-
-	-	-	-	Law	9	-	-	-	-	-	-	-	-
-	-	-	-	Arabic	2	-	-	-	-	-	-	-	-
-	-	-	-	Afarf	2	-	-	-	-	-	-	-	-
Total st scored fx	333	-	193	-	149	-	125	-	26	-	6	-	92
Total No. students	2,868	-	2,210	-	2,718	-	1,651	-	963	-	305	-	1,915
% age of scoring Fx in each college	11.6%	-	8.7%	-	5.5%	-	7.6%	-	2.7%	-	1.9%	-	4.8%

remaining 63.3% passed. However, after taking Fx exam, 86.1% passed and 13.9% failed. This indicated that the presence of Fx tutorial and exam reduced number of students who failed from 168 to 64. Therefore, the inclusion of Fx grading system contributed to reduce the attrition rate by 2.5%. Similarly, in 2015 1st and 2nd semester, from 34 and 114 students who failed before taking Fx tutorial were reduced to 14 and 59 students in first and second semesters, respectively. This indicated that the Fx grading system reduced the attrition rate by 0.5 and 1.4% in the consecutive semesters.
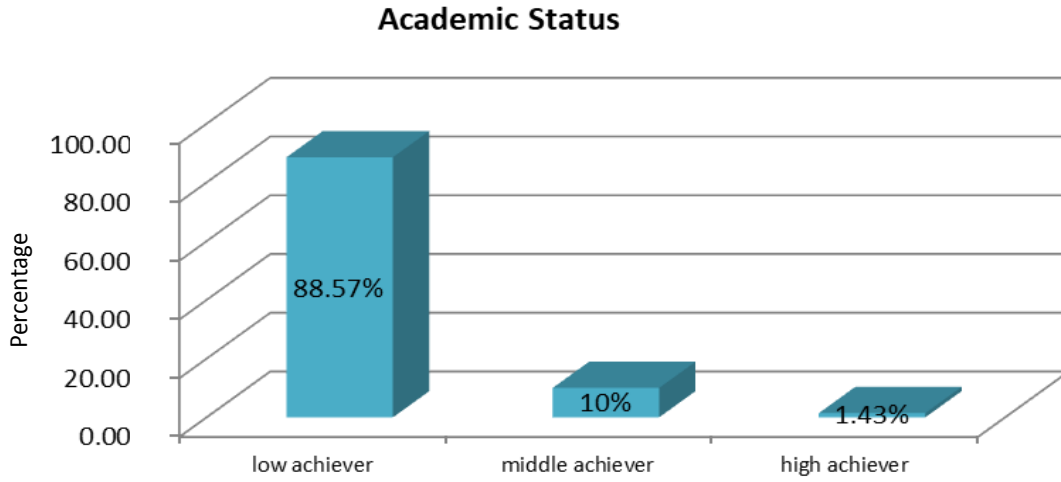
As indicated in Table 2, in 2014 and 2015, out of the total students, 11.6 and 8.7% of the students scored Fx in engineering and Technology College and Business and Economics College, respectively whereas 2.7 and 1.9% of students scored Fx in college of health science and college of veterinary medicine, respectively.

Course category: As indicated in Figure 4, 50, 29.07 and 20.92% of students who scored Fx replied that they mostly score Fx grade in common, major and supportive courses, respectively. As it was explained during the focus group discussion, students mostly scored Fx grade in common courses since they give less attention to these course catagories.

Attitude of students and instructors towards Fx Grade preference: The result indicated that, 92.94 and 93.04% of students who scored and did not score Fx, respectively replied that students prefer Fx grade than D grade. Similarly, 92.94 and 93.04% of teachers who gave and did not give Fx, respectively replied that students prefer grade Fx than D. The respondents further explained that students prefer Fx than D to improve their knowledge and grade.

Importance of Fx

The Fx grading system in the university is considered as an important system for students as it was explained by 81.8% of students who did not scored Fx grade as shown in Figure 6. However, the rest (18.2%) of respondents said that it was not important (Figure 5). On other hand, 42.99, 42.05 and 14.95% of respondents replied that it was important for improving knowledge, grade and survival, respectively. Similarly, 57.6% of teachers who gave Fx grade said Fx grading system is important for students. Moreover, they explained that it may give a second chance for the students who have some difficulties due to different acceptable reasons during an exam to improve their knowledge and grade whereas 42.4% of teachers who have implemented Fx grade responded that Fx grading system is not important for students since the

Academic Status

Figure 3. Academic status of students scoring Fx.

Course Category

Figure 4. Scoring Fx in different course categories.

Grade Preference

Figure 5. Students' grade preference.

Importance of Fx

Figure 6. Importance of Fx for the students.

system pushes the students towards misusing the system.

Factors affecting Fx grading system implementation

Tutorial implementation: The result revealed that 62.19% of students who scored Fx grade responded that they took tutorial while the rest respondents replied that they were not given tutorial during reexamination. Furthermore, 42.68 and 50.62% of the students who scored Fx responded that there is a problem regarding supervision by concerned bodies and time schedule, respectively. Similarly, 72.86, 80 and 87.14% of teacher respondents who implemented Fx grade indicated that there were problems in supervision, clear evaluation criteria and time sufficiency, respectively (Figure 7).

On the other hand, 53.16 and 32.1% of the students who scored Fx replied that there is poor status and time of tutorial, respectively, in Fx implementation. Similarly, 32.39% of teachers who were giving Fx grade explained that there was poor interest of students to take tutor whereas there is poor interest of teachers in giving tutorial as 37.04% of teachers who did not give Fx grade responded (Table 3).

Misuse of Fx by teachers and students: Regarding the misuse of Fx grading system, different perceptions have been figured out from students and teachers (Figure 8). The result showed that, 39.64% of students who did not score Fx and 55.71% of teacher who gave Fx said that students scored Fx purposely whereas 60.36% of

students scored Fx and 44.49% of teachers who gave Fx grade responded that students cannot score Fx purposely. Similarly, 58.02% of teachers who did not gave Fx expresses as Fx was misused by students and 41.98% of them said it was not misused by students; whereas 66.25% of those instructors who did not give Fx said Fx was not misused by teachers and 33.75% of them said it was misused by teachers.

Continuity of Fx grading system

Teachers who gave (54.29%) and did not give (56.25%) Fx grade said that Fx should not be continued as a grading system. The opinion of these respondents about the continuity of Fx was due to the fact that Fx has poor implementation in the university; it makes students to be dependent (carelessness) and students may misuse the system. On the contrary, 72.84 and 70.18% of students who scored and did not score Fx, respectively, replied that Fx grading system should be continued. The argue that students prefer continuity of Fx grading system wishing to score a good grade and to improve their knowledge (Figure 9).

Maximum grade of students score after 'Fx' re-exam

As responded by 57.14 and 65% of teachers who gave and did not give Fx, limiting grade after Fx re-exam is necessary (Figure 10). Moreover, teachers who gave Fx (95%) and did not give Fx (73.08%) prefer grade `C` as a limit after Fx re-exam while other respondents of 5.76
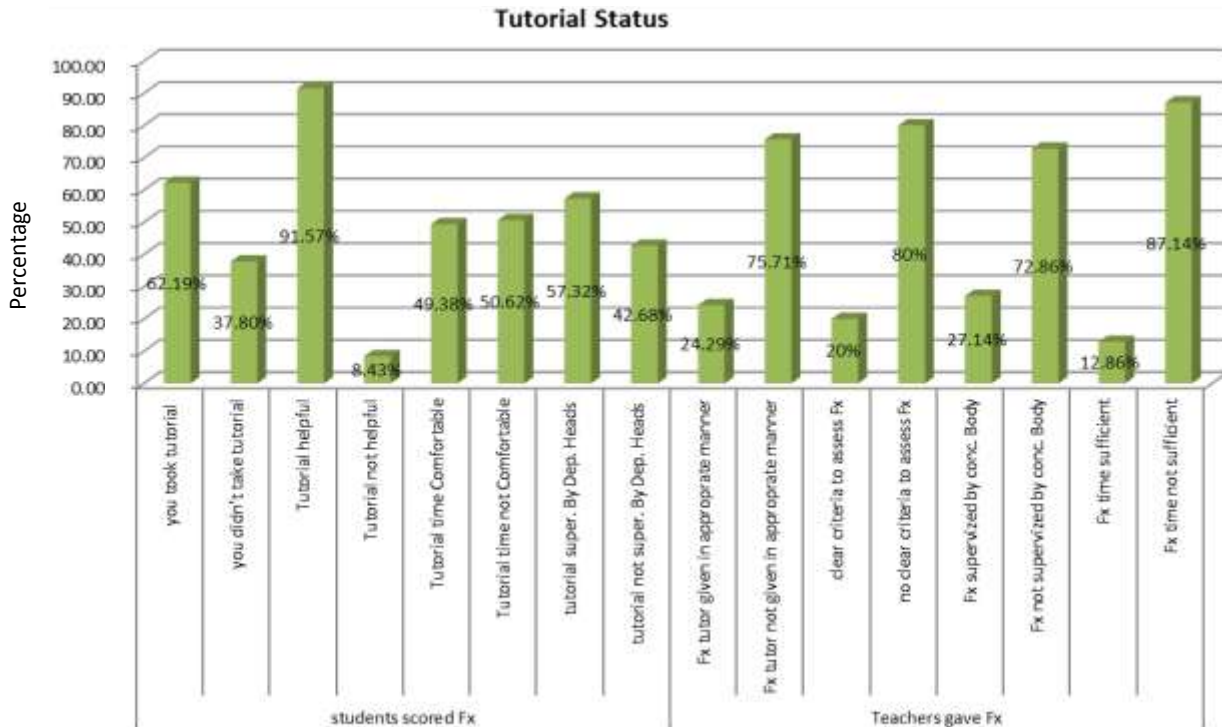
Tutorial Status

Figure 7. Implementation of Fx tutorial.

Table 3. Response of tutorial status and time by different respondents.

Respondent	Description	V.P (%)	PR. (%)	GD (%)	V.G (%)	EX (%)
St Fx	Tutor Status	10.12	53.16	13.92	15.19	7.59
St Fx	Tutor Time	22.22	32.1	17.28	24.69	3.7
Tchfx	Fx supervision	13.04	47.82	17.39	17.39	4.34
Tchfx	Students` Interest to take Fx tutor	14.08	32.39	25.35	22.54	2.81
Tchnfx	Teachers` Interest to give Fx tutor	19.75	37.04	25.93	9.87	7.4

**V.P: Very poor; PR.: Poor; GD: good; V.G: very good; Ex: Excellent.
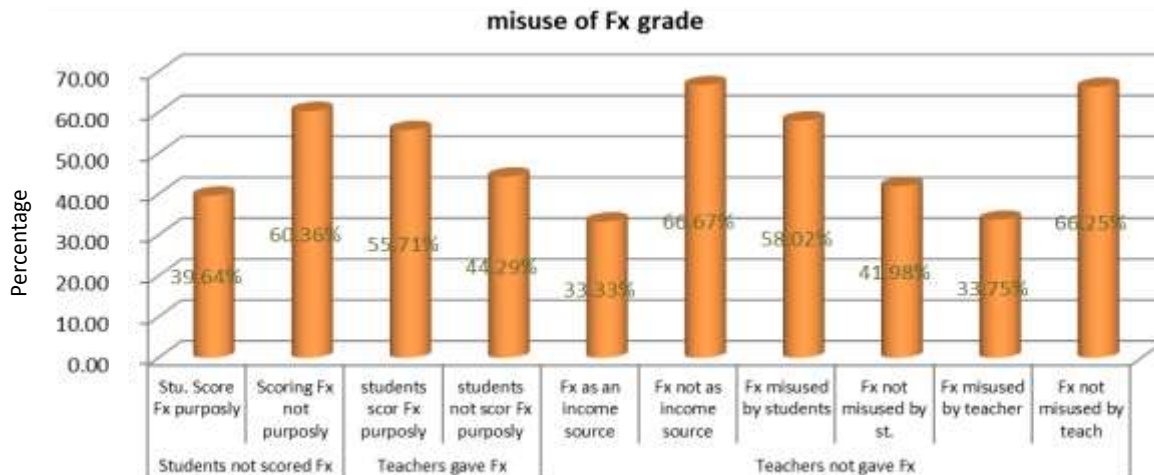
misuse of Fx grade

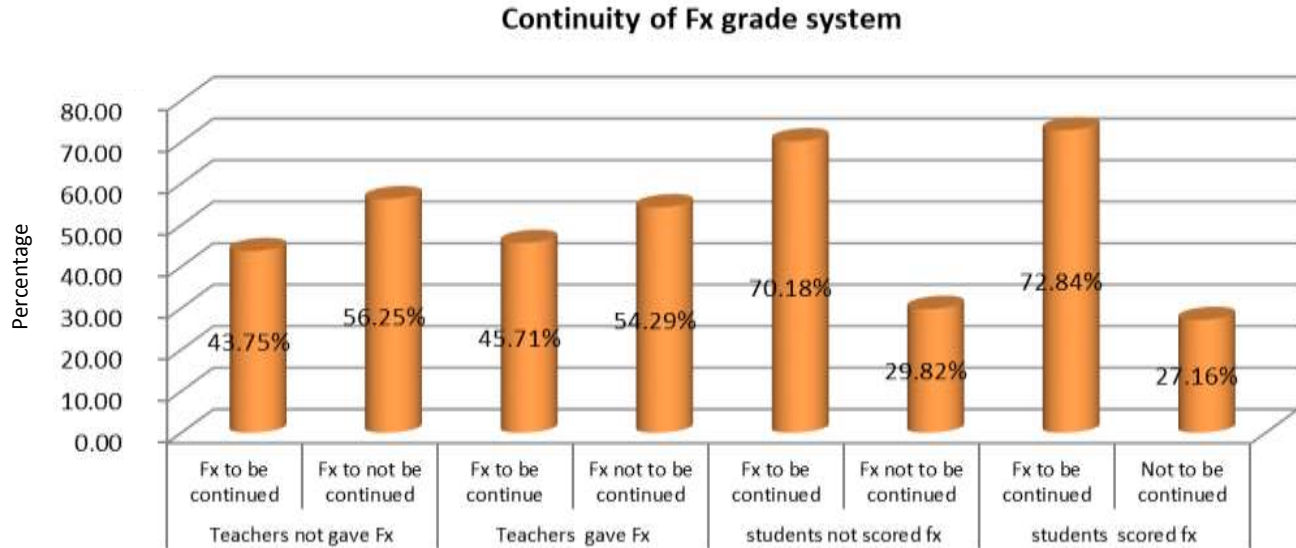

Figure 8. Misuse of grading system.

Continuity of Fx grade system

Figure 9. Continuity of Fx grading system in modular curriculum.

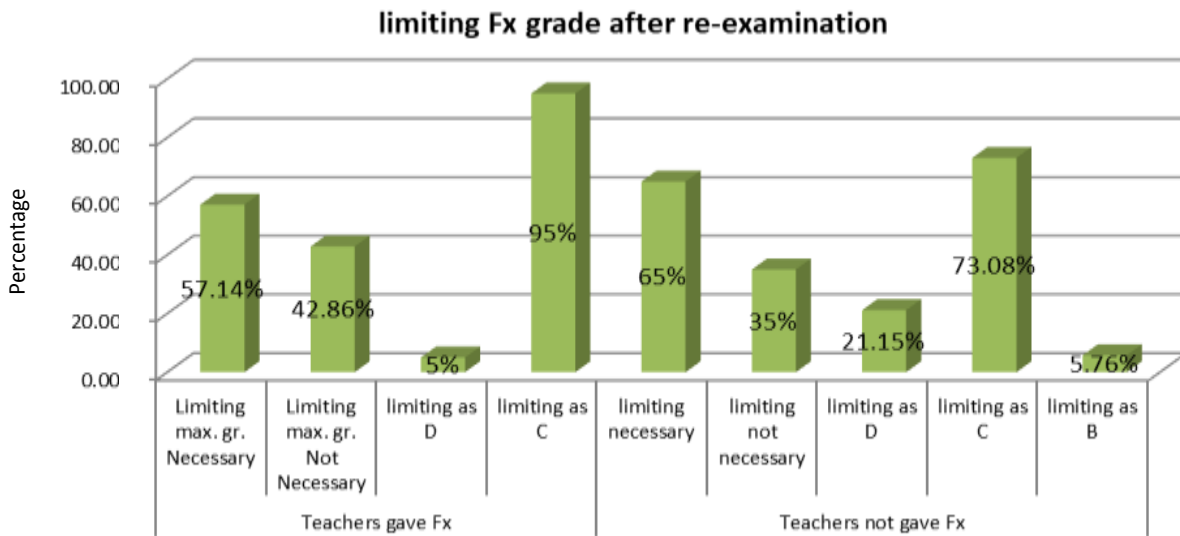## limiting Fx grade after re-examination

Figure 10. Limiting Fx grade after re-examination.

students was poor preparation. Regarding the mode of delivery, parallel mode of delivery ' was selected as a delivery system by which most of the students scored Fx. On the other hand, Fx grade is mostly scored by low achiever students. Concerning course category, it is identified that students mostly scored Fx in common courses. In case of grade preference, students mostly found to prefer Fx to D grade. The Fx grading system in the university was considered as an important system for students to improve knowledge and grade as well as for academic survival as it may give a second chance for the students who have some difficulties due to different acceptable reasons during an exam. However, it was

indicated that there is a problem regarding supervision, evaluation criteria and time sufficiency during Fx implementation. In this regard, the implementation of Fx is also being influenced by other factors such as time of tutorial, poor interest of student and teachers to take and give Fx tutorial, respectively. The result showed that there is a misuse of Fx grade both by the students and teachers. Indeed, it was described that there is poor status of Fx implementation in Samara University. According to teacher respondents, Fx grading system shall not be continued due to poor implementation status; however, if it is continued, limiting grade after Fx re-exam is necessary as grade `C`. On the contrary, students are

interested in the continuity of Fx with improved implementation. As the study showed, Fx grading system reduced the attrition rate. Regarding the frequency of Fx grade, most of the students that have scored Fx were found in technology and engineering college while the lowest Fx grade was recorded in the college veterinary medicine.

RECOMMENDATIONS

(1) There should be a revision on harmonized modular curriculum especially on the mode of delivery, course contents, course code, ownership and mode of assessment.
(2) There has to be supervision by department heads, college quality assurance and college deans during Fx tutorial implementation.
(3) The university needs to have clear evaluation criteria with sufficient time during Fx grading system implementation.
(4) Students should use Fx grading system whenever they face some difficulties due to different acceptable reasons during an exam instead of poor preparation.
(5) Teachers and department heads should identify students who scored Fx purposely and warn them not to do so.
(6) The department heads, college quality assurance coordinators and college deans should supervise the teachers not to misuse the Fx grading system.
(7) For Fx grading system to be continued, limiting grade after Fx re-exam not exceeding grade `C` is necessary.
(8) Even if the Fx grading system has a contribution on reducing attrition rate, the implementation should be reconsidered by the university through continuous supervision, putting a clear criteria for evaluation and fixing the grade after Fx tutorial.
(9) Further studies shall be made to assess modes of delivery and why students score Fx on common courses.

CONFLICT OF INTERESTS

The authors have not declared any conflict of interests.

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