The Level of Student Engagement in Deep Approaches to Learning in Public Universities in Ethiopia

Asnakew Tagele[*]

Abstract: Students benefit from learning if they put forth efforts to engage in deep approaches to learning (DAL). This study was conducted to assess the level of student engagement in deep approaches to learning in public universities. The study involved 717 second and third year (senior) students selected from Woldia, Addis Ababa and Debre Berhan Universities using a combination of stratified and cluster sampling methods from the public universities in Ethiopia. Data were obtained using an eleven-item four-point, Likert-type scale adapted from the American Survey of Student Engagement. Analysis using a two-tailed one-sample t-test showed that student engagement in deep approaches to learning was statistically significantly lower than the expected mean. The result also revealed that course work gave little or some emphasize to higher-order learning and most of the students were sometimes engaged in reflective and integrative learning.

Background of the Study

Ramsden (2003:41) defined approach to learning as the way "how people experience and organize the subject matter of a learning task." Similarly, Entwistle and McCune (2004:328) described it as "the differing ways of interpreting the requirements of the task as it was presented within a specific learning context." Thus, students' approach to learning refers to their study and learning methods,

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[*] Lecturer at the Department of Psychology, College of Education and Behavioral Sciences, Bahir Dar University. E-mail: asnakewtagele@gmail.com

procedures, and cognitive strategies including repetition, understanding, organizing, and elaborating. Similarly, Nelson Laird, Shoup, Kuh, & Schwarz (2008), suggested that approaches to learning refer to the focus, strategies and techniques students use in the learning process. Although a third approach called strategic or achieving approach has been identified, most scholars acknowledge that deep and surface approaches are the most common approaches (Reason, Cox, McIntosh & Terenzini, 2010; Nelson Laird, Shoup and Kuh, 2005; Entwistle and McCune, 2004; Marton and Säljö, 1976).

Students using the surface approach to learning emphasize rote learning and regurgitating the learning material (simply struggling not to forget the facts, concepts, principles, formulae and theories without understanding the underlying meaning) with the intention to remember as much information as possible (Biggs & Tang, 2007; Snelgrove & Slater, 2003). Students who adopt the deep approach to learning (DAL) strive to understand the material, construct meaning from their understandings and apply what has been learned to new situations (Mayhew, Seifert, Pascarella, Nelson Laird, & Blaich, 2011). On the other hand, students who adopt achieving or strategic approach recognize the requirements of assessment and study exerting energy seeking high grades. They switch between deep and surface approaches and their intention is to get good grades (Ferm & Johansen, 2008; Entwistle and McCune, 2004; Snelgrove & Slater, 2003; Gordon & Debus, 2002).

As indicated by Scullion (2002), each of these approaches has a purpose and a strategy dimension as its defining features. The deep approach intends to understand concepts or ideas for oneself, while the intention of the strategic approach is to achieve the highest possible grade and that of a surface approach is to cope with course requirements. Coutinho & Neuman (2008) suggested that DAL is considered the most important approach to learning. Similarly, Gordon & Debus (2002), quoting Biggs (1993), concluded that DAL is the only appropriate one, while both surface and achieving

approaches are inadequate. Moreover, as discussed in the forthcoming paragraphs, only DAL is related to better learning outcomes.

Scullion (2002) suggested that a good student adopts a DAL through a series of strategies including "relating newly studied material to previous knowledge and experience, looking for patterns and underlying principles, checking evidence and relating it to conclusions, examining logic and argument cautiously and critically, and becoming actively interested in the course content. He/she is "reflective, seeks to understand concepts, checks evidence, examines logic and arguments cautiously" (pp. 2-5). Students who adopted DAL purposefully (deep learners) plan "to understand and construct the meaning of the content to be learned" (Gijbels, Watering, Dochy &Bossch, 2005, p. 328) and "see things from diverse perspective, and seek to integrate and synthesize information to making learning conceptually structured" (Wang, 2013, p. 18). Moreover, Biggs and Tang (2007, p. 24) indicated that "deep learners focus … on main ideas, principles or applications".

Similarly, a review by Nelson Laird, Shoup, Kuh, & Schwarz (2008, p.2) indicated that the various strategies used by learners who adopt deep approaches to learning include "… reading widely, combining a variety of resources, discussion of ideas with others, reflecting on how individual pieces of information relate to larger constructs or patterns, and applying knowledge in real world situations" . Ramsden (2003, p.47) has summarized the defining features of DAL in the context of everyday academic studying: (1) relate previous knowledge to new knowledge, (2) relate knowledge from different courses, (3) relate theoretical ideas to everyday experiences, and (4) relate and distinguish evidences and arguments, and (5) organize and structure content into a coherent whole.

Researches substantiated that, of the three approaches, the deep approach is related to quality learning, high achievement and student satisfaction (Wang, 2013; Nelson Laird, Shoup, Kuh, & Schwarz, 2008; Coutinho & Neuman, 2008; Nelson Laird, Shoup and Kuh, 2005; Ramsden, 2003). A review by Wang (2013) showed that deep learners receive higher grades, retain information for longer time, and achieve high qualitative learning outcomes. A similar review by Nelson Laird, Shoup and Kuh (2005) showed that students who use a deep approach to learning tend to retain, integrate and transfer information at higher rates, earn higher grades, and be more satisfied in their educational experience.

Using longitudinal pretest-posttest deign with statistical control and the NSSE DAL scale, Wang (2013) reported that engagement in deep learning generated a significant positive effect on the development of inclination to inquire and lifelong learning over four years. Nelson Laird, Garver, Niskodé-Dossett, and Banks (2008) too reported that a measure of the deep approaches to learning scale on the NSSE survey positively predicted the critical thinking dispositions (B= .96) and reflective thinking skills (B=.75). Moreover, Mahew, Seifert, Pascarella, Nelson, and Blaich, (2012) reported a modest positive relationship between measures of deep approaches to learning on the NSSE DAL scale and moral reasoning at the end of the first year of college even after controlling for precollege moral reasoning.

Another important finding is that approach to learning is improvable. Using cooperative group problem based learning methods, encouraging personalization and personal reflection with reflective learning journals and the exposition of personal theories of learning, and by shifting assessment tasks into essays and written reports, Gordon and Debus (2002) have increased students' use of DAL. Besides, (Gordon & Debus, 2002) reduced students' reliance on the use of surface approaches and it is possible to change from surface learning approach to a deep one. Modifications to teaching methods, task requirements and assessment processes (Gordon and Debus,

2002), providing action-based learning environments (Wilson and Fowler, 2005) and active learning environments (Sivan, Wong Leung, Woon, & Kember, 2000) reduces students' use of surface approaches and increases their use of deep approaches. Improving institutional commitment to student success is another dimension to promote engagement in deep approaches to learning. Campus culture in terms of commitment to student success is an important factor for variations among universities in their student engagement (NSSE, 2014).

Generally, a deep approach to learning results in greater learning outcomes (Nelson Laird, Shoup, Kuh, & Schwarz, 2008; Ramsden, 2003), positively predicts overall grade point average (Zeegers, 2001; Zhang, 2000), positively correlates with critical thinking dispositions and reflective thinking skills (Nelson Laird, Garver, Niskodé-Dossett, & Banks, 2008);Besides, it is associated with an enjoyable learning experience and results in greater satisfaction with college experience (Nelson Laird, Shoup, Kuh, & Schwarz, 2008). As discussed in the preceding paragraphs, approach to learning could be improved and changed. Moreover, engagement in DAL is advantageous to university students regardless of discipline (NSSE, 2005). It is not restricted to a particular subject matter, context, or student (Reason, Cox, McIntosh & Terenzini, 2010).

From the above background information, one can conclude that students' DAL is very much important to develop deeper content knowledge, retain longer, and develop an ability to apply their knowledge and skills to tasks and situations after graduation. Thus, the extent to which university students in Ethiopia are engaged in DAL should be studied and it should get consideration in the governmental and institutional effort to improve student learning in higher education. Since it is related to many positive outcomes, unless students engage in deep approaches to learning, improvements in curriculum, learning materials and management alone may not result in improved learning.

Statement of the Problem

Improving the quality and the employability of university graduates and the sustainable development of research capacity for knowledge creation and technology transfer were renewed priorities of the Ethiopian government (MOE, 2010). There was an effort to improve employability through quality higher education and improved student learning (MOE, 2015). To improve student learning and consequently augment employability, the government focused on transforming higher education. The transformation was started with strategic planning, administration and management, financing, cost effectiveness and efficiency, capacity building and implementation mechanisms of cost sharing (Teshome, 2003); and these were followed by procuring essential educational inputs including books, laboratory materials, equipment, furniture, machinery, chemicals and computers; curriculum was subsequently revised to ensure relevance (MoE, 2005).

Recent initiatives taken for improvement include "harmonizing curricula for all of the undergraduate programs, adopting a modular approach for course delivery so as to enhance active learning, institutionalizing Quality Assurance Offices at each university, and equipping libraries and laboratories" (MoE, 2015, p. 24). There are also capacity-building programs to improve the skill of teachers and other workforce. Although rudimentary, electronic libraries are opened in higher education institutions. Accordingly, promotion and graduation rates are increasing. However, as indicated by Tomlinson (2008) in his study entitled *the degree is not enough,* being a graduate does not guarantee employability. That is why quality of learning in higher education, that is, the competence and employability of graduates continued to be a concern for the nation.

Before forty years, Marton and Säljö (1976) posited that describing learning outcomes as scores gained in a test is inadequate. Nelson

Laird, Garver, Niskodé-Dossett, & Banks (2008, p.5) added that research in the area of the learning process is insufficient because it uses "grades as indicators of academic achievement." In their classical study, Marton and Säljö (1976) suggested the need to describe and measure the qualitative differences in processes of learning. Scullion (2002, p. 2) also proposed "learning is best achieved through study, and qualitative differences in learning are explainable in terms of different approaches to studying." Thus, to improve student learning and consequently augment their employability, there is a need to improve students' approaches to learning.

Living in the era when learners are at the center of the learning process, focusing solely on factors such as materials and equipment, the curricula, teaching competence and others, without equally focusing on students' engagement in deep approaches to learning; may not improve their learning. Regarding this issue, Kuh (2003) suggested that inspiring resources could surround students and students may not take part in activities that engage them in authentic learning. Similarly, Reason, Cox, McIntosh and Terenzini (2010) suggested that unless students put forth effort to engage in deep learning, simply providing a deep learning emphasized context does not benefit them. Similarly, Pascarella and Terenzini (2005, p. 62) concluded that the "impact of college is largely determined by individual effort and involvement in the academic…offerings on a campus".

Although there is a concern that university students are not accountably engaged in deep learning and hence are not well prepared for the job market, there is no research evidence on their engagement in DAL. The purpose of this research therefore was to assess the level of student engagement in deep approaches to learning in public universities of Ethiopia. This study was designed to

find out to what extent university students are engaged in deep approaches to learning.

Methodology

Design of the Study

The purpose of this study was to determine the level of students' engagement in deep approaches to learning in public universities in Ethiopia. To achieve this, data were gathered using a cross-sectional survey research design. That is, quantitative data were collected using a questionnaire.

Sample of the Study:

Currently there are thirty-one public universities in the country, administered by the Ministry of Science and Higher Education. These universities were classified into first, second and third generations based on their establishments or entitlements of universities. Therefore, the sample of this study was selected from such universities using a combination of stratified and cluster sampling methods as described below.

First, the thirty-one universities were stratified into three clusters (generations). Then, Addis Ababa, Debere Birhan and Woldia Universities were selected randomly from first, second and third generation universities respectively. Second, four academic units (colleges/faculties): natural science, social studies, business and economics, and technology were randomly selected from each of the three selected universities. Third, one field of study, mathematics, geography, accounting and civil engineering was also randomly selected from each academic unit. Only accounting and civil engineering had more than one section and one was randomly selected. Where there was only one section, it was simply included. Finally, thirty-five students were taken from each of second and 3rd

year batches (seniors who have more exposure to their institutions and are in the best position to judge the overall undergraduate experience) and where the number of students in a particular batch or section was less than thirty-five, all of them were included in the sample.

As the questionnaire was administered in a face-to-face mode, the return rate was high, 97.6% (from 795 students, 776 of them returned). However, fifty-nine students did not complete the questionnaire and hence they were rejected from analysis. Thus, second and third year students enrolled or pursuing their education in 2015/16 academic year in these 31 universities were the population of this study and 717 students (248, 240 and 229 from Woldia, Addis Ababa and Debre Birhan Universities respectively) were used as a sample for the final analysis.

Data Gathering Instrument

Data were obtained using the engagement in DAL scale of the Revised American *National Survey of Student Engagement (NSSE 2).* The scale is an eleven-item 4-point, Likert-type scale with two subscales-the Higher-Order Learning (HOL) subscale and the reflective and integrative learning (RIL) subscale that assesses the level of students' engagement with activities believed to encourage deep approaches to learning. The scale was translated into Amharic, both forward and backward translation were done, the translations were compared with the original English version, discussed with the translators (language teacher from Bahir Dar University) and finally compiled resulting in a reconciled Amharic version. For the current data, the items of the two subscales and of the full scale were internally consistent (a=.75, .66 and .76 for the HOL, RIL and for the full scale respectively). Using principal component analysis with varimax rotation, its construct validity has been confirmed, items

loaded to their respective subscales with factor loadings ranging from .40 to .72.

In the four item HOL subscale, respondents were asked how often they were required to engage in applying facts, theories, or methods to practical problems or new situations; analyzing an idea, experience, or line of reasoning in depth by examining its parts; evaluating a point of view, decision, or information source, and forming new ideas or understanding from various pieces of information. The seven-item RIL subscale measures the amount students participate in activities that require combining ideas from different courses: connect learning to societal problems or issues, include various perspectives in their course discussions or assignments; how often students examine the strength or weaknesses of their own views on a topic or issue, triy to better understand someone else's views on an issue, learn something that changed the way they understand an issue or concept, connect ideas from their course to their prior experiences and knowledge.

Data Analysis Techniques

Graphs are used to describe students' perceptions of the extent to which their courses emphasized higher-order learning and how often they engaged in reflective and integrative learning. A two-tailed one-sample t-test is computed on engagement in deep approaches to learning scores to evaluate whether the sample means for the complete scale and for its subscales are statistically significantly different from the expected mean for the population using the SPSS 21 computer program version.

Results

The purpose of this study was to assess the level of public university students' engagement in deep approaches to learning. To achieve

this, a deep approach to learning scale with higher-order learning, and reflective and integrative learning subscales was used to gather data from 717 students. Hence, in this section the results of the analysis are displayed. Descriptive statistical results that illustrate the level of students' engagement for the two dimensions of the measure are presented by bar graphs followed by significant testing results.

In the higher-order learning subscale, students were asked to indicate the degree to which their courses emphasized the higher levels of mental processes (applying, analyzing, evaluating, and synthesizing). The result is displayed in Figure 1 below.
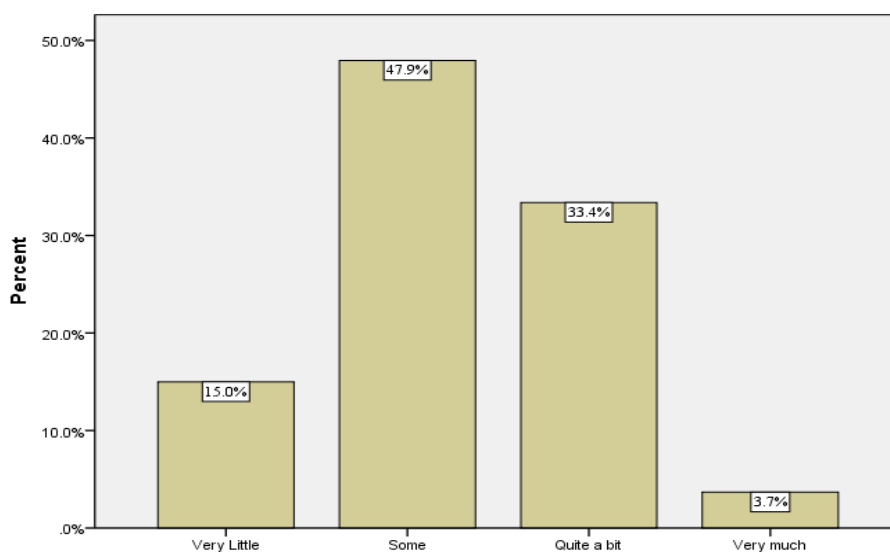

Figure 1: Percentage of respondents indicating their course work emphasis to higher-order learning

Figure 1 presents percentage of respondents about how much their course work emphasized higher-order learning. Nearly half of the respondents (47.9%) indicated that their courses gave some emphasis to higher-order learning. Still a substantial number of

respondents (33.4%) indicated that their course gave quite a bit emphasis to higher-order learning. On the other hand, few (15%) and very few (only 3.7%) respondents showed that their courses gave very little and very much emphasis to higher-order learning respectively. Generally, less than half of the respondents (37.1%) indicated that their courses gave very much or quite a bit emphasis to higher order learning. In other words, more than half of the respondents (62.9%) indicated that their courses never or sometimes emphasize higher order learning. The results for RIL subscale is displayed in Figure 2 below.
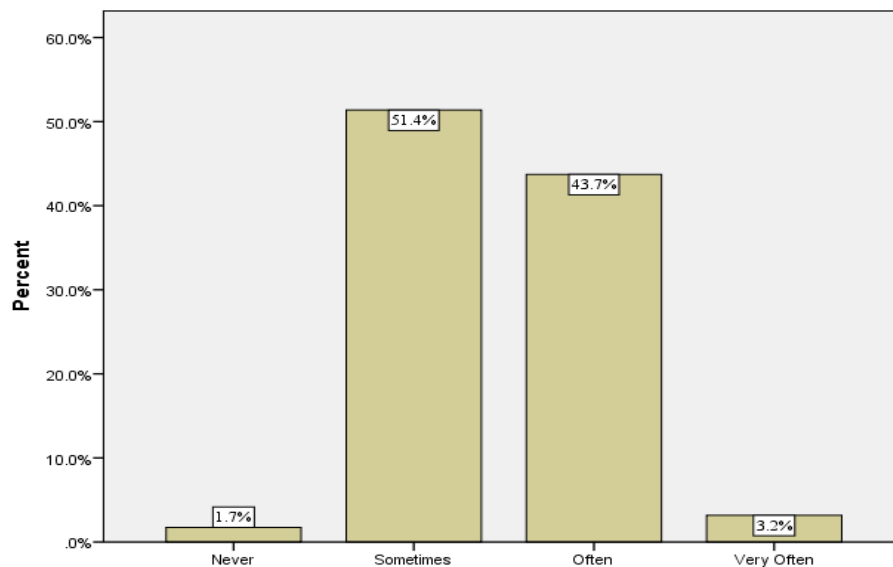

Figure 2: Percentage of respondents indicating how often they engage in reflective and integrative learning

In the second dimension, reflective and integrative learning, students were asked to indicate how often they engaged in this approach. As it is clear from the Figure above, more than half of the students,

(51.4%) indicated that they sometimes engage in reflective and integrative learning. On the other hand, 43.7% indicated that they often engage in this type of learning.

A one-sample t-test was conducted on engagement in deep approaches to learning scale scores to evaluate whether the sample means for the complete scale and for its subscales were statistically significantly different from 2.5, where 2.5 is the expected mean for second and third year students in general. As displayed in Table below, the two- tailed one- sample t-test showed that the sample mean score for the full or complete scale is statistically significantly lower than the expected mean, t(683)=2.51, p<.001, two tailed. It revealed that student engagement in deep approaches to learning is low in universities. The sample mean 2.26 of the HOL subscale is also statistically significantly lower than the expected mean, t (706) =8.58, p<.001. This result indicates that the course design allows students little or some chance to analyze the basic elements of an idea, experience, or theory; synthesize and organize ideas, information, or experiences into new, more complex interpretations and relationships; make judgments about the value of information, arguments, or methods; and apply theories or concepts to practical problems or in new situations.

Table: *One sample t-test Results of Engagement in Deep Learning Approaches*

Measures	Test Value = 2.5			
	Mean	t	Df	P
Higher- Order Learning (HOL)	2.26	-8.58	706	.000
Reflective and Integrative Learning (RIL)	2.48	-7.40	692	.46
Deep Approaches to Learning (DAL)	2.45	-2.51	683	.01

Although the difference is not statistically significant, the mean score of the RIL scale is lower than the expected mean (2.5); but it is statistically significantly lower than three, t (692) =7.4, p<.001, where 3 stands for often. That is, students confirmed that they sometimes or never engage in RIL. As per the items of the RIL subscale, this shows that while completing assignments or in classroom discussions, students never or sometimes combine ideas from different sources and include diverse perspectives (political, religious, ethnic, gender, etc.); they never or sometimes connect their learning to societal problems. Concerning reflection, they again sometimes or never examined the strengths and weaknesses of their own views on a topic or issue. Moreover, they never or sometimes tried to better understand someone else's views by imagining how an issue looks from that individual's perspective; learned something that changed the way they understand an issue or concept, connected ideas from their course to their prior experiences and knowledge.

Discussions

The purpose of this study was to assess the level of student engagement in deep approaches to learning in public universities in Ethiopia. To achieve this, data were collected from a sample of 717 students selected using a combination of stratified cluster sampling from the 31 public universities. Hence, in this section the results have been discussed.

The results of the current study indicate that the mean scores for the higher-order learning subscale and for the complete deep approaches to learning scale are statistically significantly less than their respective expected means. Although the difference is not significant, the mean score for the reflective and integrative subscale is still less than the expected mean. It is statistically significantly less than three where three means often. That is, the courses gave very little or some emphasis to higher-order learning and students never or sometimes

engage in reflective and integrative learning. There are several plausible explanations for why the results are low.

One possible explanation for this low result could be students' prior knowledge (Biggs, Kember & Leug, 2001). Biggs and his colleagues explained that what and how students learn in higher education would be influenced by their prior knowledge and academic experiences. Supporting this, Nilson (2003) suggested that students learn by connecting new knowledge to what they already know. In this regard, there is complaint about the capacity of students joining universities in that they are not well prepared to join higher education. In line with this argument, the Ministry of Education of Ethiopia indicated "many students joined higher education institutions with results below the 50% threshold in the higher education entrance examinations" (MOE, 2015, p.24). The unavoidable expansion of higher education towards mass education resulted in enrollment of many more not well-prepared students. Koljatic and Kuh (2001) suggested that such students would not benefit from and engage in deep approaches to learning.

Students' beliefs about learning and their expectations about the benefit of college degree to their future career may affect their approaches to learning and hence can be taken as another possible explanation for the current low result. Students may believe that teachers are sources of knowledge and it will be enough to memorize and remember what teachers lecture them. Moreover, unemployment of graduates may also discourage students from engaging in deep approaches to learning. The governmental encouragement of new graduates to start small business so that to reduce unemployment may create negative feelings to learning.

The other possible explanation for the low student engagement in deep approaches to learning may be related to the nature of the content being taught, methods of teaching and assessment (Biggs, *et*

al., 2001). Students may not clearly see the relevance of courses they take to their personal and future career life. Regarding this, Svinicki (1999) suggested that students learn what they regard as relevant to their lives. The Ministry of Education indicated that since quality and relevance will fall in a rapidly expanding higher education system, "the relevance and quality of development, delivery and assessment of academic programs in higher education institutions will be enhanced" MOE (2015, p.105) by implementing effective strategies to maintain standards. This shows that currently the programs may not be relevant for students' career development and hence a source of disengagement.

The results for the higher order learning scale showed that courses gave very little or some emphasis to higher-order learning. Probably courses may contain too much content for the academic time available. Biggs and his associates (2001) indicated that when courses are overloaded with content, even those students who normally engage in a deep approach might decide to go surface. Similarly, Cope and Staehr (2005) suggested that the amount of content to be covered influences students' perceptions that a workload is manageable. Moreover, they reported that when the content is decreased students perceived they had enough time to apply and encouraged to use deep approaches to learning.

Content overload also affects the teachers' strategies to teaching. As teachers run to cover lots of topics, they may have little or no time to design authentic tasks and engage students in deep approaches to learning by designing instruction that promote the application of concepts, principles and theories to solve problems. As teachers become required of covering courses and assessment requirements, they prefer just to lecture information to giving students opportunities to discuss, debate, and compare their understanding with each other. As a result, teachers may not help students develop their understanding and skills and hence lead them to use surface approaches.

Regarding methods of teaching, Fink (2003) suggested that teachers traditionally rely on lecturing and thus students do not develop higher levels of cognitive skills. He further suggested that to develop students' critical thinking skills, teachers should use procedures such as role-playing, simulation, debate and case studies rather than the traditional way of teaching. Not only using productive teaching methods but also teachers are required to ensure that assessment is constructively aligned to promote deep approaches to learning (Biggs, *et al.*, 2001). Biggs (1999, P.1) has indicated "assessment tasks tell students what activities are required of them." Likewise, Fink (2003) has suggested that teachers have to incorporate assessment activities as part of the learning process itself and provide feedback that improve student learning. Moreover, Biggs and Tang (2007) suggested that where assessment is not aligned to desired learning outcomes, or where the teaching methods do not directly encourage the appropriate learning activities, students could easily shift to a surface approach to learning.

The rapid expansion of education in general and higher education in particular has resulted in shortage of well-qualified and experienced teachers (MOE, 2015). Consequently, very young and novice teachers even with bachelor's degree joined teaching in the higher education. As soon as they complete their undergraduate education, they begin teaching; and after a year or two, they switch to graduate study and soon return to teaching. Since subject matter knowledge is a focus in teacher selection and during graduate programs, it may not be a problem. However, as indicated by Fink (2003), such teachers may not be competent in design of instruction, interaction with students and in course management.

In the current competency based modular system of curriculum implementation in public universities, courses are harmonized and cut off points are fixed for assigning grades. Moreover, the modular approach requires teachers to conduct regular assessment and

provide immediate and continuous feedback for students. In addition to these, teachers are encouraged to do research and participate in community service activities. All this might influence teachers' organization and delivery of courses, and their assessment usually tests might require only recall of information. The government's emphasis to minimize student dropout demands teachers to provide academic support to unsuccessful students so that they will continue and complete their study. If learning and assessment tasks and activities require beyond recall many students might fail to receive passing grades on the fixed grading scale and teachers will be forced to prepare another remedial assessment, at least final examination. To escape from this burden, teachers may prefer setting easier assessments that encourage students to memorize to engaging in deep approaches to learning.

The last possible explanation is related to the researcher's initial supposition that the transformation of higher education gave no appropriate emphasis for the share of students to their own learning. The transformation was very much focused on creating conducive conditions including restructuring of the learning institutions and their management, materials and equipment's purchase, revision of curricula, provision of textbooks and so forth. All these need to be supported with students' training to become self-regulated learners. As indicated by (Kuh, 2003), students may be surrounded by engagement enriched environment but they may not take part and as suggested by Reason, Cox, McIntosh, and Terenzini (2010), unless students put forth effort to engage in deep learning, simply providing a deep learning emphasized context does not benefit them.

As students join higher education institutions, there is a need to orient them so that they will prefer and adopt deep approaches to learning. For students to become more reflective and thoughtful about how they learn best, Chickering and Kuh (2005) recommended using orientation programs and first-year seminars to help students determine the deep approaches to learning. They also indicated that

some universities already provide *Seminar in Critical Inquiry* for first-year students, a course that emphasizes collaboration, teamwork, and active learning. Topics in such seminars relate to the meanings of higher education through a focus on the process of learning, how to learn, and cultivating academic habits of mind (Ben-Avie, Kennedy, Unson, Li, L.Riccardi and Mugno, 2012).

Although both are low, the mean score of RIL is somehow greater than the mean score of HOL. While 33.4% of the respondents show that their course gave quite a bit emphasis to HOL. 43.7% of them indicated that they often engage in RIL. Since the HOL is about the course emphasis and the RIL is about students' own engagement, this difference may be due to self-serving bias. That is students may hold responsible the organization and delivery of the courses as lacking well designed tasks and activities to promote engagement in deep approaches to learning and hence leading them to surface or strategic learning approaches than deep approaches. Unless the organization of a course provides a ground, it would be difficult for students to be reflective and to integrate ideas from different sources and to their experiences.

Conclusion

This study was conducted to assess students' engagement in deep approaches to learning in public universities in Ethiopia. Quantitative data were collected from 717 students selected through a combination of cluster and random sampling techniques. The findings indicated that students seem to perceive that their courses gave very little or some emphasis to higher-order learning. According to respondent students, engagement in reflective and integrative learning is almost nonexistent. Generally, student engagement in deep approaches to learning in the fields of Mathematics, Civil Engineering, Accounting, and Geography seems to be low in the Addis Ababa, Debre Berhan and Woldia universities.

Recommendations

Biggs (1999) suggested that when highly selected students were joining universities, traditional lecture seemed to function well enough but currently many students seem not to be coping. This suggestion expresses our education system very well. Today, student selection to higher education is baggy. To compensate this, universities need to have well organized learning centers that orient students about life and study in university, provide continuous support to thrive and succeed in their personal and academic endeavors. There should be a continuous support so that students develop the skills needed in the 21st century, learning to learn.

Students have evidenced that their courses gave very little or some emphasis to higher-order learning. Fink (2003) has suggested that teacher competence in designing courses is the most significant bottleneck to learn better in higher education. Except those who passed through teacher training programs, teachers in our higher education institutions have little or no chance to learn about course design. They may have participated in the in-service higher diploma programs but the extent to which these programs have made them competent should be assessed. For students to apply what they have learned and to solve problems, courses need to emphasize higher-order thinking skills such as application, analysis, evaluation and synthesis as indicated in the list of higher-order learning skills. Courses should require students to critically evaluate ideas and determine a new solution for problems. Therefore, it is necessary to assess the organization of courses and the design of tasks and activities. Students' learning approaches are very much influenced by assessments tasks and test items. Hence, to design improvement for students, it requires analyzing the assessments teachers use in higher education.

Fink (2003, p.26).) recommended "If [teachers] can learn how to design their courses more effectively, students are much more likely to have significant learning experiences" Teachers may need help and guidance in using innovative instructional methods and in their choice or development of teaching and assessment tasks as well as higher-order questions that require students explaining information or collecting of data. Therefore, universities should design in-service programs based on research and needs assessment.

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