Appropriateness, Practice and Challenges of Student Self-Assessment in the Context of Modularized Instruction in Addis Ababa University: Perspectives of Stakeholders

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Abstract: The major purpose of this study is to examine the level of implementation of student self-assessment and its suitability to modular instruction as well as to identify the underlying factors that affect its implementation. A mixed methods research design was employed in the study. Instructors, deans, department heads and undergraduate students of the College of Education and Behavioral Studies (CEBS) of Addis Ababa University (AAU) were the major sources of data. Questionnaire and Interview were used to collect data from a total of 195 samples . Purposive and proportionate stratified random sampling technique was employed for selecting the samples. Both descriptive (means, percent and SD) and inferential (one-sample t-test, independent samples t-test and one-way ANOVA) statistical tools were used to analyze the quantitative data, while thematic analysis technique was employed to analyze the qualitative data. As to the result of the present study, the study participants believe that, in theory and principle, student self-assessment is strongly aligned with modular instruction in the context of higher education institutions. The study also showed that despite strong belief that self-assessment is directly aligned with modularized instruction; enhances deep learning and can potentially lead to improved academic achievement and motivation, its level of practice in the classroom is minimal (lagging far behind its theory, assumptions and principles) in the CEBS. AAU. The study also concludes that lack of adequate awareness, knowledge and skills on the part of students, the instructors' tendency to maintain their power and control over assessment, the threat on the part of the instructors that SSA diminishes teachers' power in decision making and that sharing assessment with students lowers the standards as well as lack of clear criteria for the self-assessment tasks are perceived by the participants as the major bottle necks to the effective implementation of SSA in light of modularized instruction in the CEBS, AAU. The study findings generally imply that the students are still driven by summative assessment and there is little room and time available for the students to engage in self-assessment tasks.

Key terms: *Constructive alignment, modularized instruction, student centered assessment, student self-assessment, self-regulated learning strategies, meta-cognitive skills*.

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Introduction

Contextual Background

Assessment is the systematic collection and analysis of information to improve student learning. In the context of the classroom, assessment is broadly classified as summative and formative. Huinker and Freckmann (2009) described summative (also called assessment of learning) as judgmental and used primarily for grading student performance. Formative assessment, in the contrary, is described by O'Neill (2015) as an assessment that focuses on generating continuous feedbacks on student performance and improving learning. In its contemporary usage, formative assessment is further classified as assessment for learning and assessment as a learning process (Clark, 2011). Consequently, assessment for learning primarily refers to a *teacher-dominated* student-centered activity in which the teacher provides ongoing support and feedback to the learner (Clark, 2011); finds out about what students know and can do (Spiller, 2012), closes the gap between a learner's current status and the desired outcome (Andrade, Huff & Brooke, 2012; Heritage, 2007; WNCP, 2006) and provides opportunities for students to develop reflective practices (Mc Sweeney, 2012). On the contrary, assessment as learning (also called self-or-peer assessment) primarily refers to a *student-dominated activity* that focuses on the role of the student as the critical connector between assessment and learning (WNCP, 2006), fostering students' capacity to be their own best assessors (O'Neill, 2015) and developing students' meta-cognitive skills (Clark, 2011).

The existing literature clearly designates student self-assessment as one dimension of assessment as learning. In light of this, Spiller (2012) defined student self-assessment as the involvement of students in identifying standards and/or criteria to apply to their work and making judgments about the extent to which they have met these criteria and standards. There are two parts to this process: development of the criteria and then making assessment decisions about the quality of the

performance in relation to these standards (Eggen & Kauchak, 2001; Long, 2000; McMillan & Hearn, 2008; Thomas, Martin, & Pleasants, 2011). Generally, through the self-assessment process, students evaluate the quality of their work and learning based on explicit criteria (Crowell, 2015; Rahman, 2015), identify strengths and weaknesses in their work (Clark, 2011; Sendziuk, 2010) as well as generate feedbacks and use these feedbacks to improve their work (Andrade, Huff & Brooke, 2012; Spiller, 2012; Trumbull & Lash, 2013).

Research and theory show that the traditional curriculum focused on the teacher rather than on the learner (Donnelly & Fitzmaurice, 2005). Closely aligned with this traditional curriculum is a traditional assessment practice in which the students are assessed at the end of a course and a grade is provided at the end of the learning process. Cognizant of these pitfalls of the teacher-centered traditional approach to both the curriculum and assessment methods, in recent years, the higher education systems across the globe proposed a new paradigm called student-centered modularized curriculum (Murtagh & Webster, 2010) that promotes independent and lifelong learning (Karami & Rezaei, 2015), active engagement in learning (McMillan, 2011) and responsibility for the management of one's own learning (Juwah, et al., 2004; O'Neill, 2015). This newly proposed perspective has, in turn, impacted the assessment process with a greater emphasis on involving students to assess their own progress (Donnelly & Fitzmaurice, 2005). This strongly justifies that the student-centered self-assessment is more appropriate to or aligned with the student-centered learning contexts.

Quite for a long time, both the instructional and assessment activities were dominated by the behavioral approach to competency-based training (Stahl, 2003) in which the child was assumed to be passive (Gullo, 2005), learning and assessment were assumed to be done by the knower (Lidz, 2003) and the students were assumed to learn better by observing and listening to what the teacher was doing or saying in the class (Reece & walker, 2003). However, beginning from the 1970s, the

behavioral theory's narrowest conception of the teacher-dominated assessment was challenged by the neo-behaviorist model of mastery learning that focused on small units of learning followed by formative assessment (Mc Sweeney, 2012). Along this line, in recent times, theories from three areas of study, such as constructivist theories of learning; meta-cognition theory and self-efficacy theory, came up with a strong claim that student-centered modularized curriculum is aligned with student self-assessment (Heritage, 2010; McMillan & Hearn, 2008; Trumbull & Lash, 2013).

For instance, according to the cognitive constructivist approach, students' ability to fully engage in the construction of their own knowledge/meaning; to self-monitor learning and thinking and to connect new ideas and experiences to existing knowledge and experiences is fostered by self-assessment (Donnelly & Fitzmaurice, 2005; McMillan & Hearn, 2008; Mc Sweeney, 2012). This implies that there is a constructive alignment between student-centered assessment and modularization (Rust, 2002). Similarly, the socio-cultural constructivist perspective argues that assessment is not a unidirectional activity (Heritage, 2010), rather it is a reciprocal activity in which both teachers and students are involved as collaborative partners in generating feedbacks, self-monitoring and self-regulating learning (Trumbull & Lash, 2013). Moreover, meta-cognitive theory suggests that self-assessment is a tool for actualizing self-regulated learning strategies (El-Koumy, 2010) such as learning how to learn, thinking about own thinking and knowing how to plan, monitor and evaluate own thinking and understanding (Andrade, Huff & Brooke, 2012; Brown & Harris, 2014; Ibabe & Jauregizar, 2009; McMillan & Hearn, 2008). This again justifies that the self-regulated and self-paced learning constituents of modularized instruction (Andrade, Huff & Brooke, 2012) have changed both the role of learners to be active participants of their own learning (Juwah et al., 2004; Spiller, 2012; Siow, 2015) and assessment of learning (summative approach) into assessment for learning (formative approach) (Heritage, 2007; Karami & Rezaei, 2015). Relatedly, the self-efficacy theory claims that self-assessment plays a significant role in

developing self-perceptions (McMillan & Hearn, 2008) as student engagement depends upon students' self-efficacy beliefs, the perceptions of their ability to do well on a specific task and the value of doing well (Struyven, Dochy, & Janssens, 2005).

On top of this, substantial research evidences show that direct involvement by students in assessing their own work and frequent opportunities to reflect on goals, strategies and outcomes enhance lifelong learning (Juwah, et al., 2004); achievement (Brown & Harris, 2014; Trumbull & Lash, 2013); intrinsic motivation (McMillan & Hearn, 2008; Ross, 2006); self-regulated learning (Lysaght, 2015; O'Neill, 2015; Scott, 2017; Siow, 2015); autonomy (Sendziuk, 2010); target-setting and time-management skills (WNCP, 2006); self-pacing (Long, 2000); reflection, self-criticism, responsibility and active involvement (El-Koumy, 2010) and collaborative partnership between the teacher and the students (Shepard et al., 2005).

However, some evidences show that despite the efforts made by many academics to design classroom learning opportunities that reflect the principles of constructivist learning, this principle is frequently ignored in the design and implementation of the assessment tasks (Spiller, 2012). Similarly, despite an increased interest to use self-assessment in higher education learning environments, the assessment activity is largely controlled by the teachers (Nicol, & Macfarlane-Dick, 2005; Scott, 2017), leaving no or little space for the student to practice self-assessment (Murtagh & Webster, 2010; Rust, 2002). In fact, the low practice of student self-assessment can be associated with lack of adequate awareness, experiences, skills and focus on self-assessment by students (Reynolds, Miller, & Weiner, 2003); the tendency of many academic teachers to retain all the ownership and power in the assessment process (Nicol, & Macfarlane-Dick, 2005; Siow, 2015; WNCP, 2006); the tendency to conceptualize feedback as a transmission process from the teacher to the learner (Juwah, et al., 2004); the problem of trusting the quality, validity and reliability of self-

assessment data (Brown & Harris, 2014); the tendency of self-assessors to distort evaluative data or have inflated perceptions of their accomplishments (Cowan, 1988; Brown & Harris, 2014) and lack of clear and explicit self-assessment criteria (Ross, 2006).

In fact, overcoming these challenges requires setting detailed guidelines and performance criteria (Spiller, 2012; Thomas, Martin, & Pleasants, 2011); training students on how to carry out systematic and objective self-appraisal against these established guidelines and criteria (Crowell, 2015; Juwah, et al., 2004; Ross, 2006); providing feedbacks to students on their self-assessment activities (Clark, 2011); modeling students on how to use assessment data to develop an action plan (Ross, 2006; WNCP, 2006) as well as creating a classroom culture that supports the self-assessment practice (Heritage, 2007; Juwah, et al., 2004).

Similarly, few of the local studies conducted mainly on the practices, challenges and opportunities of modular instruction indicated that the essence of modularization is not yet well understood, that harmonized curriculum is not still implemented as expected, and that modularization is not properly aligned with student assessment. For instance, a study by Taye, Yirgalem and Yirgu (2019) indicated that modular curriculum has not been effectively implemented due to lack of the necessary facilities and materials at the required quantity and quality, adequate awareness raising training on modularization, commitment among some academic administrators and instructors to play their roles in the implementation of the curriculum as well as due to offering semester based courses in in short term block mode while some were illogically offered simultaneously. Similarly, the result of a study by Derib et al. (2014) showed that the assessment practices in modularization do not equip students well for a lifetime learning. In addition, the finding of a study by Moges (2015) clearly showed that techniques like self-assessment that facilitate the personal development of students and develop the capacity of students to plan and manage their own learning were not significantly practiced in the modular mode of deliveries. Likewise, the result of a study by Wondifraw (2019) suggested that

continuous assessment in the modularized program has continued to be perceived and practiced as continuous testing in which students sat for tests and quizzes frequently with no any written and oral feedback. According to the result of a study by Abatihun (2019), though modular/block teaching helps students to concentrate on one subject at a time, it does not place emphasis on practical skills and due to the limited time given for one course, it was difficult to implement active learning as well as student-self assessment. Moreover, the finding of a study by Gizat (2014) showed that the practice of module delivery was not in line with the guide line; the assessment strategy was poor, the existing modular master's program faced reluctance and lack commitment on the part of instructors and lack competence to grasp modular curriculum Furthermore, a study by Birhanu (2020) showed that although the ultimate goal of assessment in the modular approach is to check out whether or not students have acquired the identified minimum competences, the focus of the assessment in all the sample Universities studied is the course content, not the competencies. Lastly, the result of a study by Bineyam (2014) indicated that online discussion could be a valuable addition to face-to-face classroom teaching to improve students' engagement and interaction in an intensive block teaching postgraduate curriculum where learners are engaged in a full work load with academic studies.

Statement of the Problem

In recent years, numerous theoretical and empirical evidences show that a transformation has been made in the curriculum of higher education institutions (HEIs) from teaching to learning and from the teacher-centered traditional curriculum to the student-centered modularized curriculum. However, the assessment scheme in HEIs does not appear to show a significant change in the same pace that the curriculum has been changed.

Despite a strong claim in the literature that efforts are being made to apply the principles of constructivist learning in designing classroom learning environment as well as the instructional materials, these principles are not used in the design and implementation of the assessment scheme. This shows that, in higher learning institutions, students are still driven by the traditional teacher-centered assessment, where there is little opportunity for the application of student-centered self-assessment. Of course, the traditional assessment methods that are dominated and controlled by an instructor who sets the assessment scheme, evaluates learners' performance and provides feedback to learners to improve their learning, are not in line with the current view of modular instruction.

Assessment processes in which the teacher holds all the power and makes all the choices limit the potential for learner development in all aspects. Moreover, if assessment is exclusively in the hands of teachers, it is difficult to see how students can become empowered and develop the self-regulation skills needed to prepare them for learning outside the university and throughout life. On the other hand, lack of adequate self-assessment practice puts students out of the black box; keeps them outside of the center of their own learning and makes them to be dependent on and passive receivers of information only from the hands of their teachers.

On top of this, although numerous local and national sources, including the new training and education policy of Ethiopia (MoE, 1994) and various strategic education documents: Education sector development program (ESDP), School improvement program (SIP) and Continuous professional development (CPD) widely advocate the need to involve students in assessing or appraising their own learning processes, the level of practicing SSA seems to lag far behind the expectations of and directives given in these documents. Moreover, although Addis Ababa University claims that it has adopted the national harmonized curriculum that was prepared by the Ministry of Education (MoE, 2013) for its undergraduate programs; and that it has transformed its programs from

the conventional teacher-dominated lecture based teaching to modularization that consists of interactive teaching, independent-learning and collaborative learning among the students, still the entire assessment and marking/grading of the students' work (individual assignment, group assignment and presentations) are still dominated by the teacher. Meaning, the students are only the subject of assessment and are not given the opportunity to exercise assessing and grading their own work. Moreover, as mentioned in the background section, few local studies were conducted on the practice, challenges and opportunities of implementing harmonized modular curriculum in the Ethiopian Universities. But, none of these local studies examined the practice and relevance of student-self assessment in the context of modular instruction.

Thus, this study is an attempt to fill in the gaps stated above and add new knowledge on the current conceptualization of student-centered assessment in relation to modular instruction in the context of the College of Education and Behavioral Studies of Addis Ababa University.

Research Questions

The current study attempts to answer the following basic questions:

1) *How do the university instructors view the appropriateness of student self-assessment to modular instruction?*
2) *To what extent is student self-assessment implemented in the context of modular instruction?*
3) *Is there a statistically significant difference between instructors and students in perceiving the implementation of student self-assessment?*
4) *Is there a statistically significant variation in implementing student self-assessment by the department, years of service/teaching experiences and academic rank of the instructors?*

5) *What factors are perceived to affect the implementation of student self-assessment in the context of modular instruction?*

Operational definition of terms

In this study:

Assessment - the process of collecting, analyzing and interpreting information to inform decision-making

Student-self assessment (SSA) - the extent to which students are engaged in the assessment of their own work based on defined criteria

Appropriateness of SSA - the extent to which student self-assessment is aligned with modularized instruction

Modularized instruction - the student-centered curriculum that promotes independent learning and self-responsibility for the management of one's own learning

Practice of SSA - the extent to which SSA is implemented in the classroom context

Challenges - the factors that affect the proper implementation of SSA

Methods

Research design, sources of data and sampling

This study employed mixed methods research approach based on its appropriateness to the study's research questions and the generation of both quantitative and qualitative data in a single research (Bazeley,

2004; Bryman, 2006; Greene, 2008; Johnson, & Onwuegbuzie, 2004). Specifically, the current study employed the concurrent triangulation design (the convergent parallel design) of the mixed methods research approach for it allows collecting both the quantitative and qualitative data sets simultaneously or at the same time.

The study also used university instructors, deans, senior (2nd and 3rd year) undergraduate regular students (for they are more familiar to various modular courses and assessment procedures than freshman students), and department heads of the College of Education and Behavioral Studies (CEBS) of Addis Ababa University (AAU) as the main sources of data.

At the same time, the College of Education and Behavioral Studies of Addis Ababa University was purposively chosen as a study site. The rationale for the choice of the CEBS, on a judgmental basis, is that it is one of the pioneers in the university in adapting and offering modularized curriculum, higher diploma programs and teacher pedagogy in which testing, assessment, measurement and evaluation courses are widely and frequently taught. Moreover, four departments (school of Psychology, department of curriculum & instruction, department of Educational Planning & Management and department of Special needs education), which have long years of experiences in teaching, research, running either the PGDT or the undergraduate programs (regular, summer & extension) as well as offering modularized curriculum, were purposively selected as samples of the current study. Here, though it does not have the regular undergraduate program students, the department of curriculum & instruction was selected as sample of the current study for it runs both the regular and summer PGDT program since its inception (which is being treated as the undergraduate program in the College).

Generally, the current study employed a total of 195 samples based on Neuman's (1997) guideline (155 students and 36 instructors from the four departments for filling out questionnaire, and four Interview Informants - Dean of the college and three department heads). As suggested by Neuman (1997), for the study population of 1000 or under, the sample ratio of about 30% or more is an acceptable representative sample for quantitative studies. Hence, it is in view of this that 50% of the sample size was taken from the target population of 300 students and 76 instructors of the College. Similarly, stratified random sampling technique was employed to select samples for the quantitative part of the study proportionate to the relative size of the target population in the respective departments and batches. Moreover, purposive sampling technique was employed to select three department heads and one College dean for the qualitative part of the study by virtue of their structural position to monitor the implementation of modular curriculum and assessment schemes. The existing literature (e.g., Bazeley, 2004; Onwuegbuzie & Collins, 2007) shows that in mixed methods studies, because of the complexities of data it generates, samples for qualitative investigations tend to be smaller and drawn purposively.

Instrumentation

The study employed key informant interview (what the participants perceive about themselves and other instructors) and questionnaire (what the instructors and students say they do, think or feel) to collect information about student self-assessment. An interview guide consisting of five unstructured items was developed by the researcher to capture information about the appropriateness, level of practicing and challenges of effectively implementing student self-assessment from the College deans and department heads offering modularized curriculum for the under graduate and PGDT programs.

Similarly, the researcher developed a questionnaire consisting of three parts and 62 Likert-type items (21 items measuring the appropriateness of self-assessment, 22 items measuring the practice of self-assessment

and 19 items assessing factors affecting the implementation of student self-assessment) by making an extensive review of related literature. A panel of six subject matter experts (SMEs) was invited to establish the content validity of the instrument. The SMEs were primarily engaged in judging the appropriateness, adequacy and proper wordings of the items, where their comments were incorporated to refine the final data collection tools. Moreover, the reliability of the instrument was computed by administering the questionnaire to 15 instructors and 20 senior undergraduate students having similar characteristics with that of the main study samples. Accordingly, the internal consistency reliability in terms of Cronbach's alpha is .83 for the full scale; .80 for the appropriateness subscale; .82 for the practice subscale; and .76 for the challenge subscale. The respondents responded to each item on a scale ranging from 1 (strongly disagree) to 5 (strongly agree). At the same time, a composite score was computed for each of the three subscales separately and a high score on each subscale indicates that the student self-assessment (SSA) is importantly relevant to modular instruction; that SSA is widely implemented in the context of modular instruction; and that the factors indicated in the subscale are the major bottle-necks or challenges to the proper implementation of student self-assessment. The questionnaire was filled in both by the university instructors and undergraduate students.

Procedures of data collection and analysis

At first, having secured ethical approval for the project from the school of psychology of Addis Ababa University's Research Ethics Committee, the respective department heads and program coordinators were consulted to discuss on how to contact the study participants and facilitate the data collection process. Then, the study participants were contacted to get their oral consent to participate in the study, explain the purpose of the study and fix the schedule for actual data collection. Accordingly, questionnaire was administered to sample students in a room and at a time arranged with them at their convenience, where the

researcher was present at all levels of the questionnaire administration. The instructors were given the questionnaire to fill in at their office and return them to the researcher within the time specified. All the key informant interviews were conducted by the researcher at the informants' convenience, where an attempt was made to record the responses using both field-notes and audio/video recordings. On average, the interviews took 55 minutes to an hour. Generally, all the data gathering tools were administered in a face-to-face approach.

In analyzing the qualitative (interview) data, thematic analysis method was employed. So as to secure confidentiality both in the transcription and analysis of the qualitative data, such codes as: P_1, P_2, P_3… (which means, $participant_1$, $participant_2$, …) were used to designate the study participants rather than using their actual names. In analyzing the quantitative data, both descriptive (mean, percent, SD) and inferential (one-sample t-test, independent samples t-test and one-way ANOVA) statistical tools were employed. In fact, prior to employing these parametric tests an attempt was made to check the assumptions of these statistical models.

Result

Table 1: Demographic Data

No.	*Respondent Category*				*Frequency*	*Percent*
	Instructors	Department	C & I		8	22.2
			EDPM		6	16.7
			Psychology		15	41.7
			SNE		7	19.4
	N = 36	Service years	1-10		6	16.7
			11-20		14	37.8
			21-30		13	36.1
			31-45		3	8.3
		Academic Rank	Lecturer		7	19.4
			Ass. Prof.		17	47.2
			Assoc. Prof.		9	25.0
			Professor		3	8.3
	Students	Department	EDPM	2nd	25	16.1
				3rd	28	18.1
			Psychology	2nd	35	22.6
				3rd	26	16.8
	N = 155		SNE	2nd	21	13.5
				3rd	20	12.9

Key: C& I= Curriculum & Instruction; EDPM = Educational Planning and Management; SNE = Special Needs Education

The above table presents data on the characteristics of the study participants or data sources as well as the attributes or variables treated in the study.

The demographic data summarized in Table 1 above show that the participants (students and instructors) of this study are fairly represented from each category (department, experience, and professional career) and are eligible to be employed as sources of data.

Table 2: One-Sample T-Test for Testing the Appropriateness of SSA to Modular Instruction

This table presents data that describe the extent to which student self-assessment is relevant/appropriate to modular instruction

Variable	*N*	*M*	*SD*	*df*	*Test value*	*t*	*P*
ASSA	36	88.6	7.4	35	63	18.55	.000

ASSA-Appropriateness of student self-assessment

One sample t-test was used to test instructors' ratings of the appropriateness or relevance of the student self-assessment to modular instruction in the context of higher education system. The result of a one sample t-test revealed that the sample mean (obtained from the sample data) is significantly different from the hypothetical mean or test value (obtained from the scale) [t (35) = 18.55, P = .000]. This means that since the observed mean score obtained from the direct calculation of the sample data is significantly higher (*M* = 88.6) than the hypothetical mean of the scale (*M* = 63), student self-assessment is judged/ rated by the College of Education and Behavioral Studies' instructors as more relevant to the context of modular instruction.

Connected to this, qualitative data were generated through key informant interview to substantiate the quantitative data. In light of this, the interview informants were asked to describe as to *who regularly assesses student learning/work in their college or respective department*. Generally, the summary of the interview responses indicate that it is the teacher who exclusively designs and accomplishes the assessment of student learning; and the culture of involving students to assess/mark/grade their own work/performance is not well-established in the context of the college of education and behavioral studies of Addis Ababa University. The following quotes as directly extracted from the

interview transcripts are presented here to help the readers get adequate insights about the sources of the summary of the findings stated above.

For instance, one of the interview participants reported that:

> Though the modularized curriculum adapted by the university presupposes that students should be encouraged to learn independently and make self-assessment of their own work/performance, there are still the traditional teacher dominated assessment practices/activities in place at the College.

The points mirrored in the above quotation clearly show that the College instructors have adequate awareness about the linkage between SSA and modularized instruction; that the assessment scheme is still a teacher-dominated activity and that there still remains a lot to make assessment a student-centered activity.

Another interview informant said

> In the national harmonized curriculum that was adapted for the undergraduate programs (MoE, 2013), as a general assessment policy or guideline, it is stated that the assessment of student learning shall employ quizzes, tests, group assignments, group presentation, project work, attendance, checklist, and final examination. However, nothing is explicitly stated regarding who should do the assessment activity, and what roles do the students play in the assessment process. Nothing has also been indicated in the module syllabi adopted by the university as to how the teacher and students work as partners in sharing the assessment tasks.

The points narrated in this quotation generally show that the university in general and the CEBS in particular does not have clear and specific assessment policy or guideline that explicitly explains 'who should judge the learners' work or performance, how both the teachers and learners share the assessment task, what role can the students play in the assessment process', and as a result, the entire assessment activity is still monopolized by the teacher.

In addition, the participants interviewed were also asked to express their views regarding '*the appropriateness or relevance of SSA to modular instruction in the context of higher education system*.' Hence, a critical analysis of the interview responses indicates that, as an alternative assessment tool, student self-assessment is strongly aligned with modular instruction for it enhances independent learning, self-confidence and motivation as well as helps actualize lifelong learning, self-regulated learning (SRL) and meta-cognitive skills that are at the heart of modularized instruction.

In connection to this, for instance, one interviewed informant expressed that:

> The self-assessment technique has the benefits of providing an opportunity for students to know their roles in learning; developing a sense of self-awareness; engaging students in the assessment of their own learning activities; motivating them to take the learning activities seriously; and helping them to see how it can become a valuable complement to their learning. Of course, these chains of activities are also considered as the major ingredients of modularized curriculum.

A critical examination of the contents of the above quotation generally shows that SSA and modularized instruction have a lot in common; and

that SSA is a suitable strategy for transferring modular curriculum into practice or a reality.

Another informant of the interview also suggested that:

> Self-assessment with its emphasis on the student responsibility to make judgments on their own accomplishments is a necessary skill for lifelong learning. It encourages the students to critically reflect on and identify gaps in their learning tasks…as you know, promoting self-reflection, self-appraisal, and self-regulation is the central goal of modular instruction…so, as me there is a strong link between student self-assessment and modularization…

In sum, what the content of the above quotation generally conveys is that the SSA scheme is an integral part or part and parcel of modular curriculum as both the SSA and modularized instruction focus on the same goal of promoting a sense of independence and self-responsibility for one's own learning.

Still another interviewed informant said:

> Correctly implemented student self-assessment can promote intrinsic motivation, internally controlled effort, a sense of goal mastery, and more meaningful learning in students. Moreover, student self-assessment develops an awareness of which meta-cognitive strategies to use and when to use them. In connection to this, modularized instructional practice can also engage students to actively participate in the learning process and become more connected and committed to the learning outcomes.

The critical scrutiny of the content of this quotation shows that both SSA and modularized instruction are mutually inclusive; that both of them enhance self-regulated skills among the students and that both of them have the advantage of mentally, physically and emotionally engaging learners in the learning tasks.

The data summarized in table below help readers capture the extent to which student self-assessment is being implemented/practiced within the context of block/modular instruction.

Table 3: One-Sample T-Test for Testing the Level of Implementation of the SSA

Variable	*N*	*M*	*SD*	*df*	*Test value*	*t*	*P*
PSSA	36	53.56	8.46	35	66	-8.83	.000

PSSA = Practice of student self-assessment

In order to test the level of implementation or the level of practicing SSA in the context of the modularized system of the university, one-sample t-test was employed. The result of the one-sample t-test showed that the sample mean obtained from the instructors' ratings was significantly different from the hypothetical mean of the scale [t (35) = -8.83, P = .000]. This means that as the sample mean (*M* = 53.56) obtained from the instructors' ratings was significantly lower than the hypothetical mean of the scale (*M* = 66), the implementation or the use of SSA is rated by the respondents as very low in the context of the College of Education and Behavioral Studies (CEBS) of Addis Ababa University (AAU). This implies that the assessment activity is still under the ownership of the instructors even in the context of the modularized instruction of the university system.

In addition, the interview informants were asked to describe '*the extent to which SSA is typically practiced or implemented in their classrooms.*' Accordingly, the summary of the key informant interview responses indicated that SSA is not widely employed or not adequately applied as an alternative tool or as a supplement to the teachers' assessment of student learning in the real context of the College of Education and Behavioral Studies of AAU.

In view of this, one interviewed participant said:

> In the form of advice, I tell my students to evaluate themselves to check their understanding as a tool of self-development. Otherwise, I did not try to practice student self-assessment in its proper sense. As there is no clear policy and guideline in the university regarding student self-assessment and there is no well-established culture of involving students in the assessment of their own learning at all, other instructors in our college are not using it either. Hence, involving students in the design of self-assessment, choice of assessment tasks and setting of assessment criteria is missing in the context of our classrooms.

Generally, what can be understood from the contents of the above quotes is that students are only the subject of assessment, have no or little role in the appraisal of their own learning progress, and have no opportunity to develop self-regulation skills. Moreover, the content embedded in this quotation also indicated that assessment of student learning is *instructor-driven* and it is *'business as usual*' for there is no clear assessment policy illustrating the role of teachers and students in the assessment tasks as well as enabling environment for the learners to be engaged in evaluating their own learning in the context of modularized instruction.

Another interviewed informant also reported that:

> Years ago, I tried using SSA with my students. I make use of indirect ways of self-and-peer-assessment, particularly to assess presentations. Unfortunately, they all gave the same mark to all their friends and to themselves. After a few repetitions, I had to avoid it. The point is that the use of self-assessment is low in my class as the reliability and validity of its information cannot be trusted. To my knowledge, most of the instructors in my department and college are not properly applying the SSA in their courses and classrooms, either.

An inspection into the content of this quotation implies that SSA is being practiced in an off-and-on, in a fragmented or inconsistent manner due to the pretext that learners over-inflate (fail to fairly judge) their own work; that instructors do not have the required commitment to gain adequate insight on the importance of aligning SSA with modular instruction; that the instructors fail to serve as role models by actually demonstrating self-assessment tasks to their students in the classroom context and that the learners lack adequate awareness on the value of SSA in promoting self-development and how to fairly assess their own work.

Still another interviewed informant reported that:

> I did not use SSA at all because given the existing classroom culture, students lack motivation to learn, and most of them want to get grades without adequate effort. This may make self-assessment counter-productive.

The important implication that can be drawn from the above quotation is that SSA is not well institutionalized and established in the College or

the university; that its practice is currently very low due to the reason that there is no enabling academic or classroom environment to currently exercise SSA and that learners give due attention to getting grades in a short-cut way than exerting efforts to master the subject matter, gain knowledge, and understand learning tasks in a better way.

Table 4: Independent Samples T-Test for Testing the Variation Between the Teachers' and Students' Ratings on the Level of Practicing SSA

DV	IV	*N*	*Mean*	*SD*	*df*	*t*	*P*
	Teachers' score	36	53.56	8.46	189	.95	.34
PSSA	Students' score	155	52.92	7.87			

PSSA = Practice of student self-assessment

This table presents data to examine whether or not there is a difference in a way instructors and students perceive the presence or absence of student self-assessment in the university classrooms.

It was hypothesized that there is variation in the teachers' and students' perceptions of the level of practicing student self-assessment in the context of modular instruction in the CEBS. An independent t-test was performed to test this prediction. The result of an independent t-test revealed that there is no significant variation between the perceptions of teachers and students with regard to the level of practicing SSA [t (189) = .95, p= .34]. This means that both the students and the teachers rated the level of practicing SSA as very low in the context of the College of Education and Behavioral Studies (CEBS) of Addis Ababa University since the two-sample means obtained from the teachers' and students' ratings are far below the expected hypothetical mean of the scale (*M* = 66).

Table 5: One-way ANOVA for testing variations in the level of practicing SSA as a function of the respondents' department, academic rank and years of service

DV	*IV*		*N*	*M*	*SD*	*F*	*P*
	Department	C & I	8	55.25	8.68	.68	.57
		EDPM	6	54.0	8.3		
		Psychology	15	51.27	9.65		
		SNE	7	56.14	5.5		
	Service years	1-10	6	54.8	8.5	.44	.73
		11-20	14	53.4	9.2		
		21-30	13	54.3	7.6		
		31-45	3	48.3	11.5		
	Academic rank	Lecturer	7	50.9	13.1	.43	.73
		Ass. Prof.	17	53.5	8.7		
		Assoc. Prof.	9	55.8	4.3		
PSSA		Professor	3	53.3	2.9		

PSSA = Practice of student self-assessment

The data summarized in table below help capture information on whether or not the implementation of SSA differs across the academic units offering courses and across the different attributes of instructors (experience in teaching & academic ranks).

The study compared the level of implementation of SSA as a function of the respondents' department, academic rank and years of service. A one-way analysis of variance was conducted to test the comparison. The results of ANOVA revealed that there are no statistically significant differences in the level of implementation of SSA by the respondents' department/area of specialization [F (3, 32) = .68, P = .57]; service years [F (3, 32) = .44, P = .73]; and academic rank [F (3, 32) = .43, P = .73]. This generally shows that the implementation of SSA is very low in all the departments hosting the undergraduate programs as all the observed means are below the ideal mean for the scale (*M* = 66) and that there is no substantive difference in the implementation of SSA in

terms of the area of specialization, service years and academic rank of the study participants.

Table 6: One-Sample T-Test for Testing the Major Challenges to the Implementation of the SSA

Variable	*N*	*M*	*SD*	*df*	*Test value*	*t*	*P*
CSSA	36	65.97	5.51	35	54	15.23	.000

CSSA = Challenges to the implementation of student self-assessment

This table presents data that describe the factors that hinder the effective implementation of SSA in the context of the harmonized national curriculum.

In order to examine the major challenges to the practice of SSA, one-sample t-test was employed. The result of a one-sample t-test showed that the sample mean obtained from the instructors' ratings is statistically different from the hypothetical mean [t (35) = 15.23, P = .000]. The result also showed that the sample mean (*M* = 65.97) is significantly higher than the test value (*M* = 54), implying that the higher the score on the scale, the higher the agreement that the factors indicated in the scale are bottlenecks to the implementation of SSA in the College. Hence, as rated by the respondents, limited knowledge of the instructors on the assumptions and principles underlying SSA; students tendency to inflate their accomplishments; students' lack of knowledge and skills for assessing their own work; the tendency of students to distort evaluative information to favor themselves; the doubt to trust the reliability and validity of SSA information; lack of the classroom culture that supports the practice of SSA; the threat that SSA diminishes teachers' power in decision making; the fear that sharing assessment with students lowers the standards; failure to design appropriate self-assessment questions

(SAQ) for the students; lack of explicitly stated SSA criteria in the course modules; lack of adequate experience and training by students on how to use SSA; instructors' struggle to maintain their power and control over assessment; students' reluctance in reporting their own weaknesses; and lack of explicitly stated rationale in the module on how to apply self-assessment were identified as the major challenges to the effective utilization of SSA in the context of modular instruction in the College of Education and Behavioral Studies of Addis Ababa University.

In addition, qualitative data were generated through key informant interview to substantiate the quantitative ratings. Accordingly, the interview informants were asked to '*identify the factors that typically affect the use of SSA in their classrooms*.' Generally, summary of the key informant interview responses showed that lack of clear self-assessment policy and guideline in the university; lack of adequate experience and a well-established culture of involving students in the assessment of their own learning; lack of motivation and a sense of self-responsibility among students for their own learning; lack of adequate awareness and experience among the students to evaluate their own work; and the tendency of the students to under or overestimate their performance were identified as the major challenges hindering the effective utilization of the SSA in the HEI contexts.

In connection to this, one of the interviewed informants reported that:

> There is a mismatch between the class size and the time when the module is expected to be accomplished. There is also lack of adequate materials like well-prepared modules and instructional media that could engage students in practical activities as well as lack of students' motivation and readiness to engage in self-regulated learning. Moreover, students do not have adequate capability, have biases toward oneself, and lack confidence. Hence, all these factors as well as the

> existing assessment system in the university are the major bottle-necks in using SSA in the context of our classrooms.

The important message that the above quotation conveys is that the College as an institution, its staff and students are not mentally, technically and practically ready to exercise SSA in relation to modular instruction that, in fact, is theoretically the fashion of the day.

Another informant also suggested that:

> In my view, the main bottleneck to the use of SSA is the belief among the instructors that it will not be fairly practiced among students. This appears to be the biggest challenge as some students inflate self-scores and some rate themselves relatively lower than their peers despite their better work. So, the overall trend is inflated evaluation. The other challenge is that students do not value their own self-assessment and their peers' assessment of their work much. Lack of the culture and the experience of using it is still another challenge.

The points raised in the above quotation imply that all the essential stakeholders and practitioners in the profession tend to externalize their own weaknesses or failures to put SSA into an effect to someone else and that there is complete absence of institutional or collegial dialogue on how to introduce modern as well as student-centered assessment schemes into their classroom practices.

Still another interviewed informant said:

> The use of SSA in the context of modularization is very minimal due to a number of factors. One is that there are no standard modules for the courses. Secondly, no self-evaluative culture was established among the Ethiopian HEIs. Thirdly, there is a feeling of shyness among students to exercise SSA, where this does not encourage self-reflection and self-criticism. Fourthly, students do not like to work hard as work-based culture is not well developed. Lastly, the procedure detailing how to use SSA is not explicitly stated in the syllabi of the modular courses. Generally, SSA is not adequately institutionalized in the university culture as a whole.

The central theme of the above quotation is that SSA is given no or little attention even by the necessary stakeholders (University officials, assessment experts, the staff) let alone by learners and, as a result, its practice is still at the inception stage, where this stands against the intent of modular instruction.

Discussion

The Appropriateness of SSA to Modular Instruction

The result obtained from the quantitative data revealed that student self-assessment is a relevant tool to modular instruction in the context of higher education institutions. Similarly, the findings obtained from qualitative data indicated that, as an alternative assessment tool, student self-assessment is strongly aligned with modular instruction for it enhances independent learning, self-confidence, and motivation as well as helps actualize lifelong learning, self-regulated learning (SRL) and meta-cognitive skills that are also at the heart of modularized instruction.

This means that most of the participants in the study seem to believe in the existence of a strong alignment between SSA and modular curriculum. Of course, the participants' increased awareness on the appropriateness of the SSA to modular instruction seems to be a golden opportunity, at least in theory or in principle. In fact, changing or transforming this golden opportunity into practice on the ground requires the higher learning institutions to create an enabling environment such as having a clear assessment policy, aligning the preparation of course modules with the appropriate assessment scheme, clearly indicating the roles of instructors and students in the assessment task within the modules and enhancing the awareness and skills of both the instructors and students on the SSA.

The finding is generally consistent with the existing body of literature that confirms the presence of a linkage between self-assessment and modularized instruction. For instance, El-Koumy (2010) suggests that self-assessment fosters the elements embedded within the modular instruction (students' ability to fully engage in the construction of their own knowledge /meaning and connect experiences to the existing knowledge). Similarly, Mc Sweeney (2012) pointed out that self-assessment is a tool for actualizing self-regulated learning strategies. Moreover, as to Karami & Rezaei (2015), the self-regulated and self-paced learning components of modularized instruction have changed assessment of learning (summative approach) into assessment for learning (formative approach).

The Level of Practicing SSA

The result of the present study (as captured from both the quantitative and qualitative data) showed that the implementation or the use of SSA is very low in the context of the College of Education and Behavioral Studies (CEBS) of Addis Ababa University (AAU). The finding also showed that there is no substantive difference in the implementation of the SSA in terms of the area of specialization, service years and

academic rank of the study participants. This means that student self-assessment is not widely employed or not adequately applied as an alternative tool or as a supplement to the teachers' assessment of student learning in the real context of the study site. The fact that SSA is still at an infancy stage further indicates that teachers and students do not have specific roles or are not partners in the assessment tasks, that students are still the subject of assessment, that students do not feel a sense of ownership in their own learning and that students' engagement in the assessment of their own learning is still minimal. This might be influenced by the behavioral theories of learning that assumes that the child is passive (Gullo, 2005); that learning and assessment should be conducted by the knower-the trained and knowledgeable teacher (Lidz, 2003); and that students learn better by observing and listening to what the teacher is doing in the class (Reece & walker, 2003). In the contrary, the constructivists and developmental theorists believe that the child is active creator and processor of information; that the child's learning is facilitated when it is designed and provided based on the child's natural developmental order; that children learn by constructing their own knowledge through demonstration, experimentation and manipulation of objects (Stahl, 2003). The implication of the current finding is that the assessment activity is still under the ownership of the instructors contrary to what is intended in the modularized instruction of the university system and the philosophies as well as the principles of the constructivist theories. Of course, such a practice leaves little or no chance or opportunity for the students to exercise their full potential, academic tasks and responsibilities. At the same time, such a practice clearly shows the existence of a huge gap between the theory and practice, belief and behavior or attitude and behavior of the SSA. In fact, this is a warning sign that requires exerting tremendous efforts to bridge the existing gaps so as to improve the prevailing situation.

Generally, the present finding is consistent with the existing literature. For instance, Spiller (2012) reported that though tremendous efforts have been made to design classroom learning opportunities that reflect the principles of constructivist learning, this principle is mostly ignored in

the design and implementation of the student self-assessment. Similarly, Scott (2017) reported that despite an increased interest to use self-assessment in higher education learning environments, the assessment activity is still largely controlled by the teachers.

Challenges to the Effective Implementation of SSA

The findings of the current study (as drawn from both the quantitative and qualitative data) identified the following factors as the major challenges to the effective utilization of SSA in the context of modular instruction in the College of Education and Behavioral Studies of Addis Ababa University: students' lack of knowledge and skills for assessing their own work; students' tendency to distort evaluative information to favor themselves; teachers' doubt on the reliability and validity of SSA information; lack of the classroom culture that supports the practice of SSA; the threat that SSA diminishes teachers' power in decision making; the fear that sharing assessment with students lowers the standards; lack of explicitly stated SSA criteria in the course modules; lack of adequate experience and training by students on how to use SSA; instructors' tendency to maintain their power and control over assessment; and lack of explicitly stated rationale in the respective course modules on why and how to use student self-assessment.

In fact, this finding is in line with the existing body of knowledge. For instance, Miller and Weiner (2003) are of the opinion that the low level of implementation of the student self-assessment can be linked to lack of adequate awareness, experiences, skills and focus on self-assessment by students. At the same time, Juwah et al. (2004) reported that the low utilization of SSA is also related to the tendency to conceptualize feedback as a transmission process from the teacher to the learner. Moreover, Brown and Harris (2014) reported that self-assessors' tendency to have inflated perceptions of their accomplishments can also undermine the use of SSA.

Implications

The result of the present study revealed that student self-assessment is perceived by the participants as strongly aligned with modular instruction in the context of the higher education institutions. However, despite strong belief that self-assessment, as a form of formative assessment, is directly aligned with modularized instruction; enhances deep learning and can potentially lead to improved academic achievement and motivation, its practice in the classroom lags far behind its theory, assumptions and principles in the context of the CEBS of AAU. This implies that the students are still driven by summative assessment and there is little room and time available for the students to engage in self-assessment. Hence, the researcher hopes that the finding of the present study will have both theoretical and practical values for policy designers, module developers as well as university instructors and students. It will have theoretical values in gaining adequate insights on the importance of aligning self-assessment with modular instruction based on the constructivist alignment principles. It will have practical values in designing appropriate assessment policy or guideline that fits well to the context of modularized curriculum, in preparing operational guidelines and manuals that explain the procedures of how SSA is applied in detail and in preparing instructional materials and modules in which the what, why and how of self-assessment are explicitly explained. Moreover, the finding of the current study will have implications for the instructors to view students as active rather than passive learners as well as learning as a self-monitored rather than a teacher monitored activity. Not only this, as modularization embraces in it the philosophy of developing self-monitoring, self-regulation, self-reflection and self-criticism skills in students, the result of the present study has also implications for the instructors to design an assessment scheme that consistently fosters these meta-cognitive skills in students. In fact, this requires teachers to possess adequate pedagogical content knowledge and knowledge of assessment in addition to domain/subject matter knowledge and knowledge of students' previous learning.

The current study also concludes that lack of adequate awareness, knowledge and skills on the part of students as well as lack of clear criteria for the self-assessment tasks are perceived by the participants as the major bottle necks to the effective implementation of the SSA in light of modularized instruction in the context of the HEIs. Hence, the study results imply that learners should be made aware of the purposes, techniques, advantages and disadvantages of self-assessment; students should be given the opportunity to develop adequate experiences and skills in judging their own work as well as in practicing and exercising the self-assessment tasks from initial stages; teacher should develop or set clearly defined self-assessment criteria (such as rubrics, checklists & rating scales) that enable students to assess their own work objectively, realistically and fairly and teachers should pass the evaluative responsibilities to their students by scaffolding and modeling goal setting, evaluation, good feedback practice, reflection and quality work that reflect curriculum outcomes. Moreover, the College/ University management can use the findings of the current study as an input and a baseline to design and implement appropriate interventions (e.g., developing clear assessment policy/guideline in line with modular instruction, providing awareness raising trainings both for the staff and the students on SSA, preparing concrete examples or models of SSA being aligned with modular curriculum for the staff and the students to practice) that enhance the level of practicing SSA.

Finally, the current study has implications for future research to extend the scope of this study in terms of the study sites, study variables, conceptual framework and methodological issues so as to ensure more generalizability and capture better insights on the topic.

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