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Formative Assessment Techniques to support Student Motivation and Achievement

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Certification

I certify that this study was prepared by students (Solin Hashim and Sozan Aziz) under my supervision at college of Education Salahaddin University – Erbil in partial Fulfillment of the requirements for the degree of bachelor in English Language.

Signature

Professor, assistant proferssor, lecturer, assistant lecture.

Name of the supervisor

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Dedication

This research is wholeheartedly dedicated to our beloved parents, who have been our source of inspiration and gave us strength when we thought of giving up, who continually provide their moral, emotional, financial support.

To our friends, classmates and mentors who shared their words of advice and encouragement to finish this study.

And lastly we dedicated this research to the Almighty God, thank you for the guidance, strength, power of mind, protection and skills for giving us a healthy life. All of these, we offer to you.

Section One

Abstract

Students' motivation and success can be greatly influenced through formative assessment. This article highlights five critical strategies that instructors may utilize to acquire vital information on their students' comprehension, provide feedback to students, and enable students to set and attain meaningful learning goals. Each of the techniques can enhance student motivation as well as achievement. however Formative assessment is an important aspect of teaching and learning since it has an impact on students' learning and vice versa. Formative assessment is thought to alter students' needs for autonomy, competence, and relatedness, and hence their autonomous motivation. Two assumptions were empirically examined in this investigation: Students' autonomous motivation is aided by formative evaluation, and students' need fulfillment acts as a mediator in this interaction. The findings backed up those expectations, indicating that more formative assessment usage is linked to sentiments of autonomy and competence, as well as more autonomous motivation. The current study proved the advantages of studying formative assessment as a technique and encourages instructors to use formative assessment in their classrooms. The theoretical model offers instructors with instructions for implementing formative assessment effectively, as well as a platform for researchers to investigate the phenomena of "formative assessment as practice" in greater depth.

Keywords: formative assessment, motivation, feedback, motivation; need satisfaction; need frustration

1. Introduction

The primary goal of this research is to look at the efficacy of formative assessment procedures in major teacher education institutes. This helps to understand how it affects students' ability to learn by engaging and inspiring them. In order to evaluate and enhance their learning performance, students must rely on assessment information. Students must use social interaction and group communication to self-assess and peer-assess in order to establish their own strengths and deficiencies. As research tools, the study included a questionnaire, in-depth interviews, and observations. The results of this study showed that students are engaged and involved in learning by formative assessment practices which help them shift the process of acquiring knowledge forward. Other factors impacting the implementation of formative assessment including class-size, portfolios, and curriculum etc. are also discussed in this study. Formative assessment approaches have expanded over the last decade in response to a traditional view of assessment (i.e. measurement tradition), in which assessment is solely about producing accurate estimations of students' learning to monitor and report on progress (Wiliam 2011). However, despite increased interest, these approaches to assessment have only been minimally adopted by teachers (Boud et al. 2018). Boud and colleagues (2018) reflected on this and made a case for an alternative view on assessment, contrasting with the measurement tradition: assessment as a cultural practice. In their 'assessment as practice' view, assessment is seen as a 'socially situated interpretive act' (Boud et al. 2018, p. 1109), rather than as an entity on its own: not the product of assessment, i.e. accurate estimations of students' learning, but the process of assessment is of interest when studying assessment as practice. Assessment is seen as a social activity in which a teacher, a student and peers interact and discuss the standards, criteria and the assessment practices. The current study presents and tests a model of formative assessment as practice with a central role for students' motivation.

1.1 The problem

The education system is now dealing with the issue of an underqualified workforce, with 65 percent of graduates requiring more schooling to fulfill employer demand [and just 50 percent of graduates being able to find employment in their majors]. Declining academic standards, increased teaching by free-lance lecturers, enormous class sizes, and dwindling value of academic degrees due to an excess of graduates in the labor market are all ongoing issues in higher education. When students attend colleges, they are increasingly expected to stand out in a dynamic and competitive higher education environment. As indicated in the worldwide literature, formative assessment supports students in being self-driving and self-regulating in their knowledge acquisition process.

1.2 The aim of the study

Higher education's aims have shifted from information transmission and acquisition to the production of knowing persons, with a focus on problem-solving abilities, professional skills, and authentic learning, or learning in real-world situations. As a result, higher education should foster a positive learning culture and atmosphere in which students and lecturers have common goals before beginning to collaborate. The growth of formative assessment in higher education implies that assessment should be seen of as both an assessment of students' progress during the learning process and an assessment of their ultimate performance at the conclusion of the course. Formative evaluation must take into account the social and cultural settings in which it is used. Standardized evaluation focuses mostly on competitive examination culture in civilizations shaped by Confucian ideals and Buddhist culture. Because culture is a factor in evaluation, we must understand it as a social product in which cultural values and traditions, as well as the interests of certain groups, play a significant role. The learning and social culture of students are part of the assessment's cultural background. Formative assessment is influencing the learning culture through modifying classroom procedures. Lecturers should collaborate to discover how to adjust formative assessment practices to their students' requirements. (Daxue, H, 2020)

1.3 The significance of the study

The fact that both competence satisfaction and frustration were found to be statistically significant mediators in the relationship between students' perceptions of the use of formative assessment strategies and autonomous motivation emphasizes that competence satisfaction and frustration are not polar opposites. (Vansteenkiste and Ryan 2013). Both explain variance in students' motivation. Moreover, it shows that formative assessment is mainly affecting students' feelings of competence, and thus can be considered a competence supportive practice, similar to providing structure, which provides students' perceived control and motivation (Skinner 1995). Structured contexts have shown to promote students' competence satisfaction and reduce their competence frustration (e.g. Stroet, Opdenakker, and Minnaert 2013).

1.4 Definition of Basic Terms

Formative assessment is important in helping students enhance their skills and confidence in the self-studying and self-researching process. Students participate actively in all class activities, which may be changed to help them meet their learning objectives depending on various types of feedback. Although the many definitions of formative evaluation are well-known, the extent to which it affects lecturers and students is still contested. It is usually assumed that students' abilities may be shown during the learning process, allowing lecturers and students to change their activities to meet the goals depending on feedback. Students are encouraged to exhibit their inherent skills and govern their learning process in order to improve their performance through formative evaluation. Previous research has found that encouraging students' creativity and inventiveness helps them make links between their classroom learning and the actual world.

Section Two

2. Overview of assessment and formative assessment

Overview of assessment and formative assessment Higher education in the 21st century requires students to master up to date skills for both their social and professional life. It is necessary for them to focus on learning new competencies through updated learning and instruction methods. Learning involves not only acquiring new knowledge but also connecting the previous knowledge with the one they may (want to) know [53, 44]. A document issued by OECD/ CERI (illustrates the relationship between assessment and evaluation in which evaluation is made based on judgements from assessment with the aim of improvement. Information from students' learning process may help educators in making decisions on the way to change teaching and learning methods in order to improve curriculum and education

institutions as well. Moreover, OECD has also reported research on how to use evaluation in improving teaching capacity of teachers with skills required in the 21 st century [30]. In that sense, it focusses on the way to measure the obtained knowledge during the learning process. The rapid change in the context of assessment drags on the adjustment of the way to give feedback in higher education [6]. Globally, higher education is concerned with students' competencies in terms of what they can do, how they do and what they are able to do when they receive support and feedback from lecturers and peers. The key factor lies in the way lecturers engage and motivate students in the classroom to enhance their performance and uplift their achievements. Formative assessment is considered by many as the combination of feedback from lecturers' evaluation, self assessment and peer assessment which may be collected and used for adjusting students' current learning methods and contents [31, 23,14]

2.1 Formative assessment in higher education context

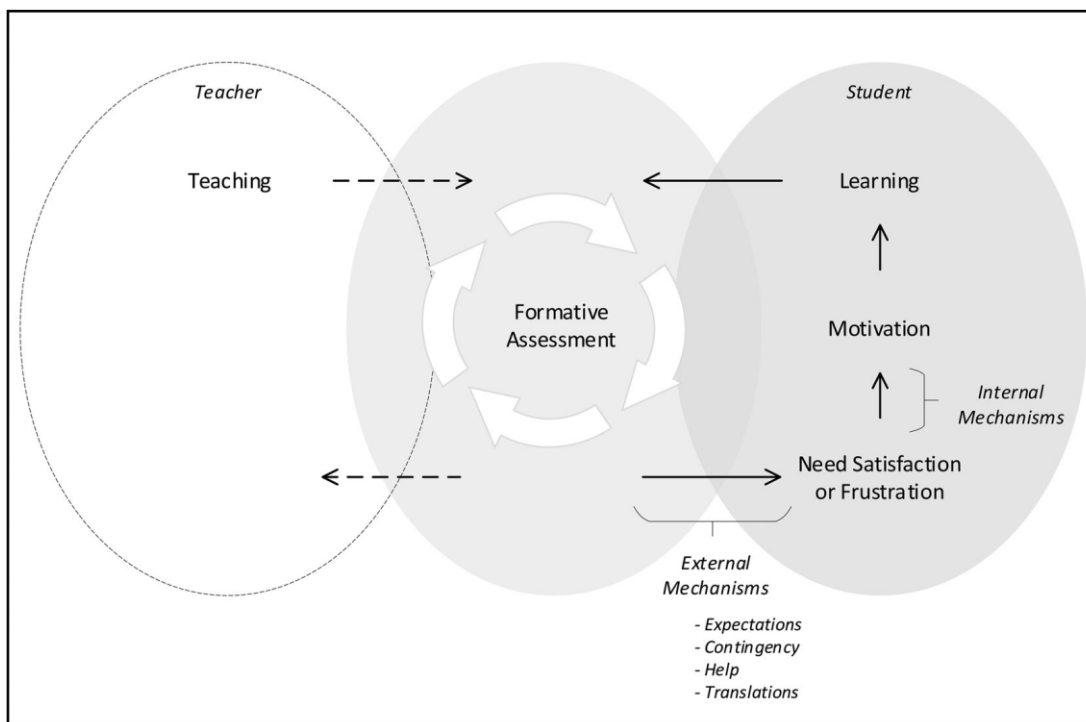
Formative assessment plays a key role in contributing to improve students' competencies and confidence in self studying and self researching process. Students are actively involved in all class activities and these activities can be modified to enable them to achieve their learning targets based on different kinds of feedback. Formative assessment is well known for its various definitions but the extent of its impacts on lecturers and students remains debatable. It is widely believed that students' competencies can be shown during their learning process so that both lecturers and students can adjust their activities to gain the targets based on provided feedback. Formative assessment encourages students to demonstrate their natural abilities and regulate their learning process to achieve better performance. Previous studies observed that when students' creativity and innovation is encouraged, connections of the acquired knowledge with the real world are established [Research Methodology

2.2 Why formative assessment is beneficial for the students?

The results of the current study showed that not one strategy of formative assessment is favorable above others. Students' perceptions of the use of all strategies were associated with higher self-perceptions (i.e. need satisfaction) of autonomy and competence and, consequently, more autonomous motivation. Our theoretical model, which is based on the Self-System Model of Motivational Development (Skinner and Belmont 1993), provides insight into how formative assessment influences students' learning. The theoretical model can be used to explain the effectiveness of formative assessment, and the external and internal mechanisms can be used to study formative assessment practice in depth. Even though the current study provided proof for two fundamental assumptions of the model, more fine-tuning of the model is recommended, for example, about the role of ASSESSMENT & EVALUATION IN HIGHER EDUCATION 17 relatedness satisfaction. With the introduction of the theoretical model, we contribute to the debate and research on formative assessment as practice (Boud et al. 2018). For teachers who are thinking about applying formative assessment in their lessons, the current study is an encouragement to start practicing. We showed the beneficial association between students' perceptions of the application of formative assessment and students' autonomous motivation. Moreover, the current study provides teachers with a framework to apply during curriculum and course development. The external mechanisms of contingency, help, expectations and translations can help teachers to evaluate their formative assessment as practice.

2.4 Five key strategies of formative assessment

The first strategy of formative assessment identified by Black and Wiliam (2009, 2018) is clarifying, sharing and understanding learning intentions and criteria for success. This is the first step from the model of Antoniou and James (2014). This strategy can be employed to answer the question *Where is the student going?*, and involves teachers, students and peers. Examples of this strategy are a teacher discussing a rubric with students, the use of exemplars to co-construct assessment criteria, and letting students formulate personal learning goals. To find an answer to the question *How is the student doing?*, a teacher can make use of the second key strategy: arranging effective classroom discussions, activities and learning tasks that elicit insight into students' learning processes (Black and Wiliam 2018). The teacher initiates activities and discussions to elicit students' responses. This strategy is similar to the E and S part of the ESRU-model (Ruiz-Primo and Furtak 2007). These classroom practices can be done



collaboratively, for example, when the teacher starts a class discussion to activate prior knowledge, or individually, for example when the teacher uses a quiz to test students' knowledge. The third strategy, teacher feedback, is the teachers' response to the (elicited) insight they have gained into students' learning process, to help students determine *Where to go next?* (Black and Wiliam 2018). This strategy can be found in the U phase of the ESRU-model (Ruiz-Primo and Furtak 2007) and the last step of the model by Antoniou and James (2014). In the teacher feedback, teachers inform students how they are doing and what they

have to accomplish next. Teacher feedback can vary in nature and form, such as collectively or individually-given, written or oral, and corrective or constructive feedback (e.g. Hattie and Timperley 2007). Not only teachers have a role in determining how students are doing and where they are going next. The fourth and fifth teaching strategies activate students as instructional resources for one another and as owners of their learning process (Black and Wiliam 2018). The most common way to adopt those strategies is by implementing peer and self-assessment, respectively. A recent meta-analysis by Li and colleagues (2020) showed that students benefit from peer assessment, especially when this is accompanied by peer assessment training. Panadero, Jonsson, and Botella (2017) concluded after their meta-analyses on the effect of self-assessment on self-regulated learning and students' self-efficacy that 'self-assessment is a necessity for productive learning' (p. 95). Activating students as an instructional resource is not represented in the ESRUmodel by Ruiz-Primo and Furtak (2007) or the model by Antoniou and James (2014).

Section Three

3. Formative feedback and achievement goals

Formative feedback affects the kind of achievement goals students internalize. Achievement goals fall into two categories: performance goals and mastery goals [Order switched to match the order of subsequent explanation). A performance-goal orientation (also called an ego-involved orientation) emphasizes comparison of students' abilities. Teachers promote performance goals by making student evaluations public, attributing performance to individual ability, and rewarding students who outperform others. In contrast, a masterygoal orientation emphasizes learning, understanding, improving, mastering new skills, and taking on challenges. Teachers promote mastery goals by evaluating student progress, providing students opportunities to improve, treating mistakes as part of the learning process, varying evaluation methods, and making evaluation private (Ames 1992; Patrick et al. 2001; Meece, Anderman, and Anderman 2006). Students adopt mastery goals when evaluation (a) is tied to progress toward individual goals, (b) takes into account active participation, and (c) provides positive feedback on strategy use (Ames 1992; Kaplan andMaehr 1999). Such evaluation techniques are also characteristic of effective formative assessment.

3.1 Internal mechanisms: Students' basic psychological needs

Students' motivation is well-described in self-determination theory (Ryan and Deci 2017). From the perspective of self-determination theory, motivation is determined by the level of selfendorsement for an activity (i.e. the level of perceived control; Reeve et al. 2008). When students experience pressure in their behaviour and feelings due to various forces (e.g. rewards or feelings of shame; Deci and Ryan 2000; Ryan and Deci 2000a, 2000b; Vansteenkiste, Lens, and Deci 2006), students experience high levels of controlled motivation. Students who are studying because they like the task or process they are engaged in or because they find it personally meaningful to engage in it, experience volition, are self-endorsed in their actions, and are autonomously motivated (Ryan and Deci 2017). Autonomous motivation is associated with higher achievement, higher persistence, and wellbeing (e.g. Taylor et al. 2014; Ryan and Deci 2017), while controlled motivation is associated with maladaptive outcomes, like procrastination, burnout and ill-being (Bartholomew et al. 2011; Ryan and Deci 2017). According to self-determination theory, the level of motivation is determined by the satisfaction of a person's basic psychological needs for autonomy, competence and relatedness (Ryan and Deci 2017). We describe this effect of the basic needs on students' motivation as the internal mechanisms in our model (see Figure 1), as it is a process of internalisation that we can describe but not observe directly. Both the effect of need satisfaction as well as need frustration is taken into account in the current study.

Section Four

4. Conclusion

Formative assessment and, in particular, feedback and instructional correctives, can be a powerful technique to support student motivation and achievement. As teachers incorporate more formative assessment techniques into their day-to-day instruction, they will have information which they can use to modify their instruction. Teachers can also use this information about student understanding to help students self-assess and improve their own performance. When students focus on improvement and progress, they are more likely to adopt mastery goals and develop high self-efficacy and expectations for success. When students and teachers attribute student successes to effort, this attribution supports future successes. Formative assessment's emphasis on instructional modifications and student improvement supports student motivation and enables them to maintain high engagement and achievement. Using formative assessments effectively is indeed key to student motivation and achievement.

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