

## Assessment Literacy: Teachers' Conception of Formative Assessment in EFL Classrooms

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### Abstract

*Formative assessment has been proven to be one of the means of improving the quantity and quality of students learning. However, it hasn't been implemented effectively in classrooms, possibly because of misconceptions. The purpose of this research is to find out how English language teachers conceptualise formative assessment and if their conceptions vary with their level of qualification. A total of 252 randomly selected secondary school English language teachers with different levels of qualification filled out the Teachers' Conception of Formative Assessment (TCFA) questionnaire adapted from Teachers' Conception of Assessment (TCOA III). They were also interviewed in groups based on their qualifications. The data from the questionnaire was analysed using a one-sample t-test and a one-way between-groups ANOVA. The interview data was analysed thematically. The result indicated that the participants' conception is mixed and partially deviates from the proper notion of formative assessment. It also revealed that the higher the level of qualification, the better the conception of formative assessment. This implies a poor conceptualization of the relationship between teaching, learning, and assessment that can impede its implementation.*

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## INTRODUCTION

The Ethiopian Ministry of Education is making numerous efforts to improve the quality of education in general and of English in particular. For instance, recently, much work has been done in revising the textbooks and improving their provision, upgrading teachers' qualifications, and using the learner-centred active learning method. Attempts are also being made to promote aligning teaching and learning with assessment methods, i.e., the use of formative assessment, as part of the effort being made to improve the quality of education (MoE, 2015).

Despite all these efforts, learners' performance in primary and secondary schools in the core subjects in general and English in

particular is not satisfactory. The National Educational and Assessment Agency (NEAEA) (2017) report on National Learning Assessment revealed that the composite mean score of all subjects in grade 10 and 12 national exams is less than 50%, which is the minimum achievement level set by MOE; and particularly, the results of the English national exams in grades 10 and 12 were 32.04 and 45.59, respectively. The report also indicated that, especially, the results in math and English have actually declined over time. In addition, Mesaye et al. (2019) observe that though policy priority and financial input to the education sector improved access to education, quality is still a critical challenge, and they recommend that "the assessment

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system should be strengthened in order to support evidence-based intervention and decision-making (p. 5).

One of the major issues to be addressed in strengthening the assessment system to improve the quality and quantity of learning is the need to align the assessment practice with learner-centred classroom teaching and learning, i.e., the use of formative assessment in the classroom, because research has confirmed that it enhances the quality and quantity of students learning. For instance, CERI's (2005) study of formative assessment confirmed that formative assessment works well—it is effective in promoting student learning across a wide range of disciplinary areas and in different types of outcomes, including increasing equity of student outcomes and improving students' ability to learn at different grade levels. It also helps to build stronger relationships with students and increase contact with parents.

Although the research findings on the effectiveness of formative assessment relate to all school subjects, the use of formative assessment in EFL classrooms is of paramount value. As the language learning process by itself is complex and the nature of the constructs of what is to be learned and assessed is elusive (Bachman, 1990; Coombe, 2002; Dickinson & Carver, 1980), assessment appears to be more doubtful in language classrooms than in content area classrooms for various reasons. Unlike assessment in other areas of knowledge where language is used in the process of measuring something else other than language, in a foreign language classroom, language is both what is to be learned and, at the same time, the means by which it is learned and assessed. Consequently, there is a high probability of the occurrence of a number of unnoticeable errors of a certain sort. This makes the need for formative assessment more important in

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EFL classrooms when compared with content-area classrooms, where the focus of the evaluation is the degree of acceptability of the content information (Bachman, 1990; Tsui, 1996; Allwright and Bailey, 1991).

While the benefits of formative assessment in the classroom are praised, there are a number of challenges to implementing it. One of the challenges is the way the teachers conceive of it. Conception highly influences the teachers' and students' multiple classroom activities, including the implementation of assessment practices (Pajares, 1992; Williams and Burden, 1997). Widiastuti and Saukah (2017) also explain that "how teachers conceive of the nature and purpose of assessment matters to the implementation of classroom assessment. Thus, formative assessment is practiced accordingly and serves its purpose only when it is clearly and positively conceived by both the teachers and the learners; otherwise, as observed by Yorke (2003), it can have a detrimental effect on learning. Carless (2007, cited in Xie and Lei, 2019) also stresses that effective implementation of formative assessment depends largely on teachers' understandings. Thus, it would be crucial that teachers, students, and other stakeholders have a clear and positive conception of formative assessment so that it can be used appropriately. Therefore, it is important that the conceptions held by the teachers and the students about formative assessment are studied and made explicit so that necessary interventions are done to modify unfavourable behaviours and improve the practice.

However, there are few studies that study conceptions of formative assessment in their complete and full-fledged sense. In many of the studies on formative assessment,

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Widiastuti and Saukah (2017), for instance, focused on its implementation and found that the implementation is poor because of the poor understanding of the teachers. Others focused on separate and specific aspects of assessment. For example, Brown (2002, 2004, 2011), Opre (2015), and Brown, Gebril, & Michaelides (2019) focused on the purpose of assessment. The report shows that the teachers' perceptions are mixed; some perceive it as a means of improvement and others think it is a means of accountability, and it seems that they have no clear understanding of the real purposes of formative assessment. Others, like Modupe and Sunday (2015), who focused on perception and implementation of continuous assessment, reported that the implementation is contrary to its definition and recommended orientation for the teachers. This generally implies that there is a scarcity of empirical literature that provides the conception of formative assessment in its complete image.

In addition, studies that focused on the factors that influence the teachers' conception of assessment are sparse, and the findings are inconsistent. For example, in Brown's (2004) report, variables like age, gender, training and practices, school size, location, or socio-economic status did not make any differences in the participant teachers' conception. EMİNE (2010) also reported that the subject they teach and in-service training did not influence the teachers' conception of assessment. However, Xu and He (2019) found out that teaching practicum has changed pre-service teachers' conception of assessment. This also indicates the need for further studies on the variables that influence conceptions. Therefore, this study is set out to fill these gaps.

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To that effect, it is aimed at answering the questions:

1. What is the teachers' existing conception of formative assessment?
2. Do the conceptions vary with the level of qualification?

### **Review of Literature**

Assessment is one of the major components of a course because it has a big effect on students' learning; it informs the students about what and how they learn and how much effort they should invest in it. For the assessment to have a positive effect on students learning, it should be aligned with the teaching-learning process. Formative assessment is the tool for this alignment.

### **Formative Assessment**

One of the prominent recent reforms in education is re-establishing the relationship between and alignment of teaching, learning, and assessment. Assessment has been re-defined, and the assessment culture has changed from being a means of auditing learning outcomes as a way of controlling the students and the school's accountability to a means of helping learners improve their learning. In generic terms, it has moved away from controlling to supporting, and learners are put in the mainstream of the assessment scheme. This form of assessment is generally referred to as formative assessment or Assessment for Learning (AfL) (Black & Wiliam, 1998; Yorke, 2003).

In light of this major shift, the Ethiopian Ministry of Education (2003, 2005) recommends the use of learner-centred active learning methods and formative assessment at all levels of educational institutions to improve the quality and quantity of learners learning outcomes.

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Formative assessment is rooted in constructivism. Constructivists believe that learners are better able to process, comprehend, and analyse information if they have had some input in the construction of this information. The learners must be the central focus and hub of the learning process. A teacher working within a constructivist way of thinking becomes a facilitator, providing support to plan, organise, and direct the learner, who is held responsible for her or his own learning.

Formative assessment is a concept that is more complex than it might appear at first sight. The basic idea is that the central purpose of formative assessment is to contribute to student learning through the provision of information about performance. Assessment of learning becomes formative when it "provides information to be used as feedback to modify teaching and learning activities" and "the evidence is actually used to adapt the teaching to meet the student's needs" (Black and William, 1998: 2).

Typical characteristics of formative assessment, according to CERI (2005), are:

1. It primarily aims at improving learning outcomes, not judgement.
2. integrated into the teaching and learning process, not a separate entity
3. provides instant and rich feedback.
4. involves learners
5. uses a variety of assessment techniques

First of all, the major objectives of the teacher working with formative assessment are not grading and counting on how much students learned to check the extent to which students achieved the curricular objectives. The emphasis is on helping students not only cognitively but also emotionally and socially feel safe; engaging them in the whole process of learning; encouraging them to take risks

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and take responsibility; and developing self-confidence in the classroom.

Next, formative assessment is not external to the learners and comes in periodically, at the end of instruction; it is considered not just an integral part but also a major component of classroom instruction. In classrooms featuring formative assessment, teachers make frequent, interactive assessments of student understanding. This enables them to adjust their teaching to meet individual student needs and better help all students reach high standards.

Rapid and quality feedback is also an important aspect of formative assessment. Feedback is information about the gap between the actual and reference levels of quality and quantity of performance expected of the learners. Comments can be given in written form or orally so that students can learn from the feedback. The information on the gap between the student's current performance and the reference point can be provided by the assessor: self, peer, or teacher. This information should also provide students and staff with opportunities to reflect on their practice and gather information on which teachers can base their subsequent instruction.

Another distinctive feature that underpins formative assessment is student involvement. If students are not involved in the assessment process, formative assessment is not practiced or implemented to its full effectiveness. Students need to be involved both as assessors of their own learning and as resources for other students in the form of peer and self-assessment. When learners are involved in assessment, they develop a sense of ownership and worthiness, a sense of responsibility for their own learning, and are motivated to learn. Learners need to participate in the whole aspect of assessment: setting standards for the

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quality of the work expected of them, developing criteria to meet the set level of quality work, and marking their own or their peers' performance (Boud & Brew, 1995).

Assessing students also involves the use of a variety of assessment techniques and forms, ranging from the very informal and almost casual to the very formal, perhaps even ritualistic one (Yorke, 2003). These include the use of written and oral task performances, portfolios, project works, individual and group assignments, presentations, poster works, etcetera.

### ***Benefits of Formative Assessment***

Studies of formative assessment have unanimously shown that it is highly effective in raising the level of student attainment, increasing equity in student outcomes, and improving students' ability to learn. The achievement gains associated with formative assessment have been described as "larger than most of those found for educational interventions" (Black & Wiliam, 1998, p. 3).

The study carried out by the Centre for Educational Research and Innovation (CERI) supports these findings. Formative assessment also improves equity in student outcomes. Schools that use formative assessment show not only general gains in academic achievement but also particularly high gains for previously underachieving students. Attendance and retention of learning are also improved, as is the quality of students' work.

### ***Challenges***

Though the empirical literature shows that the benefits of formative assessment are impressive, the implementation and practice are not straightforward as such. The challenge can be at the systemic or grass-roots level. There can be a lack of policy support for

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formative assessment or tension between the policy, its conception, and the practice.

The more serious challenge to formative assessment, however, like any other innovation in education, is that there can be resistance from teachers and students because of the kinds of conceptions they hold about teaching and learning in general and formative assessment in particular. For example, beliefs and assumptions about learning, about their roles as assessors, and about the "abilities" and prospects of their students will affect their interpretations of their students' learning work and thereby determine the quality of their formative assessment. Similarly, perceptions and beliefs held by students about themselves as learners and their experience of the changes that follow from innovations in formative assessment affect the practice (Black and Wiliam, 1998).

### ***The Concept of Conception***

It is difficult to demarcate precisely the distinction between or among the plethora of terms that are used to refer to psychological constructs that define and describe the structure and content of mental states that drive a person's actions. These terms include belief, knowledge, attitudes, assumptions, values, judgements, axioms, opinions, perceptions, conceptions, conceptual systems, preconceptions, dispositions, implicit theories, and personal theories (Pajares, 1992; Woods, 1996). The interest, however, here is in the term conception and its affiliates like knowledge, perception, and belief. In some literature (e.g., Abiy, 2005), these terms are used interchangeably, and in others (e.g., Struyven et al., 2005; Kreber, 2003), the researchers bypass defining the terms. However, although these terms have some commonality,

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they have differences in some aspects; therefore, they should be used accordingly.

Perception refers to a person’s understanding of her or his surroundings by organising brief experiences, sensory information, and feelings. Knowledge is a set of relatively universal facts and information a person possesses about his or her world. Belief is a valued knowledge that refers to a relatively more developed idea or opinion acquired through evaluation and judgement of the knowledge, perception, reflection, or experience felt to be true, deeply personal, and more stable than knowledge and perception (Bunts-Anderson, 2004; Heal, 2003; Pajares, 1992).

Conception, as invoked by Thompson (1992), represents the general mental structure of phenomena, encompassing knowledge, perceptions, beliefs, attitudes, meanings, preferences, and other mental images that explain complex and difficult categories of experience. It represents a comprehensive, organised, and unified body of knowledge (Brown, 2004; Freeman & Richards, 1993). As the context of teaching, learning, and assessment is characterised by such complex phenomena and the attempt of this study is to gain insight into them, the meaning of the term conception is maintained in this study and used accordingly, i.e., it includes the cognitive (beliefs and perceptions about) and affective behaviour towards assessment that teachers exhibit.

**Research Methods**

*Design*

To study the existing conceptions of the teachers about formative assessment, a descriptive survey design is used. The study is also predominantly quantitative in approach, and qualitative data is used to corroborate the quantitative data.

***Participants in the Study***

Participants in this study are 252 English language teachers selected using stratified simple random sampling from secondary schools (grades 9–12) in the East and Wollega zones of Oromia, Ethiopia. As all the government secondary schools in Oromia have very similar features, the two zones were selected because of convenience, considering the time and financial issues. The total population was 588 English language teachers from 114 secondary schools, and they were categorised into three groups according to their level of qualification, of which 157 were diplomas (two years of teacher training after grade 10), 394 were BA degrees (three years of university education after grade 12), and 30 were MA degrees (two years of graduate study). Then, following Cohen, Manion, and Morrison's (2005) recommendation, stratified simple random sampling is used to select participants from each category. Accordingly, 69, 173, and 13 participants were selected from the diploma, BA degree, and MA degree, respectively.

**Table1**

*Participants’ data*

Qualification	Frequency	Percent	Valid Percent	Cumulative Percent
Diploma	66	26.2	26.3	26.3
BA degree	172	68.3	68.5	94.8
MA degree	13	5.2	5.2	100.0
Total	251	99.6	100.0	
Missing System	1	.4		
Total	252	100.0		

## **Instruments**

Two instruments are utilised in this study: a questionnaire and an interview. The questionnaire is the principal one, and the interview is supplementary.

### **Questionnaire**

The Teachers Conception of Formative Assessment (TCFA) Questionnaire is used as a major instrument, and interviews are used to supplement the questionnaire. The questionnaire, which contains 33 items, is adapted from TCOA III (Teachers' Conception of Assessment III), originally developed and validated by Brown (2004). TCOA III is about conceptions of assessment and is directly related to conceptions of formative assessment. Therefore, it is adapted by rephrasing the items (statements) in the way they elicit knowledge, perceptions, beliefs, attitudes, and preferences of the respondents on formative assessment based on the literature by the scholars. TCFA is a Likert scale type with five degrees of agreement to study teachers' conceptions of assessment. It is made up of 33 first-order factors (items) that constitute eight second-order factors: student accountability, teacher and school accountability, improvement, irrelevance, integration, diversity, learner involvement, and feedback. Again, the first four second-order factors constitute one third-order factor, purpose.

Two associate professors, one with a PhD in educational psychology and the other with a PhD in measurement and evaluation, assessed the validity of the questionnaire. The reliability (internal consistency) of the questionnaire items is checked using Cronbach Alpha after recoding the negatively

worded items, and the test result was found to be 0.723, which is acceptable (Pallant, 2011).

### **Interview**

An unstructured group interview is also conducted with three groups of six (a group from each stratum) randomly selected teachers. The points for the interview are derived from the literature on formative assessment and are related to the questionnaire items so that the responses are compared to the questionnaire.

### **Procedure**

First, the questionnaire was administered to the teachers face-to-face in their respective schools during the visit to schools for community service and practicum. All the papers were collected, but three were discarded because they were not filled out appropriately. Then,

### **Data analysis**

The data gathered through the questionnaire was analysed quantitatively using SPSS version 24. To describe the teachers' existing conception, a *one-sample t-test* is computed to get sample mean values and compare them against the expected mean (Myers & Well, 2003; Gaur & Gaur, 2009) to see whether the differences are significant. To see whether the teachers' conceptions vary with differences in qualification, a *one-way between-group ANOVA* was run, and the result was interpreted.

The qualitative data gathered through the interview is analysed by the qualitative content analysis technique, i.e., transcribing, coding for themes, looking for patterns, and making interpretations (Dornyei, 2007; Given, 2008). The findings from quantitative and qualitative data were merged at the discussion level.

### Findings

As mentioned in the methodology part, the quantitative data was collected using the TCFA questionnaire from a total of 252 teachers of different levels of qualification, as shown in the following tables.

#### Overall Concepts of Formative Assessment

As discussed in the literature, the conception of formative assessment is characterised by the five elements (factors) it involves. Accordingly, the data from the questionnaire was analysed by category of the factors.

#### Major Purpose of Formative Assessment:

In the questionnaire, the first factor, i.e., the purpose factor is a second-order factor made up of 19 items, which are categorised into three first-order factors of Accountability, Improvement, and Irrelevant, and the Accountability factors were again sub-categorised into two sub-scales of Student Accountability and School and Teacher Accountability. The following table shows one-sample t-test statistics for data on the purpose factors.

**Table 1**

*One-Sample t-test of the purpose of Formative Assessment)*

Purposes of Formative assessment	N	Mean	Std. Deviation	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Student Accountability	252	17.47	1.940	44.774	251	.000	5.472	5.23	5.71
school and Teacher Accountability	252	26.84	1.201	116.763	251	.000	8.837	8.69	8.99
Improvement	252	22.39	1.269	92.491	251	.000	7.393	7.24	7.55
Irrelevance	252	7.91	.966	97.194	251	.000	5.913	5.79	6.03

Analysis of the data in Table 2 indicates that the calculated mean value of the first three purpose factors, student accountability (M = 26.84; SD = 1.2), school and teacher accountability (M = 17.47; SD = 1.94), and improvement (M = 22.39; SD = 1.27), exceeds their respective expected mean values of 12, 18, and 15. The mean differences for the three factors (MD = 5.472), (MD = 8.837), and (MD = 7.393), respectively, are also statistically significant at  $P < 0.05$ . In addition, the calculated mean value of the fourth factor, irrelevance (M = 7.19; SD = 0.97), is less than the expected mean, and the difference (MD = 5.913) is significant ( $P < 0.05$ ). This suggests the disagreement of the respondents with the proposition that formative assessment has

nothing to do with the students learning or the teachers' teaching. The analysis indicates that the school and teacher accountability subcategories stood first with the highest mean difference (MD = 8.837), followed by the improvement and student accountability subcategories with mean differences (MD = 7.24 and 5.23), respectively. This indicates that the participants' understanding of the major purpose of formative assessment is confused, i.e., they agreed to two contrary ideas simultaneously, but they gave priority to school and teacher accountability.

The result of the analysis of the group interview on the participants' thinking about the major purpose of formative assessment is consistent with the result of the questionnaire.

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It shows that they assess students continuously to evaluate and grade the students' performance, to rank (categorise) them, and to help them learn better through the feedback they provide. For instance, when the group member answered the question of why they primarily assess their students during the classes, teacher A said, "It helps to grade our students. It is obvious that there are three kinds of students in the class, so evaluation helps us grade our students according to their

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level. It is also good to motivate the students to learn. The other teacher added, "We have to evaluate how much they have understood; formative assessment also helps the students to correct their mistakes frequently."

### *Aspects of Formative Assessment*

The next four second-order factors are formed from statements about the aspects of formative assessment. Table 3 displays one-sample t-test statistics for the data.

**Table 2**

*Result of One-Sample t-test of Aspects of FA*

	N	Mean	Std. Deviation	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Integration	252	14.46	1.094	-22.395	251	.060	-0.544	-1.68	-1.41
Diversity	252	10.62	.935	-74.380	251	.000	1.381	-4.50	-4.26
Learner Involvement	252	5.36	1.941	-29.790	251	.000	-3.643	-3.88	-3.40
Feedback	252	10.67	1.897	-32.668	251	.000	1.669	-4.14	-3.67

The expected means of the four factors: integration, diversity, learner involvement, and feedback factors are 15, 9, 9, and 9, respectively. As indicated in Table 3 above, the calculated mean values of the integration factor (M = 14.46; SD = 1.094) are less than the expected mean. However, the P value (P > 0.05) indicates that the difference is not significant. This implies that the participants' hesitation to clearly disagree or agree with the proposition that assessment is and must be integrated with the teaching-learning process

The table also shows that the calculated means of the diversity factor (M = 10.62; SD = .935) and feedback factor (M = 10.67; SD = 1.897) are greater than the expected means, and the difference is statistically significant (P < 0.05). This signifies that the respondents

supported statements that propose that assessment techniques should be diversified and feedback should be immediate and frequent. The mean value of the learner involvement factor (M = 5.36; SD = 1.941) is less than the expected mean (9), and the P value (P < 0.05) indicates that the difference is significant, which signals that the respondents strongly disagree with the notion that learners should take part in the assessment process.

As indicated in Table 3, the calculated mean (M = 10.67; SD = 1.897) of the feedback factor is bigger than the expected mean. The table also shows that this difference is statistically significant (P < 0.05), signalling that the participants agree with the proposition that immediate and frequent feedback is an element of assessment.

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The result of the analysis of responses to interview questions related to aspects of formative assessment reflects the result of the questionnaire. The interviewees assumed that assessment is what comes as a means of evaluating the learning after covering a certain portion of the curriculum. They also mentioned that a variety of assessment techniques should be used and feedback should be given soon, but categorically denied the need for and possibility of learners participating in the assessment process. For example, in response to the question, "What are the features of formative assessment?" the interviewees reported that when we give different kinds of assessment on what we teach and we mark it and give them the right answers, it is formative assessment. They

**Table 3**

*The Descriptive Statistics*

		N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
						Lower Bound	Upper Bound		
Total Student Accountability	Diploma	66	18.14	.943	.116	17.90	18.37	15	20
	BA degree	172	17.76	1.020	.078	17.60	17.91	15	20
	MA degree	13	10.38	1.044	.290	9.75	11.02	9	13
	Total	251	17.47	1.944	.123	17.23	17.72	9	20
Total school and Teacher Accountability	Diploma	66	26.92	1.232	.152	26.62	27.23	24	29
	BA degree	172	26.80	1.184	.090	26.62	26.97	24	29
	MA degree	13	26.85	1.345	.373	26.03	27.66	25	29
	Total	251	26.83	1.202	.076	26.68	26.98	24	29
Total Improvement	Diploma	66	22.20	1.166	.144	21.91	22.48	20	25
	BA degree	172	22.30	1.164	.089	22.12	22.47	20	25
	MA degree	13	24.77	.599	.166	24.41	25.13	23	25
	Total	251	22.40	1.268	.080	22.24	22.56	20	25
Total Irrelevance	Diploma	66	17.86	1.094	.135	17.59	18.13	15	20
	BA degree	172	17.94	.928	.071	17.80	18.08	16	20
	MA degree	13	17.85	.801	.222	17.36	18.33	17	19
	Total	251	17.92	.966	.061	17.80	18.04	15	20

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were also asked whether students should be permitted to evaluate their own work, and the response was, "No, students cannot mark it correctly; they just mark all of it as correct."

**Comparison of the Concept among Groups:**

The second objective of this study is to find out whether qualification has an impact on the conception of the participants as measured by the TCFA questionnaire. To achieve this, a one-way between-group ANOVA with post-hoc tests is computed and interpreted.

**Major Purpose of Formative Assessment**

**Table 4** displays the results of the descriptive statistics of the data obtained from the TCFA questionnaire.

Table 5 displays the result of the statistics of one way ANOVA

**Table 4**

*Result of the One way ANOVA*

Major Purposes of Formative Assessment		Sum of Squares	df	Mean Square	F	Sig.
Total Student Accountability	Between Groups	695.988	2	347.994	347.16	.000
	Within Groups	248.594	248	1.002		
	Total	944.582	250			
Total school and Teacher Accountability	Between Groups	.781	2	.390	.269	.765
	Within Groups	360.191	248	1.452		
	Total	360.972	250			
Total Improvement	Between Groups	77.534	2	38.767	29.617	.000
	Within Groups	324.625	248	1.309		
	Total	402.159	250			
Total Irrelevance	Between Groups	.359	2	.180	.191	.826
	Within Groups	232.884	248	.939		
	Total	233.243	250			

**Table 5**

*The Post-HOC comparison*

**Multiple Comparisons**

Tukey HSD

Dependent Variable	(I) Qualification	(J) Qualification	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Total Student Accountability	Diploma	BA degree	.381*	.145	.025	.04	.72
		MA degree	7.752*	.304	.000	7.04	8.47
	BA degree	Diploma	-.381*	.145	.025	-.72	-.04
		MA degree	7.371*	.288	.000	6.69	8.05
	MA degree	Diploma	-7.752*	.304	.000	-8.47	-7.04
		BA degree	-7.371*	.288	.000	-8.05	-6.69
Total school and Teacher Accountability	Diploma	BA degree	.128	.174	.745	-.28	.54
		MA degree	.078	.366	.975	-.78	.94
	BA degree	Diploma	-.128	.174	.745	-.54	.28
		MA degree	-.050	.347	.989	-.87	.77
	MA degree	Diploma	-.078	.366	.975	-.94	.78
		BA degree	.050	.347	.989	-.77	.87
Total Improvement	Diploma	BA degree	-.100	.166	.820	-.49	.29
		MA degree	-2.572*	.347	.000	-3.39	-1.75
	BA degree	Diploma	.100	.166	.820	-.29	.49
		MA degree	-2.473*	.329	.000	-3.25	-1.70
	MA degree	Diploma	2.572*	.347	.000	1.75	3.39
		BA degree	2.473*	.329	.000	1.70	3.25
Total Irrelevance	Diploma	BA degree	-.078	.140	.843	-.41	.25
		MA degree	.017	.294	.998	-.68	.71
	BA degree	Diploma	.078	.140	.843	-.25	.41
		MA degree	.096	.279	.937	-.56	.75
	MA degree	Diploma	-.017	.294	.998	-.71	.68
		BA degree	-.096	.279	.937	-.75	.56

\*. The mean difference is significant at the 0.05 level.

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The descriptive statistics in Table 4 show that there are differences in the mean values of all three qualification groups for all four purpose factors. To check whether these differences are real (significant) or not, we will turn to Table 5.

Table 5 shows that there is a statistically significant difference at the  $p < .05$  level between the three qualification groups for the Student Accountability and Improvement factors,  $F(2, 248) = 347.16, P = .000$ , and  $F(2, 248) = 29.6, P = .000$  respectively. Nevertheless, the mean differences for school and teacher accountability and irrelevance ( $F(2, 248) = .269, P = .765$ , and  $F(2, 248) = .191, P = .826$ , respectively) are not statistically significant.

While Table 5 shows whether the differences in the mean values between the groups are significant or not, Table 6 shows where the differences exist. The Post-Hoc test result (Table 6) indicates that for the student accountability factor, the mean score of the diploma group ( $M = 18.14, SD = .943$ ) is significantly different from both BA and MA ( $M = 17.76, SD = 1.02$ , and  $M = 10.38, SD = 1.04$ , respectively). The table also shows the means for BA ( $M = 17.76, SD = 1.02$ ) are significantly

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different from MA ( $M = 10.38, SD = 1.044$ ). In addition, the difference exists between BA Group ( $M = 22.3, SD = 1.16$ ), MA Group ( $M = 24.7, SD = .59$ ), and MA Group and Diploma Group ( $M = 22.2, SD = 1.16$ ) for the improvement factor.

Thus, referring to Tables 5 and 6, it is possible to infer that qualification has no influence on the thinking of assessment as a means of checking school and teacher accountability and irrelevance, but it has impacted the participants thinking of formative assessment as a means of checking student accountability and means of improvement. Comparing the mean score for the MA group with the expected mean of the whole (analysis of Table 2 and Table 6), the MA group disagrees with the idea that formative assessment is used for checking students' accountability and is more positive about its use as a means of improving learning.

**Aspects of Formative Assessment:** The following three tables display descriptive statistics, the result of a one-way ANOVA test, and multiple comparisons of the data gained through the TCFA questionnaire.

**Table 6**

*The Result of One Way ANOVA Test*

		Sum of Squares	df	Mean Square	F	Sig.
Total Integration	Between Groups	2.231	2	1.115	.928	.397
	Within Groups	297.992	248	1.202		
	Total	300.223	250			
Total Variability	Between Groups	.001	2	.001	.001	.999
	Within Groups	219.282	248	.884		
	Total	219.283	250			
Total Learner Involvement	Between Groups	663.912	2	331.956	29.21	.000
	Within Groups	281.817	248	1.136		
	Total	945.729	250			
Total Feedback	Between Groups	743.930	2	371.965	57.73	.000
	Within Groups	159.775	248	.644		
	Total	903.705	250			

**Table 7***Result of the POST HOC Test*

Tukey HSD Dependent Variable	Multiple Comparisons						
	(I) Qualification	(J) Qualification	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
						Lower Bound	Upper Bound
Total Integration	Diploma	BA degree	.051	.159	.944	-.32	.43
		MA degree	-.376	.333	.495	-1.16	.41
	BA degree	Diploma	-.051	.159	.944	-.43	.32
		MA degree	-.428	.315	.366	-1.17	.32
	MA degree	Diploma	.376	.333	.495	-.41	1.16
		BA degree	.428	.315	.366	-.32	1.17
Total Diversity	Diploma	BA degree	.005	.136	.999	-.32	.33
		MA degree	.006	.285	1.000	-.67	.68
	BA degree	Diploma	-.005	.136	.999	-.33	.32
		MA degree	.001	.270	1.000	-.64	.64
	MA degree	Diploma	-.006	.285	1.000	-.68	.67
		BA degree	-.001	.270	1.000	-.64	.64
Total Learner Involvement	Diploma	BA degree	.197	.154	.411	-.17	.56
		MA degree	-7.186*	.323	.000	-7.95	-6.42
	BA degree	Diploma	-.197	.154	.411	-.56	.17
		MA degree	-7.383*	.307	.000	-8.11	-6.66
	MA degree	Diploma	7.186*	.323	.000	6.42	7.95
		BA degree	7.383*	.307	.000	6.66	8.11
Total Feedback	Diploma	BA degree	-.037	.116	.946	-.31	.24
		MA degree	-7.795*	.244	.000	-8.37	-7.22
	BA degree	Diploma	.037	.116	.946	-.24	.31
		MA degree	-7.758*	.231	.000	-8.30	-7.21
	MA degree	Diploma	7.795*	.244	.000	7.22	8.37
		BA degree	7.758*	.231	.000	7.21	8.30

\*. The mean difference is significant at the 0.05 level.

Table 7 indicates that the mean values of the three qualification categories are different for all factors except the diversity factor. Table 8 displays whether these differences are significant or not. Accordingly, the reading on the table shows that the differences are not significant at the  $p < .05$  level for the three qualification groups in Integration  $F(2, 248) = .928, P = .397$ . However, the differences are significant at the  $p < .05$  level for the three groups in learner involvement and feedback factors:  $F(2, 248) = 29.21, P = .000$ , and  $F(2, 248) = 57.7, P = .000$  respectively.

The post-hoc test of comparisons using the Tukey HSD (Table 9) indicates that for the learner involvement factor, the mean score for MA ( $M = 12.31, SD = .63$ ) differs significantly

from both the BA and Diploma groups ( $M = 5.12, SD = 1.103$  and  $M = 4.92, SD = 1.076$ , respectively), and the difference between the means for Diploma ( $M = 4.12, SD = 1.076$ ) and BA ( $M = 5.12, SD = 1.103$ ) is not statistically significant. Again, the same situation is true for the Feedback Factor: the table shows the mean score for MA ( $M = 12.46, SD = .776$ ) differs significantly from both BA and Diploma groups ( $M = 4.7, SD = .802$  and  $M = 4.67, SD = .81$ , respectively), and the difference between means for Diploma ( $M = 4.67, SD = .81$ ) and BA ( $M = 4.7, SD = .802$ ) is not statistically significant.

The analysis indicates level of qualification does not influence the participants mental set about the two aspects of formative

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assessment: integration and diversity. However, it has an impact on their thinking about learner involvement and feedback. The comparison of the means of the three groups with the calculated means of the whole (table 3 and table 7) shows that the MA group agrees with the proposition of learner involvement in the assessment process and the need for quick and frequent feedback, while the rest of the groups disagree.

## **DISCUSSIONS**

As the finding indicated, the respondents reflected contradictory conceptions regarding the major purpose of the assessment, but with certain priorities. This is consistent with some studies and not so with others. As it is found out in many studies like Brown (2002, 2004), Azis (2015), and Opre (2015) that are conducted in different contexts, it is not unexpected that teachers can simultaneously have more than one conception of the purpose of assessment and even conflicting ones. Similarly, the pattern of the participants' agreement in the current study is also consistent with other similar studies. For example, Brown (2004), in his study of New Zealand primary school teachers and managers' conceptions of the purpose of assessment, reported that "teachers who believe assessment is a means of school accountability are highly likely to also conceive of assessment as a means of student accountability and improvement.

Besides the similarities, there are also inconsistencies with the findings of some similar research in the priority given to the purpose factors. For example, in Azis (2015), Yetkin and Özer (2019), Brown, Lake, and Matters (2011) studies, the improvement

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purpose gets the highest score, while school and student accountability follow. The possible explanation for such variation can be related to the source of teachers' conceptions of assessment. As studies like Jane (2012) and Brown, Gebril, and Michaelides (2019) reported, teachers' conceptions of assessment are highly shaped by local factors such as culture, assessment policy, and social and personal experiences of assessment contexts. According to Brown (2011), teachers develop or adopt conceptions of assessment that allow them to successfully function within their own policy or legal framework. Thus, the divergence of the responses of the participants of this study to the conception of the purpose of assessment can be attributed to the Ethiopian social and educational context.

Although, as far as my search goes, there is no study that included all the aspects of formative assessment, the findings of this study that are related to the aspects of formative assessment (the respondents are diffident about whether assessment should be integrated into classroom teaching and strongly disagreed with learner involvement) are similar to some and deviate from other studies that focused on specific elements of formative assessment. For instance, in Modupe and Sunday's (2015) study of Nigerian secondary school teachers' perceptions of continuous assessment, the participants clearly agreed to the conceptions that a variety of assessment techniques should be used to assess students' performance, and there should be regular, frequent, and immediate feedback on students' assessment performance. The teachers perceive assessment as a separate entity that is conducted every 3 or 4 weeks of teaching.

These results of the comparison of the conceptions across qualification levels again

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seem to be consistent with Xu and He's (2019) finding that practicum has significantly influenced teachers' conceptions, but contradict the findings of some studies that concluded that the number of years in education (Brown, 2004) and in-service training (Emine, 2010) did not influence teachers perceptions related to assessment. This suggests that further research is needed to understand what really influences teachers conceptions of the purpose and aspects of formative assessment.

## CONCLUSIONS

Teachers are expected to have clear and favourable conceptions about every aspect of their profession so that they can practice it effectively. This study tried to check if teachers have the appropriate conception of formative assessment and if their conception varies with their level of education. The conception of formative assessment is made up of two categories: purpose and aspects. Data was collected using a TCFA questionnaire that comprised 33 items organised into eight second-level factors adapted from TCOA III and analysed using a *one-sample t-test* and a *one-way ANOVA* test.

The findings indicate that the teachers had a mixed conception of formative assessment. Regarding the purpose of formative assessment in teaching, they reflected conflicting views by agreeing to two contradictory propositions. Concerning the four elements that characterise formative assessment, the teachers favoured two of the elements, rejected one of them, and were reserved about the est. Thus, the teachers failed to clearly articulate the primary purpose of formative assessment and mistakenly

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identified the features that define formative assessment. Therefore, it can be concluded that the teachers lack a clear and favourable conception of what characterises formative and non-formative assessment. The findings also show that the MA group has a relatively clearer and more favourable conception.

Formative assessment has been proven to be one of the means of maximising the quality and quantity of student learning, and to make this happen, teachers need to have a clear conception of formative assessment (Brown, 2004; Struyven et al., 2003). Alavi & Dashtestani (2015) also assert that to implement formative assessment, teachers should have "knowledge of the assessment and the different tools and procedures that can be adopted to assess students' performance in the classroom. (p. 67). However, this study revealed that the teachers failed to clearly identify the major purpose and distinctive features of formative assessment, and the group with a higher educational level had a better conception.

As Weeden, Winter, and Broadfoot (2002) observe, given that it has become an explicit focus for attention only recently, though it has become a part of the teaching and learning process, it is not surprising that the teachers are confused about what constitutes formative assessment and how it may best be conducted. Thus, it is crucial to bring the topic to teachers' attention by providing training on the topic. As local research on this area is scarce and the findings are not consistent with some of the other research, further research is needed to compare the findings.

## Disclosure statement

There is no competing interest to declare.

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