

## **Exploring Variation in Summative Assessment: Language Teachers' Knowledge of Students' Formative Assessment and Its Effect on their Summative Assessment**

Fasih Ahmed<sup>\*</sup>, Shamim Ali<sup>\*\*</sup> and Rashid Ali Shah<sup>\*\*\*</sup>

---

### **Abstract**

The present study investigates the variation in summative assessment based on language teachers' knowledge of formative assessment (i.e. classroom performance) and its effect on students' grades. The two groups of teachers, on the basis of familiarity/unfamiliarity with formative assessment of students, were investigated through paired sample t-tests. These two groups were asked to mark students' papers. The results revealed a significant difference in the grades marked by the group of teachers who were aware of students' classroom performances as compared to the group of teachers who were unaware of students' performance of the class. The study suggests a synergy between summative and formative assessment.

**Keywords:** Formative assessment, Summative assessment, teachers' skills, variation, paired sample t-test

---

<sup>\*</sup> Assistant Professor, Department of Humanities, COMSATS University Islamabad

<sup>\*\*</sup> Associate Professor, Department of English and Applied Linguistics, AIOU

<sup>\*\*\*</sup> Assistant Professor, Department of English King Khalid University, Abha KSA

## **Introduction**

The present study investigates the variation in summative assessment in relation to language teachers' knowledge of formative assessment (i.e. classroom performance) and its effect on grades. The two groups of teachers, based on familiarity/unfamiliarity with the formative assessment of students, were investigated through paired sample t-tests and qualitative interviews. These two different groups were asked to mark students' papers. The results revealed a significant difference in the grades marked by these two groups of teachers. The study suggests a synergy between summative and formative assessment. The process of assessment involves decisions about what is the relevant evidence for a particular purpose, how to collect the evidence, how to interpret it to intended users (Harlen, 2005). Assessment includes contexts (i.e., historical, social and political), principles (i.e., concepts) and practices (i.e., knowledge skills and abilities) (Fulcher, 2012). Assessment in language is central to a successful language program in terms of its effectiveness whether it be summative or formative. Formative and summative assessments are closely linked to each other and help in assessing the qualities of the students. The present study aims to investigate the difference in summative assessment based on teachers' experience of being cognizant or incognizant of the formative assessment of the class. Assessment for learning or formative assessment has increasingly been emphasized but its relation to summative assessment has been little explored (Taras, 2005). Moreover, the study hypothesizes that the teachers who are involved in formative assessment can make a better summative assessment of students as compared to those teachers who make only summative assessment and are not aware of the overall performance of the students. To the best of the authors' knowledge, summative assessment in liaison with formative assessment has not been explored especially in the context of language assessment. The present study investigates the effect of formative assessment on summative assessment by involving two different groups of teachers. This study is aimed to fill the gap that exists between summative and formative assessment.

## **Literature Review**

The review of the literature has focused on formative and summative assessment and then the relation between the two types of assessments.

## **Summative Assessment**

Summative assessment aims at recording or reporting the students' achievement (Harlen (2005). In other words, summative assessment is the reflection of what they have learned in the past. Taras (2005) defines summative assessment as a sort of 'judgment which encapsulates all the pieces of evidence to a given point (p. 467). This "given point" can be a time interval in the form of examination or test. According to Brown (2004), 'A

summation of what the student has learned implies looking back and taking a stock of how well that student has accomplished objectives but does not necessarily point the ways to future progress'. It is important to notice that summative assessment focuses on past performance but does not offer possible direction to improve learners' performance in the future. Herrera Mosquera, Macías, and Fernando (2015) view summative assessment as a kind of evaluation which informs the teachers of students' success or failure in their learning process based on a numerical scale. A numerical scale is the only parameter which may not reflect students' competency at a given point in time (McClam & Sevier, 2010). While summative assessment treats teachers as the main authority and only shows the students' progress of the past, it does not offer accountability for the teachers to test their own practices and then to renegotiate their teaching according to the requirements of learners. Hence, in the light of above definitions, the summative assessment can be summed up as the process of recording the students' achievement to a given point, on a numerical scale, which aims to look back and take a stock of how students have achieved the objectives.

### **Formative Assessment**

Formative assessment is defined as the frequent, interactive assessment of students' progress and understanding to identify learning needs and to adjust teaching appropriately (William, 2011). This sort of assessment is equally helpful in reflecting the achievement of students as well as of teachers. He sums up formative assessment in three steps—monitoring (is learning taking place?), diagnosis (what is not being learned?), action (what to do about it?). From this perspective, formative assessment enables teachers to set out the future dimensions of teaching. In other words, formative assessment is about classroom practices of both, learners and teachers. For Taras (2005), formative assessment indicates 'a gap between the actual level of work being assessed by the standards'. Taras (2005) view of formative assessment is ZPD (Zone of Proximal Development) where learners are considered less competent to reach a standard position and teachers as MKO (More Knowledgeable Other). Additionally, by looking at the previous performance of the learner, formative assessment also offers remedy to reach that position. Due to these remedial characteristics, William (2006) refers to formative assessment as a type of process that shapes students' learning. Formative assessment is an ongoing process which remains active even when a student responds to a question, offers a comment, or tries out a new word or structure (Brown 2004). Hence, keeping in view the above-mentioned aspects of formative assessment, it can be summed up as the process of understanding to identify learners' needs, which involves monitoring, diagnosis, and action, and shapes students learning as well as informs teachers about how to adjust their teachings, appropriately.

### **Teachers' Skills in Assessment**

Assessment in education is highly dependent upon the teachers' skills in dealing with it. Christoforidou, Kyriakides, Antoniou, and Creemers (2014), developing a model of teacher assessment, view teachers' skill as the central part in making students' assessment. Xu and Brown (2016) present a model of assessment by combining three factors for teacher role as an assessor: reflection, participation, co-construction. Popham (2009), explaining the issues in assessment, believes that assessment issues in case of teachers' skills relate to teachers' lackness in terms of language assessment. Stiggins (2007), working on assessment literacy in language, is of the view that language teachers spent one-third of the time of their professional career in activities related to assessment but without having sound knowledge of the principles of assessment. In addition, assessment practices should have equal importance to instructional practices. Examining teachers' skills for formative assessment, Aschbacher and Alonzo (2006) view that students' indicators of success become ambiguous, sometimes underestimating and sometimes overestimating. Moreover, the teachers' poor and vague instructions are also a cause of underestimation and overestimation. This problem hinders the actual performance of students from teachers and parents. The study concludes that teachers with better formative assessment skills can cope up with the situation. Teachers' skills of assessment have also been seen in combination with teachers' other skills. Studies on teachers' behavior conclude that teachers with more advanced type behavior have better student outcomes (Bakx, Baartman, & van Schilt-Mol, 2014; Kyriakides, Creemers, & Antoniou, 2009) which are an indication that a teacher's skills in carrying out the assessment affect the overall assessment process. Havnes, Smith, Dysthe, and Ludvigsen (2012), investigating teachers' skills in doing the formative assessment, relate it to its effect of feedback provided to the students. According to them, formative assessment causes formative feedback and happens to be the real cause of AfL (i.e., Assessment for Learning). Teachers' skills are primary to formative assessment to diagnose the effective areas in learning and teaching.

Gulikers, Biemans, Wesselink, and van der Wel (2013) research work focuses on teachers' conception of formative and summative assessment through a collaborative action research involving top-down and bottom-up activities. Their research concludes with a difference in teachers' conception and practices regarding formative and summative assessment. Teachers' difference in conception of assessment practices influences their competence to do the assessment. Smith (2011), working on the assessment as a part of teachers' professional development, states, 'Teachers skills to do assessment needs to be contextualized and tailored to the group of participating teachers and there has to be a shared understanding of AfL practice' (p. 60). According to Smith (2011), teachers do not have the essential competence in AfL to successfully implement it in their teaching.

Teacher skills in handling assessment have been widely discussed. The term 'assessment literacy' is used to deal with teachers' skills of doing assessment. More precisely, Davies (2008) uses the term Skill + Knowledge in the context of assessment literacy. Skills relate to teachers' awareness of test analysis and construction and Knowledge to the relevant background information. Inbar-Lourie (2008) centralizes social context for assessment and assessment literacy reaching the point that an assessment culture is required where new suppositions regarding assessment to be proposed for formative assessment. The above-discussion sums up that though formative and summative assessments have their own importance, the language teachers' skills to do assessment is of central importance to implement any type of assessment.

### **Research Methodology**

This study investigates variation in assessment especially in the South Asian educational contexts where performance of students is assessed mainly through written tests by teachers who are not aware of the classroom performance of students. Moreover, there is no criterion to assess students on their performance in the class. As a result of it, the students focus only on summative assessment to achieve higher grades through rote learning or memorization, but the real spirit of learning is lost due to sole focus on summative assessment. Moreover, formative assessment which the essential part of students' learning progress is not given due weight age in examination system. As a result, students overall learning is affected, and they focus only on written tests.

### **Participants**

The participants of the study were language teachers and students. The written tests were taken from learners and then distributed to the teachers. Moreover, these teachers were divided into two main groups based on their familiarity with students' classroom performances. The first group consisted of teachers who had full knowledge of the classroom performance of learners for at least 6 months. They were also involved in formative assessment. These teachers had the advantage of doing summative assessment of learners, keeping in view the progress of their formative assessment. In a nutshell, the familiarity with classroom performance provided them with the knowledge about the competence of learners which was impossible for teachers to assess from written tests.

On the other hand, the second group of teachers had no familiarity with the classroom performance of the students. They were unaware of the formative assessment of the learners. The disadvantage of being unaware of the formative assessment placed these teachers in a different positions while doing the summative assessment since they could only rely upon the written proficiency of the learners as could be gleaned from the paper.

**Instrumentation**

A test was designed by language teachers, which was based on the written proficiency of students. The test comprised multiple questions including reading comprehension, essay and letter writing. The teachers were given full authority to design the test keeping in view the overall performance of the classes. These teachers were asked to take the test in their convenient timings.

**Procedure of data collection**

Students from different schools were requested to attempt the test. These tests were photocopied. One set of copies was handed over teachers who had been teaching them at least for the last 6 months. These teachers were asked to check the test and assign grades keeping in view the overall performance of the students in the class.

On the other hand, the second sets of copies of the same tests were handed over to teachers who had no knowledge of students' classroom performances. In other words, they had no link to the overall performance of students. This group of teachers was requested to check the tests and assign grades based on their own experience of testing.

Teachers were also interviewed from both groups to know how formative and summative assessment are linked to each other and how they help teachers to assess students. A total of 10 teachers were interviewed by selecting five teachers from each group.

**Results**

A paired sample t-test was conducted to analyze the difference in summative assessment based on teachers' familiarity/unfamiliarity with students' classroom performances. According to the paired-sample t-test, there was a statistically significant decrease in summative assessment grades of group 1 ( $M=78.42$ ,  $SD=11.078$ ) and group 2 ( $M=72.14$ ,  $SD=10.698$ )  $t(42)=4.27$ ,  $p<.000$  (two-tailed) as shown in table 1, table 2 and table 3. The mean decrease in score was 6.279 with a 95% confidence interval ranging from 3.31 to 9.24. Moreover, the difference in these two scores shows that teachers with high range of marks belong to the group that was familiar with classroom performance of students or was involved in formative assessment of the students. Moreover, their familiarity with the learners' classroom practices provided them additional knowledge to make summative assessment in a better way.

**Table 1**  
*Paired Samples Statistics of Groups*

Paired Samples Statistics		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	SA (concerned teacher)	78.42	43	11.078	1.689
	SA (external teacher)	72.14	43	10.698	1.631

**Table 2**  
*Paired Sample Correlation of Groups*

Paired Samples Correlations		N	Correlation	Sig.
Pair 1	SA (concerned teacher)&SA (external teacher)	43	.609	.000

**Table 3**  
*Paired Samples Test*

	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			
SA (concerned teacher)- SA (external teacher)	6.279	9.637	1.470	3.313	9.245	4.273	42	.000

From table 3, it is evident that sig. (2-tailed) value is .000 which is less than p-value ( $p < .05$ ), which shows that there is a significant difference between the score obtained by two groups. The effect size of paired-sample t-tests was also calculated. The effect size of the paired-sample t-tests was also conducted by following Cohen (1988), for interpreting the values. According to (Cohen, 1988), the effect size is small (.01), moderate (.06) and large (.14). It was calculated using the following eta squared formula.

$$\text{Eta squared} = \frac{t^2}{t^2 + (N-1)}$$

The eta squared value was noted as 0.3 which concludes that there is a large effect with a substantial difference in the summative assessment scores by the two groups based on the teachers' familiarity or unfamiliarity of student performance.

The study also investigated through interviews, teachers' reasons for linking summative assessment with formative assessment. The qualitative data was divided into two main groups: the group of language teachers which linked formative assessment with summative assessment and the teachers which only relied on summative assessment of students. The group of language teachers who linked students' final summative

assessment with their formative assessment stressed that summative assessment should be linked to formative assessment as it provides a better understanding of students' performance. "It helps in assessing the students who perform well in class but are not good at writing," expressed one of the teachers. Another teacher expressed, "If a student does not perform well, I analyze his past performance in the class and then try to look at the paper." In a nutshell, the teachers expressed that an overview of students' classroom assessment (i.e. formative assessment) helps them in doing the summative assessment (i.e. grading) of students. Teachers also showed their concerns regarding grading as "Grading a paper does not mean grading the whole performance. Written paper lacks original performance. Therefore, I link students' classroom assessment with their final grading."

The teachers who relied only on the final summative assessments explained multiple reasons in support of their practice. The first reason which was proposed by language teachers that they focus mainly on content. The reason to focus on content was to remain objective. "I try to develop rubrics and then I go for grading for all students. It is a justified way to grade all papers on the same pattern. It also helps me to maintain objectivity." Objectivity has been noticed as one of the reasons for not linking summative assessment (i.e. grading) with formative assessment (i.e. classroom performance). One of the teachers expressed, "I first grade the papers and then check their names to remain objective and avoid biasedness." Teachers also expressed that lack of training to assess students on formative bases is also one of the causes to focus only on summative assessment. A proper training based on assessment may prove helpful to them to link formative assessment with the summative assessment of students. "I myself have gone through certain strategies on the internet but I have never been given any formal training regarding assessment by my institution."

## **Discussion**

In this study the synergy between summative and formative assessment was investigated the value of eta squared was noted down as 0.3, which shows a high impact of the difference. It also highlights that the difference between the two groups based on their familiarity/unfamiliarity with students has a high impact on students' grades, which may further lead to students' future progress. The effect of eta square also emphasizes the need to have a synergy between summative and formative assessment.

Language learners' formative and summative assessment practices are both essential and need to be taken care of in educational contexts where summative assessment is only based on writing. There are chances that some students may not perform well on written grounds, but they may perform well on other grounds such as speaking, reading, pronunciation. This becomes a problem for the teacher who only does the summative assessment and is not aware of the formative assessment based on classroom performance. Hence, teacher assessment literacy is as important a factor to be considered (Xu & Brown, 2016).



Teachers and students' assessment practices may help them to improve their teaching and learning approaches. The need of the hour is also to analyze curriculum in the light of modern assessment practices.

### **Conclusion**

The present study aimed to investigate the synergy between summative and formative assessment. The study hypothesized that the teachers involved in formative assessment of learners do the better summative assessment as compared to those teachers who are unaware of learners' classroom performances. Moreover, formative assessment influences teachers in doing the summative assessment. The study adopted a mixed-method approach.

The group of teachers who were familiar with students' classroom performances were noticed having higher means values (78.24) as compared to the group of teachers who were unfamiliar of the learners' classroom performances as explained in Table 1. One of the reasons for this higher mean value may be teachers' awareness of students' formative assessment. On the other hand, the external examiners who were unfamiliar with classroom performances were noticed having lower mean values. The possible reason for that can be their unfamiliarity with classroom performances. Moreover, they only made content analysis of written papers. Hence, they were limited in doing only the summative assessment. Moreover, the difference in mean values reveals that summative assessment of students is clearer when it is seen in the light of formative assessment. It also highlights that both types of assessments are interlinked. The data obtained through qualitative part of the study also supported the results explained above. Teachers through their interview expressed that they find it easier to do summative assessment when they are aware of the formative assessment of students.

### **Recommendations**

The study recommends considering formative and summative assessment equally by involving the same teacher. Both formative and summative assessments in combination may contribute better to the overall performance of students. Therefore, both the assessment methods should be given equal weightage.

As integrative language skills are involved in language learning, language teachers should be trained especially keeping these skills in view, so that they may be able to assess in a better way. In other words, language teachers' assessment training needs should be dealt separately as compared to the overall assessment needs of the other disciplines.

## References

- Aschbacher, P., & Alonzo, A. (2006). Examining the utility of elementary science notebooks for formative assessment purposes. *Educational Assessment, 11*(3-4), 179-203. doi:10.1080/10627197.2006.9652989
- Bakx, A., Baartman, L., & van Schilt-Mol, T. (2014). Development and evaluation of a summative assessment program for senior teacher competence. *Studies in Educational Evaluation, 40*, 50-62.
- Brown, G. T. L. (2004). Teachers' conceptions of assessment: Implications for policy and professional development. *Assessment in Education: Principles, Policy & Practice, 11*(3), 301-318. doi:10.1080/0969594042000304609
- Brown, H. D. (2004). *Language assessment: Principles and classroom practices*: Allyn & Bacon.
- Christoforidou, M., Kyriakides, L., Antoniou, P., & Creemers, B. P. M. (2014). Searching for stages of teacher's skills in assessment. *Studies in Educational Evaluation, 40*, 1-11. doi:http://dx.doi.org/10.1016/j.stueduc.2013.11.006
- Cohen, J. W. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Davies, A. (2008). Textbook trends in teaching language testing. *Language Testing, 25*(3), 327-347.
- Fulcher, G. (2012). Assessment literacy for the language classroom. *Language Assessment Quarterly, 9*(2), 113-132.
- Gulikers, J. T. M., Biemans, H. J. A., Wesselink, R., & van der Wel, M. (2013). Aligning formative and summative assessments: A collaborative action research challenging teacher conceptions. *Studies in Educational Evaluation, 39*(2), 116-124. doi:http://dx.doi.org/10.1016/j.stueduc.2013.03.001
- Harlen, W. (2005). Teachers' summative practices and assessment for learning—tensions and synergies. *Curriculum Journal, 16*(2), 207-223.
- Havnes, A., Smith, K., Dysthe, O., & Ludvigsen, K. (2012). Formative assessment and feedback: Making learning visible. *Studies in Educational Evaluation, 38*(1), 21-27.

- Herrera Mosquera, L., Macías, V., & Fernando, D. (2015). A call for language assessment literacy in the education and development of teachers of English as a foreign language. *Colombian Applied Linguistics Journal*, 17(2), 302-312.
- Inbar-Lourie, O. (2008). Constructing a language assessment knowledge base: A focus on language assessment courses. *Language Testing*, 25(3), 385-402.
- Kyriakides, L., Creemers, B. P. M., & Antoniou, P. (2009). Teacher behaviour and student outcomes: Suggestions for research on teacher training and professional development. *TATE Teaching and Teacher Education*, 25(1), 12-23.
- McClam, S., & Sevier, B. (2010). Troubles with grades, grading, and change: Learning from adventures in alternative assessment practices in teacher education. *Teaching and Teacher Education*, 26(7), 1460-1470.
- Popham, W. J. (2009). Assessment literacy for teachers: Faddish or fundamental? *Theory into practice*, 48(1), 4-11.
- Smith, K. (2011). Professional development of teachers-A prerequisite for AfL to be successfully implemented in the classroom. *Studies in Educational Evaluation*, 37(1), 55-61.
- Stiggins, R. J. (2007). Conquering the formative assessment frontier. *Formative classroom assessment: Theory into practice*, 8-28.
- Taras, M. (2005). Assessment-summative and formative—some theoretical reflections. *British Journal of Educational Studies*, 53(4), 466-478.
- William, D. (2006). Formative assessment: Getting the focus right. *Educational Assessment*, 11(3-4), 283-289. doi:10.1080/10627197.2006.9652993
- William, D. (2011). What is assessment for learning? *Studies in Educational Evaluation*, 37(1), 3-14. doi:10.1016/j.stueduc.2011.03.001
- Xu, Y., & Brown, G. T. L. (2016). Teacher assessment literacy in practice: A reconceptualization. *Teaching and Teacher Education*, 58, 149-162.