Testing Goes Mobile – Web 2.0 Formative Assessment Tools

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INTRODUCTION

1. It cannot be denied that students' interaction with the assessment process has an impact on their future learning experience and the development of their learning approach (Rust et al., 2005:231-240).

2. Assessment also plays a key role in improving and strengthening learner motivation. It allows learners to reflect on their learning, define miconceptions and assess their rate of progress (Orsmond et al., 2005: 369-386).

3. In order to reinforce learning and assessment processes, some form of support is required (Vygotsky, 1974).

4. The successful implementation of online assessment tools is one of the ways of providing support in the learning environment. Along with the introduction of smart phones and tablets, many new online assessment tools have appeared on the market, for example, Socrative, Quizlet, Kahoot! or Quizizz.

4. The purpose of this study is to examine whether online assessment tools increase students' motivation, engagement and learning.

5. Two online assessment tools chosen for this study are **Kahoot!** and **Quizizz**.

5.1 **Kahoot!** is a game based reponse system played by the class in real time. Teachers design their own multiple-choice questions adapted to the level of knowledge and skills of their students. Questions are projected on the screen. Students answer the questions with their smart phones, tablets or laptops. Kahoot! is a user-friendly online application which contains basic game elements, namely, points, a leader board, immediate feedback and a reward.

5.2 **Quizizz** is an alternative to Kahoot! and constitutes a great online tool which helps students check their knowledge and progress in learning. In Quizizz, the question order is randomized for each student. With Quizizz, teachers can also assign homework to give students additional practice. Each question ought to be multiple choice with two or four possible answers. Both Kahoot! and Quizizz are free, user-friendly online formative assessment tools which help teachers assess students' language as well as their curriculum knowledge.

WHAT IS FORMATIVE ASSESSMENT?

1. DEFINITIONS OF FORMATIVE ASSESSMENT

a) "the iterative processes of establishing what, how much and how well students are learning in relation to the learning goals and expected outcomes in order to inform tailored formative feedback and support further learning" (Gikandi et al., 2011: 2333-2351).

b) formative assessments "continually assess students' learning progress providing feedback to students and instructors that determines the course of subsequent teaching and learning activities" (Smith, 2007: 28-34).

c) Researchers believe that formative assessment increases proficiency and focus in planning, reduces student nervousness, promotes understanding of the course content, and gives students a sense of development (Stiggins et al., 2009: 640-644).

2. FORMATIVE E-ASSESSMENT

Combination of formative assessment with technological tools has given rise to online formative assessment. According to Pachler et al., formative e-assessment is 'the use of ICT to support the iterative process of gathering and analysing information about student learning by teachers as well as learners' (Pachler et al., 2010: 715-721).

Gikandi formulated **ten guiding principles** to create a successful online formative assessment activity:
1. Tasks should emulate real-life situations relevant to learners;
2. Assessment activities ought to support learners in construction of knowledge and meaning as well as encourage them to use their background knowledge;
3. Students should be allowed to share information with their peers like in online discussion forums; they ought to view themselves as sourcse of learning support for their peers;
4. A formative assessment activity should be accompanied by an ongoing and adequate formative feedback;
5. An assessment activity ought to encourage learners to reflect on their own performance and progress;

6. Teachers should be clear about the meaning of learning and assessment activities; they need to adequately define learning goals and expectes outcomes;

7. Assessment activities should involve students in multiple roles;

8. Assessment activities should create contextualized learning setting which facilitates learner autonomy and cognitive involvement;

9. Ongoing documentation and sharing of learning processes with students are key ingredients of a successful assessment activity;

10. An online formative assessment activity ought to focus on enhancing learner autonomy and actively engaging students with meaningful learning experience (Gikandi et al., 2011: 2333-2351).

ONLINE FORMATIVE ASSESSMENT TOOLS – THE STUDY

RESEARCH APPROACH

The present study is based on the Goal, Question, Metrics (GQM) research approach developed and promoted by Victor Basili in 1992. According to this approach, a researcher defines a goal for an object (Conceptual Level). Then, a set of research questions is being asked (Operational Level), and finally, a set of metrics is described to answer the defined research questions in a measurable way (Quantitive Level) (Basili, 1992). When it comes to this study, the metrics chosen to provide answers to the research questions are a mixture of quantitative and qualitative data.

RESEARCH QUESTIONS

The following research questions were asked to assess and investigate the pedagogical impact of two online formative assessment tools, namely Kahoot! and Quizizz:

a) How is student's motivation and engagement affected by the use of Kahoot! and Quizizz and paper tests for formative assessment?

b) Do the students want to continue to use online formative assessment tools in the classroom?

DESIGN AND PROCEDURE

1. As far as research tools and procedures are concerned, I worked with a group of teenage students during the classes of English in one of the Polish Junior High Schools.
2. The research was carried out with a group of 19 students who were in third grade. They were 15 years old and their level of language was upper-intermediate. Students were preparing for their final examination in English.
3. The research was conducted during the first three months of the school year 2017. A research project was launched to investigate the effects of using two different shorttest approaches in the English classroom:
a) running a paper-based shorttest
b) using two online formative assessment tools, namely Kahoot! and Quizizz

The experiment was conducted in the following way:

a) first, at the beginning of the school year, the teacher introduced the topic and then asked the students to take a grammar paper pre-test. The pre-test consisted of multiple-choice grammar questions and students were asked to tick the correct answer with a pen or a pencil;

b) second, the teacher taught other grammar points and asked the students to take some shorttests using online assessment tools, namely Kahoot! and Quizizz and paper forms;

c) at the end of the experiment, the students took a paper post-test (the same as the pre-test) to investigate learning improvement; the students were also asked to fill in a questionnaire to share their opinions about two test approaches. The questionnaire focused on student's motivation and engagement in the assessment tools they were offered in classes. Students were also asked whether they preferred the paper or game form of grammar testing.

RESULTS OF PRE- AND POST-TESTING

The pre- and post-tests assessed the general grammar knowledge assumed to be covered in Junior High School. The table below shows the statistics and the results of both tests.

	Pre-test results	Post-test results
The average score	11 correct answers out of 30 (38%)	20 out of 30 (67%)
The highest score	17 out of 30 (57%)	26 out of 30 (86%)
The lowest score	6 out of 30 (20%)	17 out of 30 (57%)

The table above shows the statistics and the results of both tests. The average score on the pre-test was 11 correct responses out of 30 multiple-choice questions (38%).

a) The highest score was 17 correct answers (57%) and the lowest 6 correct responses (20%).

b) The average score (20 correct answers out of 30) on the post-test greatly improved in comparison to the pre-test (see Table 1).

c) The highest score on the post-test was 26 out of 30 (86%), and the lowest 17 out of 30 (57%).

d) It can be concluded the use of online formative assessment tools as a means to foster knowledge enhances student performance and complements class lectures.

RESULTS OF THE QUESTIONNAIRE

To improve readability, a 3-point Likert Scale was used to show the results (Disagree, Neutral, Agree). The questionnaire consisted of five statements which reflected the research questions.

Statement	Group	Disagree	Neutral	Agree
1. The quiz was boring and not engaging.	Paper	16%	32%	53%
	Kahoot! and Quizizz	63%	11%	26%
2. It was fun to compete against other classmates	Paper	58%	11%	32%
	Kahoot! and Quizizz	11%	11%	79%
3. I am more positive towards topic after doing the quiz	Paper	63%	16%	21%
	Kahoot! and Quizizz	16%	16%	68%
4. I learned something from the quiz	Paper	63%	21%	11%
	Kahoot! and Quizizz	11%	11%	79%
5. I wish this form of testing was used more frequently	Paper	79%	16%	5%
	Kahoot! and Quizizz	11%	11%	79%

a) Majority of students (63%) felt that online formative assessment tools were engaging. Only 26% of students thought Kahoot! and Quizizz did not engage them in the lesson.

b) When it comes to the second statement, the vast majority of students (79%) agreed that it was fun and motivating to play the grammar games with the use of Kahoot! and Quizizz. Only 32% of students found the paper quiz motivating to do.

c) The great majority of students (63%) claimed that they were not positive towards the topic after doing the paper quiz. Almost the same percentage of students agreed that Kahoot! and Quizizz involved them in the lesson.

d) Small percentage of students (11%) stated that they learned something from doing the paper quiz. 79% of students deepened their understanding of English grammar by playing Kahoot! and Quizizz.

e) When it comes the fifth statement, only 5% of students would like to do the paper quiz more frequently. Three quarters of students wished to use online assessment tools more frequently.

DISCUSSION OF THE RESULTS

a) Although the grammar content may be tough, the students seemed to more willing to master it through the use of online tools.

b) Students' opinion of Kahoot! and Quizizz as effective learning tools suggests that, from time to time, the teacher ought to leave traditional ways of testing grammar, such as paper quizzes, and direct his attention towards the use of online assessment tools. Tiny minority of students were negative towards Kahoot! and Quizizz. It can be assumed that they felt discouraged to participate in the game as they did not master the basics of Kahoot! and Quizizz well. In order to avoid student's disappointment and disengagement, the teacher may encourage peer teaching. To be precise, the teacher may enable students to practise Kahoot! or Quizizz in pairs prior to testing.

c) The student feedback questionnaire clearly outlines that learners would like to use Kahoot! or Quizizz in class in the future. It cannot be denied that online tools provide students with interactive learning environments that appeal to various learning styles

CONCLUSIONS

a) As a game-based learning platform, Kahoot! and Quizizz support active learning environments and complement class lectures. The use of online tools can add motivation to classroom activities as well as spark students' interest in the material being taught.

b) Having analysed the results of the questionnaire, it can be concluded that the teacher can make use of online assessment tools in order to review material, foster knowledge, encourage an element of competition among students and enhance the quality of the course.

c) implementing online tools into the learning process will bring variety, break routine, enliven classes as well as motivate students to work hard. Without a doubt, simple or complex material can be taught by means of game-based tools such as Kahoot! or Quizizz.

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THANK YOU FOR YOUR ATTENTION