The Use of Self-Assessment Facilitated by Mobile Devices to Improve Spoken Production in

High School Students

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Speaking has always been an important skill in my classroom. The students in Bachillerato II of a public school in Ecuador have a program for level B1.1, the proficiency level of them is A1. I have always had to create special activities using pictures and group work to help them speak in class. This action research took place during the Covid-19 pandemic and everything changed.   Only 15 of my 45 students had access to technology, the rest communicated and turned in work via WhatsApp. Student autonomy is important now and the Ministerio de Educacíon has recently emphasized learning to learn.

This action research was carried out over five weeks with four volunteers with technology to help them improve speaking through self-assessment facilitated by Zoom.   I hoped self-assessment would help them become learners that are more autonomous. Self-assessment is a good way for students to identify their errors using a rubric and set goals through their own mistakes.

Self-Assessment

Panadero et al. (2016) defined self-assessment as "…a wide variety of mechanisms and techniques through which students describe (i.e., assess) and possibly assign merit or worth to (i.e., evaluate) the qualities of their own learning processes and products" (p.2). According to this definition, self-assessment is about how students can assess themselves doing their work on their own effort. Students acquire the ability to self-assess by being trained step by step during the process. One simple way to evaluate is to award a grade or mark to their own work. On the other hand, students need to follow the process rigorously by analyzing strengths and weaknesses through self-assessment training and, then with the teacher's feedback clarify mistakes and do a better job.

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Ways to Apply Self-assessment

Some techniques teachers use for self-assessment in their classrooms are learning logs, checklists, KWL (What do I know? What do I want to learn? What did I learn?) charts, and rubrics. This innovation motivates self-assessment with a rubric. A rubric is a guided judgement and a type of self-assessment that has been shown to have either a positive or a negative effect on learning. If self-assessment with a rubric is used for summative assessment the students grade themselves too high and do not learn, but if a rubric is used for formative assessment then learning happens. Finally, rubrics enhance the clarity of the learning goals, involve students in monitoring the learning process, and facilitate reflection about the final product or learning outcome (Brown & Harris, 2013; Nicol & McFarlane-Dick, 2006; Panadero & Alonso-Tapia, 2013).

Benefits and Problems of Self-Assessment

Gardner (1999) affirmed that self-assessment helps students to have autonomous learning, monitoring their success during each activity and motivating them to focus on objectives. Another contribution is that it provides learners with personalized immediate feedback on the effectiveness of their learning strategies. Students can reflect about learning, their goals, strategies and achievements that they want to get. Students can understand weaknesses while they are checking mistakes during the self-assessment process and improve it with teachers' help focusing on specific areas that need to be reinforced. On the other hand, Burns (2010) mentioned that the validity and reliability could be problems to apply self-assessment because teachers and learners can assess differently and it could affect the results where students become autonomous without enough support focused on their mistakes and objectives completed.

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How to Make Self-Assessment Effective

Gardner (1999) mentioned that the role of teachers in facilitating self-assessment falls into three parts: first to raise awareness among learners of the benefits of self-assessment; second to provide guidance on, and materials for conducting self-assessments; and third to help learners understand the significance of the results. Teachers have a unique combination of knowledge, expertise and skills and they can model the process in order to help students manage the process. They are creating opportunities for students to make responsible choices where students can assess their own progress. So, learners could be more autonomous, and become skilled in the self-assessment procedure.

In the same way, teachers can help students become autonomous by following a gradual release of responsibility model of instruction that requires that the teacher shift from assuming "all the responsibility for performing a task … to a situation in which the students assume all of the responsibility" (Duke & Pearson, 2002, p. 211). The four stages of Gradual Release of Responsibility are Focus Lessons (I do it) which allow the teacher to model his or her thinking and understanding of the content for students. Guided Instruction (we do it) is where teachers prompt, question, facilitate, or lead students through tasks that increase their understanding of the content. Collaborative Learning (You do it together) is where students consolidate their understanding of the content, students need opportunities to problem solve, discuss, negotiate, and think with their peers and independent work. Autonomous learning (You do it alone) provides students practice with applying information in new ways, so students synthesize information, transform ideas, and solidify their understanding. As the author mentioned, it occurs over a day, a week, a month, or a year where students learn from the teacher and then they are able to do a good job by themselves at the end of the innovation.

Methodology

The current study uses an action research approach to investigate how to improve spoken production. The goal of this study is to describe the effect of self-assessment on spoken production facilitated by tools such as WhatsApp app, Gmail and the Zoom platform. The data collected from this study will be used to answer the following questions:

1. Does spoken production improve?

2. Did students' self-assessment improve?

3. What is the perspective of the students of the innovation?

Innovation

During the pandemic, education methodology has changed. Teachers must move from classes in classrooms into virtual classes through platforms that encourage students in the learning process. English teachers have had great difficulties contacting students online, especially in the public school where I work with six A1 level groups of forty-five students in the Ministerio Pandemic Program one hour per week. I worked the innovation with only four students from Segundo Bachillerato, aged 16 and 17.

The innovation took place using material of Project 4 of the "Plan Educativo Aprendamos Juntos en Casa" of Bachillerato General Unificado that the government prepared for classes during the pandemic. The project focused on Ecuador. The transfer goal of the unit was to learn vocabulary about the country and grammar related to the simple past, present perfect and past modals so that in the long run and on their own they can talk and write about their country.

Students have been working with the Zoom platform and the social network WhatsApp because they are more accessible to the students. When I decided to perform this action research,

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I selected four students from a total of fifteen out of the forty-five that have an internet

connection to work in pairs and in groups of four through WhatsApp and Zoom sessions three

hours per week. I developed the process by stages following the Gradual Release of

Responsibility teaching model that begins with the teacher modeling, then students and teacher

working together, students working collaboratively, and ends with the students working

autonomously (Appendix A. Lesson Plan).

 Stage 1: Pre-innovation: Introduction. (Nov 26 to Dec 2, 2020). I introduced the

students to the technology and innovation process. They received instructions about the proposal

of the action research and we started the training focused on self-assessment in order to help

them improve their speaking. We decided to work three hours per week through Zoom sessions

during two weeks to learn technology and understand the innovation. I practiced with them

slowly because they were afraid to speak in English, and they had difficulty pronouncing English

but I explained to them that it is a process with the objective to improve speaking.

 Stage 2: Learning to use the rubric (Appendix B) (Dec 2020. Week 1). Students

filmed a short video about basic information of Ecuador. After that, we analyzed it and I

modeled assessment using the rubric to grade it while they watched. The rubric focused on

vocabulary and grammar, pronunciation and interactive communication, giving them enough

instructions to work on it by themselves. This training video was also used as the pre-test for the

action research.

 Stage 3: Guided practice (Dec 2020-Jan 2021 Weeks 2, 3, and 4.) During Weeks 2-4,

students wrote dialogs and made videos autonomously, but we discussed the self-assessment

process together. In week two, students wrote dialogs about tourist attractions of Ecuador in

order to practice speaking and follow the self-assessment process. They made a video and we

watched it two times to analyze it with the rubric parameters related to vocabulary and grammar, pronunciation and interactive communication. At the end, we individually graded the video and compared the results. We then discussed grades making a group reflection orally about mistakes and about how they have improved in speaking.

I gave feedback on the individual assessment results. In week three, they designed a conversation guide about Panama Hats, an important tourist attraction in Ecuador. They made a video and we analyzed it carefully with the rubric, discussed their progress, and talked about their improvement in self-assessment and speaking. They were very motivated doing their own work. Finally, in week four, students designed a conversation guide about Tagua Handicrafts, another relevant attraction of our country. They watched and analyzed the video with the rubric. At the end, they could see how they have improved their speaking by taking care about the mistakes and making reflections about them.

Stage 4 (Jan 2021. Week 5) Autonomous Self-Assessment: All four students listed the topics studied during the last four weeks and developed their own conversations. They watched the video two times and applied the rubric. They could appreciate how important were their practices during these weeks. Their speaking was better than at the beginning; they felt very happy while they were analyzing the rubric results. At the end of the process, they completed a self-assessment interview through a Google document where they answered questions related to difficulties, easy ways to learn, strategies applied in the process such as repeating, practicing pronunciation, associating topics with real life and interacting with partners in the group. They made reflections about improvement such as difficulties, strategies used in the process like practicing, pronunciation, repeating, translations and grammar rules to do better work, how they have learned during the process and what parts were easy to do. Spoken production has been a

good way to involve students to express their own ideas about a topic that they are studying at that moment in their schools. It is necessary to mention that they were motivated to participate in the self-assessment training, using technology easily in order to follow this innovative program during the pandemic emergency.

Participants

The sample of four students, two boys and two girls, between ages 16 to 17 years old from Second of Bachillerato Genaral Unificado of a public high school volunteered to participate in this study. Students were in A1 level according to Common European Framework. "Level A1 (Breakthrough) – is considered the lowest level of generative language use – the point at which the learner can interact in a simple way, ask and answer simple questions about themselves, where they live, people they know, and things they have. They can initiate and respond to simple statements in areas of immediate need or on very familiar topics, rather than relying purely on a very finite rehearsed, lexically organized repertoire of situation-specific phrases" (CEFR Section 3.6). It clarifies that students are able to work in a simple way in order to communicate basic ideas. I can confirm that they are level A1 because I know them well since it was at the end of the year and they fit this description. This small group of students knew how to manage online platforms like Google Drive, Zoom and social media like WhatsApp before the innovation began.

Data Collection and Analysis

To answer research question one about whether self-assessment improved spoken production, I collected samples of speaking through five videos during the innovation and used Videos 1 and 5 as the pre and posttests to answer question one.   In order to answer the research

question about improvement in spoken production, I used a rubric designed for the process that was adapted from a Cambridge A1 speaking rubric into Spanish. I used the rubric (Appendix B) to assess speaking improvement and the students used it to understand and self-assess their performance in the process. The three criteria were vocabulary and grammar, pronunciation and interaction. For vocabulary and grammar, the rubric determined whether it was easy or difficult to use correctly vocabulary and grammar. For pronunciation, the rubric determined whether students could be understood, and interactive communication evaluated fluency and ability to understand and respond appropriately. Each criteria was divided into five levels that were graded from 1.0, 1.5, 2.0, 2.5 to 3.0 points, so they notice their improvement for each aspect of speaking. The results are presented as overall improvement and sub-skill improvement.

To answer question two about whether self-assessment improved, the students used the same rubric as the teacher to self-assess. The rubric helped students notice their strengths and mistakes step by step which contributed to improvement in the next video. Teacher and student results for Videos 1 and 5 were compared. The students have improved if the students' results for Video 5 are similar to results of the teacher.

To answer research question three about the students' perspective of the innovation, I made individual oral and written Zoom interviews (Appendix C) in Spanish where students expressed their personal opinions about the innovation process one by one. First, the teacher and student discussed the question and then the student wrote the answer on the Google document shared for this activity. There were five questions to determine the perspective of each student about what they learned, strategies used to learn, what was difficult, and what was easy in the innovation process. Finally, what did they like about the innovation? I used the categories and codes to analyze the reflections and interviews. The categories were *learning* that describes what

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students learned. Another one identifies the strategies used to learn. *Difficulties* describes the

challenges trying to learn and *easy* that showed the events where students enjoyed the training.

This interview was applied in Spanish in order to get clear and more detailed information.
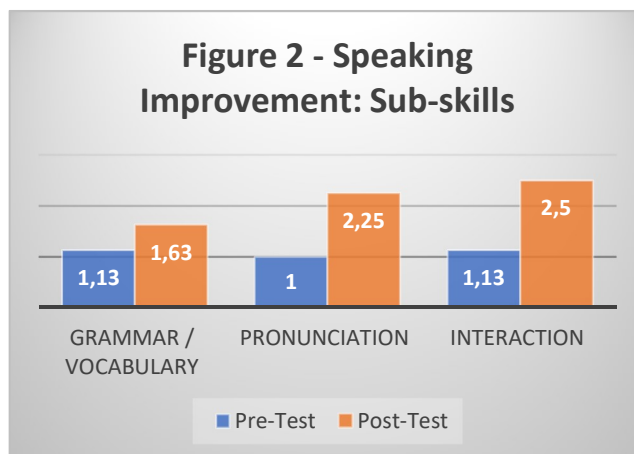
Results

Does self-assessment improve spoken production? To answer this question, pre and post-

test videos collected evidence of speaking and the teacher used the speaking rubric to analyze

data in order to measure students´ speaking improvement. On the pretest the average for the four

participants was 3.25 and on the posttest the average was 6.38 as can be observed on Figure 1.

**Figure 1 Speaking Improvement: Overall**

PRETEST 3,25   POSTTEST 6,38
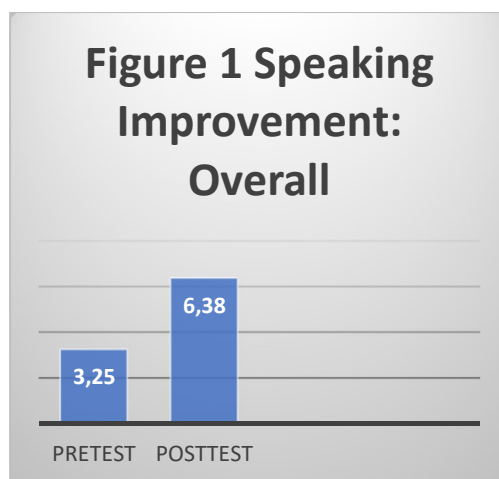
In Figure 2, the sub-skill categories such as grammar and vocabulary, pronunciation, and

interaction were graded over 3.0. Figure 2 shows speaking improvement by sub-skills.

Pronunciation and interaction had the most improvement. Pronunciation improved from 1.0 to

2.25 or 125%. Interaction improved from 1.13 to 2.50 or 137%.

Figure 2 - Speaking Improvement: Sub-skills

GRAMMAR / VOCABULARY: Pre-Test 1,13 Post-Test 1,63
PRONUNCIATION: Pre-Test 1 Post-Test 2,25
INTERACTION: Pre-Test 1,13 Post-Test 2,5

Pre-Test   Post-Test

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To answer question two, the data gotten from the four students´ pre-tests and post-tests was represented in a line graph in Figure 3 which shows the students' self-assessment average from the beginning of the innovation until the end as well as the teacher's speaking average regarding to pre and post-test. At the beginning, the teacher's value was lower than the students´ with a considerable difference of 1.25. Regarding the students´ pre-test, the results showed a value of 4.5 and for teacher results showed a value of 3.25. Data from students´ and teacher´s post-test got closer during the innovation process. At the end the average for the students was 6.25 and 6.38 to teachers, with a little difference of 0.13 meaning the students and teacher understood the rubric the same way.
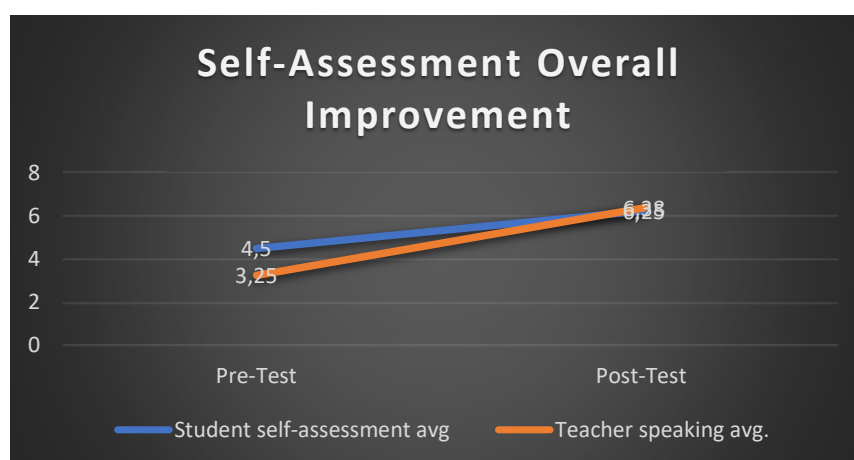
Regarding the students' perspective of the innovation, students had the following comments:

"I am learning to improve my pronunciation and writing, speak more fluently and ask basic questions in English." (S1)

"I learned to speak naturally and dialogue slowly." (S2)

"I have improved my pronunciation." (S3 and S4)

The analysis showed that pronunciation is the most important skill for students to improve in the process. The strategies applied by students to reinforce speaking abilities were

practice pronunciation, watching videos, listening to audios and being optimistic about doing an

excellent job. To confirm this information, one student affirmed, "I need to be concentrated to

avoid mistakes and working hard with partners get goals." (S4) At the same time, S2 said, "I am

practicing a lot and try to be positive, I use the Cake app, a software that students can download

in their cellphones through the Google store, to practice and improve their pronunciation,

watching videos and listening to audios to do an excellent job." Practicing frequently is one way

to improve speaking according to student comments.

     Regarding difficulties that students found during the innovation process were with

pronunciation and the rubric. Three students mentioned, that the most difficult was practicing

pronunciation and one said that the management of the rubric was very hard because they had

rarely used a rubric before. As a conclusion, pronunciation presented difficulties at the

beginning.

     According to the question that students answered about easy procedures during the

innovation, they affirmed the following:

     "I was working on pronunciation, using the guide and talking with my classmates. At

     first we didn't understand each other, but now we all speak more fluently."(S1)

     "I liked interacting with friends using the guidelines and writing some words to

     practice."(S2)

     "I like to apply verbs to talk with friends."(S3)

     "I connect with the teacher in order to learn something new each day."(S4)

     The most relevant strategy in this case was practicing pronunciation and working hard to

make interacting easier with classmates in Zoom classes. The students´ preferences were

associated with their daily life, by the curiosity to learn something new, listening to favorite

songs, the connection with the teacher and to develop fluency using familiar topics related to

Ecuador. Students commented:

"I like speaking English and singing my favorite songs." (S1)

"I enjoy the time during classes."(S2)

"I like sharing ideas with friends." (S3)

"I enjoy classes and it makes me feel enthusiastic." (S4)

After finishing this action research, the participants felt excited because they noticed their

speaking had improved thanks to the practicing routine during Zoom sessions. One of them said

that, "We have to record the perfect video" (S2) at the end when we were trying to make a fluent

conversation in the last video number five. The perseverance, rubric parameters and hard training

routine helped them to understand the importance of self-assessment in order to improve their

speaking skills and encouraged each one to produce comfortable conversations.

Discussion

Quantitative and qualitative data have showed that self-assessment helped students to

improve their speaking skills. In relation to research question number one about whether self-

assessment improved spoken production, the teacher used a rubric to measure students` speaking

improvement from the first video to the last one. The results from the pretest and posttest showed

a mean difference of 3.13, which means that the innovation had a large effect. The improvement

is the result of the hard routine of self-assessment training in Zoom sessions with students. Joo,

(2016) backed up the outcome of this research by showing that when conditions are met such as

sufficient training and positive students' perceptions about the activities, it can enhance L2

ability. On the same way, constant individual and group feedback during the Zoom sessions must

have contributed to the good results.   They became autonomous as a result of planning with

backwards design which focuses on the end results. Planning incorporated the model of gradual release of responsibility so they became confident of speaking and autonomous in self-assessment (Appendix A).

Regarding sub-skills analysis, grammar and vocabulary, pronunciation and interaction were graded over three. The data showed a high improvement in pronunciation and interaction skills with a one hundred twenty-five percent improvement between the pretest and posttest in pronunciation and one hundred thirty-seven percent improvement in the interaction skill in relation to pretest and posttest. This gives a clear idea that the students were successful in developing interaction skills during the innovation process. It was possible because students understood and followed the rubric parameters in order to improve their speaking production.

For research question number two about whether self-assessment improved, the results showed the difference between the students and teacher pretest and posttest scores for Videos 1 and 5. At the beginning, students graded themselves higher than the teacher did, but lower than the teacher did at the end, showing a difference of one point twenty-five on the pretest. However, when students understood the rubric they started to underestimate their work during the practice to improve speaking skills. According to the posttest for teacher and students, the results got closer as a result of the innovation process, giving a difference of zero point thirteen between them indicating that there was a small difference in speaking assessment at the end. Both the teacher and the students understood the rubric in the same way. It is important to mention that student improvement became more autonomous because during the Zoom session practices. I noticed that while using the rubric they tried to improve if they were doing something wrong. It is according to findings of Spiller (2012) who affirmed that self-assessment helps students to improve autonomously.

To question number three regarding to the students' perspective of the innovation, qualitative data showed that students applied different strategies during the innovation, basically the use of technology at home due to the pandemic emergency. As the innovation went by, students expressed that they used other strategies such as practicing with friends, listening audios, watching videos, repeating vocabulary and trying to improve speaking using a Google app called Cake for learning English. Cake is a cellphone app that helps students practice speaking skills.

Adding to these strategies, the most important resource to manage the innovation was the use of Google Documents where students worked on the rubric, answered the interview and made reflections while they were grading themselves. Other basic apps were the Zoom Platform and WhatsApp that helped the interaction between teacher and students. Students mentioned they enjoyed being part of the innovation and it was beneficial to improve their speaking skills. Data showed that students felt eager to use technology to record themselves given they had not had that experience before. They were excited to record the video dialogs many times in Zoom sessions. It is probable that the self-assessment innovation process raised their personal goals and motivated them to do a better performance. Students said that pronunciation and understanding phrases and questions were the most important things. They felt they had improved and it motivated them to practice with others the content about Ecuador on their own without guidelines and the teacher's monitoring. Brown (2000) affirmed that the most powerful reward is the one that comes from inside the learner, given their motivation comes from needs or desire within themselves.

Finally, students expressed a positive acceptance of being part of the action research. It gave them the opportunity to grade themselves and appreciate their personal opinions regarding

to the innovation with the principal purpose of improving speaking skills in an easy way using technology. The teacher´s support changed a traditional classroom to an interactive learning one.

Conclusions

This action-research was developed to find out how self-assessment can improve speaking and help them become more autonomous. After the project was applied with four volunteers, it can be concluded that students' oral skills benefitted from the process of self-assessment. Also, students expressed a positive perception of the innovation and felt their vocabulary, pronunciation and interaction skills had benefitted from reflecting on their work.

First of all, the rubric helped the students not only to self-assess their speaking skills, but to clarify and reach the end goal so self-assessment led to learning. It can be concluded that guided practice using gradual release of responsibility and constant feedback until they are autonomous motivated and gave them confidence to continue improving during each recorded video. Students were able to use new vocabulary and improve their pronunciation making connections to real life while they interacted into training process.

As a result, it became meaningful and motivating to them in order to communicate their ideas in effective way. Technology was another important aspect that helped students to increase their motivation. Students felt more involved in learning activities into this innovation than into a traditional classroom, they were able to speak and interact in the group, without being afraid of making mistakes during the training. The recorded videos helped students to notice their mistakes without relying only on the teacher. They improved while they were working with the rubric, so they became experts using technology and learning at the same time.

On the other hand, individualized attention is a difficulty that teacher faces in classrooms with a large group of students, so they need to engage students to lessons by working in pairs,

adapting games to real life in order to catch the students´ attention and achieve learning and successful outcomes.

Recommendations

This action research was carried out with only four students. In order to carry out the innovation with forty students, the recommendations follow.

1. To apply this project, it would be advisable to facilitate the process with Google Docs which is easy to give feedback to a whole group of students. Also they could check instructions, do activities and interact with others at the same time using their own electronic devices.

2. Continuous training with individual feedback in self-assessment at least once so each student learns to use the rubric correctly and become better speakers, so in the long run they will be able to speak according to the proficiency level expected by the Ministry of Education making connections in a real life context.

3. To monitor group work in Stage 3 of GRR which promotes students` collaboration and the teacher´s feedback where students have the opportunity to analyze the work done.

4. To follow the innovation process, it is necessary to apply peer and self-assessment for practice videos that help students become independent learners reflecting on how they are learning and thinking about some strategies to improve speaking in future activities.

5. Final autonomous videos (posttest) in pairs would be the perfect tool to appreciate how students have improved their speaking skills while they develop a conversation easily with the minimum percentage of mistakes and with fluency unlike the initial videos that I took as the pretest.

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Appendix A - Lesson plan

Available upon request.

Appendix B - Rubric

Available upon request.

Appendix C - Interview protocol.

Available upon request.