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USING SMARTPHONE VIDEO CAMERA TO ENHANCE 1ST GRADE PUPILS' ORAL PERFORMANCE SKILLS

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Abstract

Video recording is increasingly used in educational settings. However, little research has been done on the effects of in-class video reviewing and the correction of presentation skills of younger pupils in elementary school. The purpose of this research was to examine the effects on the oral communication performance skills of first grade pupils of an intervention program using the video camera of common and widespread smart devices as an instructional tool. The program consisted of 10 sessions divided into: a. Practice b. Feedback. A test was conducted on the 11th session: A video clip was recorded for each pupil followed by both self-feedback and instructor's feedback. After this part of the test session, a second clip was then taken by the instructor and feedback provided. Aspects of pupils' performance, included following instructions and awareness of audience, were analysed by quantitative and qualitative research paradigms. Statistic results showed significant positive change in the tested parameters. Qualitative data revealed that some pupils overcame major barriers such as performance anxiety and understanding of given instructions, while others had difficulties coping with their first clip's results. This research showed that a pedagogical program that combines smart device video cameras and feedback may enhance first grade pupils' oral performance skills.

Keywords: Presentation, rubric, hard evidences, feedback.

1. Introduction

In our generation extreme changes are taking place in the communication habits of human beings and in their access to data sources. Written language is losing its superiority in a growing competition with the visually transmitted media of television and the internet. These visually dominated media contain many possibilities for absorption, learning, and entertainment, but it is clear that they also pose many risks, due to their formation of a mediated world picture imposed, in many cases, by commercial interests (Ben-Shahar, 2003). Moreover, claims Ben-Shahar, the language of the visual media is rapid, shallow, short, and lacking in continuity and consistency. Visual stimuli are light and entertaining, and do not demand the effort, discipline, and intellectual rigor required to draw out meaning from written texts. Therefore, it is not surprising that pupils of the electronic media generation find it much more difficult to learn written texts, or to work with verbal messages that demand abstraction, conclusion, generalization, etc. It is also known that the new generation has less patience and motivation to try harder. Teachers all over the world find themselves trying to run a "rear-guard action" against the culture of quick flashy reception of messages that the electronic media transmit. Today's teachers are required much more than in the past to put an effort on teaching reading, writing, and oral communication literacy. Taking in consideration that TV, internet, social networks, and other electronic media suggest to pupils that it is worthless to repeat and practice, and that learning can become entertainment. While These words were written at the first decade of our century, in the second decade a new device flooded our social communication. Smartphones and other smart devices have replaced older cell phones, and present constantly developing capabilities and a growing variety of communication media. One of these new media is the device's video camera.

Children of the second decade of the 21st century become familiar very early with the smartphone's camera. Many children today have been videotaped since birth. They seem to grasp newly available media applications independently, often faster and better than their adult parents and teachers. Yet despite their rapid accommodation to new technology, many have difficulty delivering an idea orally. They compose broken sentences and often speak with grammatical errors, so that their spoken and written language is full of slang words and full of fillers (a…amm…etc.).

In an attempt to partially address the problem of oral proficiency raised here, as a teacher of web-based learning projects, I suggested that my school run a trial program making use of the teacher's smart-devices' video cameraas an instruction tool for enhancing first grade pupil's oral communication skills. In 20 sessions of 45 minutes per week, I gathered groups of 6-7 pupils, took them from their regular lessons and taught them to speak to my smartphone's video camera, in what Gee and Hayes (2011) called: "School talk".

1.1. Literature review.

Using formal video review in education displayed effectivity in improving communication skills for professionals with repetitive client contact (Fukkink, Trienekens, & Kramer, 2011). According to Santagata, Gallimore, and Stigler (2005), several other researchers demonstrated that classroom video can be a particularly effective tool for promoting the development of key aspects of teachers' expertise. While the educational literature concerning teaching aided by video tools is full of material for high school age

and forward, only a few research studies have been done on this kind of teaching in elementary school, especially on first grade pupils.

According to Ayala and O'Connor (2013), Bandura showed how children may acquire many abilities via modelling with and without reinforcement, and that self-efficacy may be up-graded through the use of video modelling by looking at the person's own success. The practice of video modelling to acquire a skill that is above the ability of that moment, is also supported by Vygotsky (1978), who stated that learning is most effective in the zone of proximal development (ZPD). "By definition, the ZPD covers experiences between a child's unaided performance and the performance that is possible with the help of a teacher or peer" (Hausfather, 1996).

Students, as well as most adults, become anxious when faced with public speaking (Lucchetti et al., 2009). Smith and Sodano (2011), reported that while making a presentation, around 50% of the participants showed anxiety while preparing for their presentation, and felt like they were blocked in their speech at the moment of the presentation itself. Ritchie (2016), maintained that video clipping has been used for many years to provide access for students to watch and evaluate their performances. Quoting a number of research studies, he lists several uses for video technology in education: in speech/communication classes, and during career building of teachers, medical health professionals, social workers and lawyers. "The use of video technology during a performance allows students to gain the observers' perspective" (Quigley & Nyquist, 1992). Quigley and Nyquist (1992), found that skills improved when students looked at themselves, but in some other occasions, they did not. Bourhis and Allen (1998), concluded that addressing specific skills to be achieved and comparing with other video recordings of performances, is most effective in influencing self-evaluation of the students' own video clips. After reviewing 12 reports on video recording in high education, e.g. videoing presentations in a range of universities, they concluded that "Although some increased student anxiety might be expected from the use of this technology, reported that the effect is negligible" (Bourhis & Allen, 1998).

In a research on public speaking skills of undergraduates, Dunbar, Brooks, & Kubucka-Miller (2006) found that even though students were at the expected level for different academic skills, they demonstrated lesser delivery skills, which means that their oral performance was below the expected standards. This suggests that training for oral performance skills should be stressed just as much as other academic skills, even in classes that are not solely focused in communication skills (Smith & Sodano, 2011).

Several research projects on language instruction, whether teaching a first or second language, make use of reflection and corrective feedback as one of the most valuable tools for enhancing progress. Fukkink, Trienekens, & Kramer (2011) studied the influence of targeted feedback on skills learning using a special observation form while reviewing the video. The researchers found that the video feedback enabled focus on several aspects: verbal, content, para-lingual aspects such as tone of voice, and non-verbal such as eye contact and the way the body is held. These aspects are important because they of their relevancy to the communication skills required in professional practice.

The research on children's' capacity for self-regulated learning, found that from the age of three, children may demonstrate some pre-metacognitive control skills such as planning, monitoring and assessing, as long as the tasks given to them are meaningful and related to their chronological age (Whitebread et al., 2005; Whitebread et al., 2007). It is important to promote self-regulated skills from

young age to upgrade later academic achievements in higher education (Torrano & González, 2004; Zimmerman & Schunk, 2001). Furthermore, there are evidences that these self-regulated learning skills acquired in early elementary schools can predict achievements in reading and mathematics more than IQ tests can (Blair & Razza, 2007).

2. Problem Statement

Children of our generation demonstrate difficulties in simple abstract thinking and appropriate phrasing. They perform poorly when being asked to compose simple sentences explaining common knowledge and/or feelings. When required simple explanation in short academic talk, many pupils do not manage to perform.

3. Research Questions

How can smart device video clips and subsequent feedback contribute to oral expression and presentation skills?

4. Purpose of the Study

- To examine the level of improvement of the mean score between trial 1 and trial 2
- To examine the role of the instructor in the test
  To examine the influence of the feedback given in the interval between trial 1 and trial 2

5. Research Methods

5.1. Research population.

20 first grade pupils (7 girls and 13 boys), age 6-7, from various SES in an urban elementary school in the northern region of Israel, in which the teaching language is Hebrew. Five of the pupils speak another language at home, since their families recently immigrated. One is a new immigrant himself who is learning the Hebrew language.

5.2. Program and procedure.

The program consisted of 10weekly sessions in which the pupils were asked to speak to the instructor's smart phone video camera about the subject raised in the session. Parental consent forms for this program were signed at the beginning of the school year. The even sessions were dedicated to group assessment of the clips taken the week before, and to providing self, peer, and instructor feedback and reinforcement. Two types of data were retrieved on the eleventh session, during which pupils were asked to talk to the smart device's video camera about the picture of holiday symbols that they drew in the previous week. Two video clips and an audio recording were taken, as shown in figure 01.

The pupils were instructed to elaborate on the purpose of their drawing, i.e. the holiday's symbols, then to describe what they drew, and after that to tell a short story about their holiday vacation. These clips were taken twice. After taking the first video, the instructor and the pupil watched the clip and talked about the outcome. In this interaction, self-feedback and instructor feedback and reinforcement

were discussed, with the second clip taken after the feedback dialogue. The entire session was audio-recorded in order to provide insights into the instructor-pupil interaction during the test
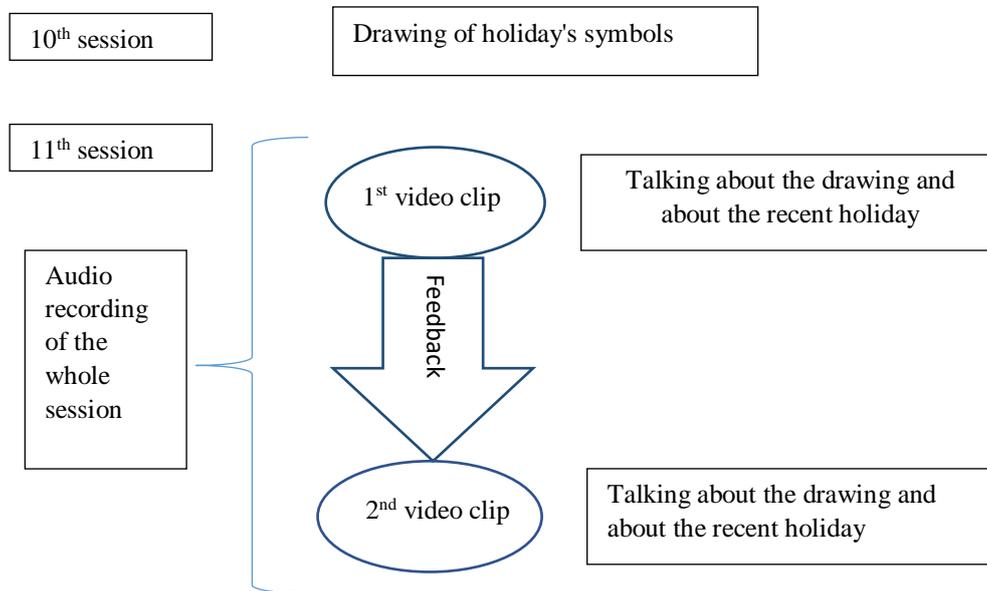

Figure 01. Structure of the eleventh session (test)

5.3. Research tools.

The five questions related to the aspects of: "following instructions" and "awareness of audience", were taken from a questioner used by Gwee and Toh-Heng (2015) in their research on developing student oral presentation skills with the help of mobile devices. These aspects were chosen as suitable for first grade pupils, who are beginners in oral communication performance. Reliability among five judges (Alpha Cronbach) was found to be at a good level (r=0.746).

6. Findings

6.1. Quantitative analysis.

Two unbiased assessors watched the clips and graded the performance on a 1-5 Likert scale. Each assessor coded, blindly, 20 clips of the first attempt, and 20 clips of the second attempt. In order to check for improvement between the trials, a paired t-test was performed on the first and second attempts. Figure 02 shows the mean scores of the tested parameters retrieved from the first and second attempts by each pupil to speak to the instructor's smartphone camera.
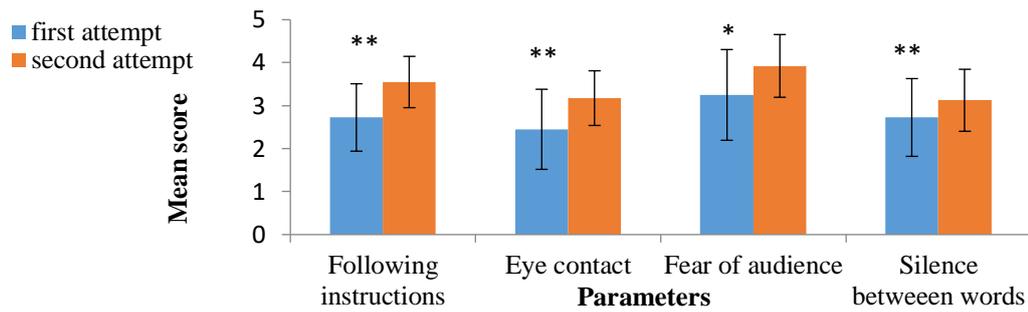
Figure 02. Mean scores of the tested parameters on first and second attempt

Changes in both following instructions and awareness of audience were found to be positively significant as shown at table 01.

Table 01. Paired T test results

Column Heading	Mean	Std	t	df
Following instructions 1-Following instructions 2	-0.825	0.63599	-8.204**	39
Eye contact 1-Eye contact 2	-0.725	0.81610	-5.619**	39
***Fear of audience 1-Fear of audience 2	0.675	0.91672	4.657**	39
***Silence between words 1-Silence between words 2	0.4	0.98189	2.576*	39
Audience awareness 1-Audience awareness 2	-1.8	2.01533	-5.649**	39

*p<0.05, **p<0.01,***questions are phrased negatively

Audience awareness is a summary of 3 components: Eye contact, fear of audience, and silence between words.

6.2. Qualitative analysis.

Qualitative content analysis was used to analyse the transcribed session recording data. Reading and coding the text derived from the pupil-instructor test meeting raised ten themes, 6 of which related to the instructor, with 4 themes related to the pupils, as shown in figure 03.

Figure 2 demonstrates an action-reaction of the instructor-pupil dyad during the test. The 4 categories of pupil's behavior are addressed by 4 of the categories related to the instructor. Two categories--**error arbitrages**and **agreed rubric construction--**have a general character that does not stem directly from the pupils' actions, but they do provide a general frame.

The instructor used many forms of **mediation** to address the pupils' **seeking for mediation**. For example: "Talk like you are telling a story to other children…" in reply to "I forgot what I need to do" (L, boy). **Instructions** were given where there were issues with **getting started/following instructions**. **Encouragement and feedback**were used to calm the pupils' **fear to fail:** "There is no wrong or right if you are trying" was one strategy to face a recurrent dynamic such as "What if I do it wrong?". **Audience awareness** includes aspects such as eye contact and flow of speech that were addressed by the instructor

in the feedback interval between clip 1 and clip 2. Forms of **specific guidance** were used to ease the types of behavior that occurred as a result of the presence of the video camera: "Look straight into the camera", "Think of what you need to say before you start".
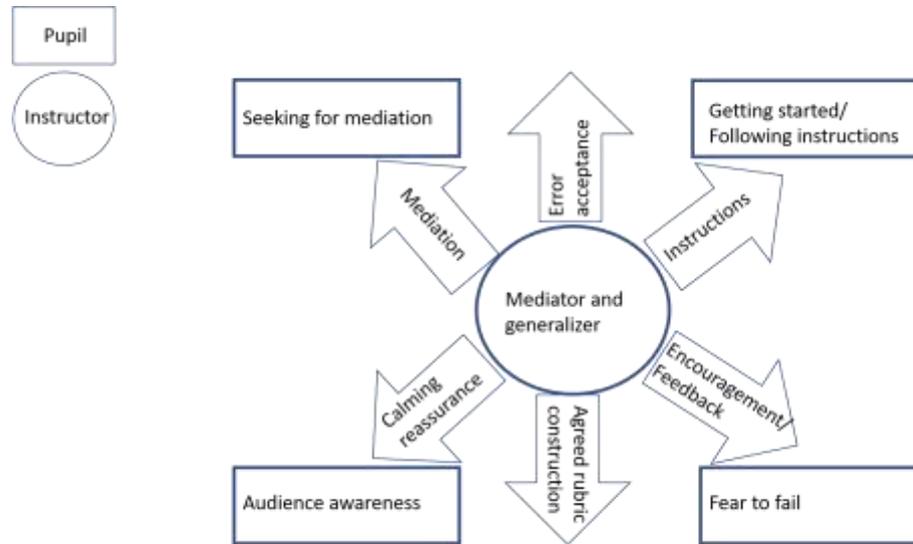

Figure 03. Main categories of the qualitative analysis

7. Conclusion

The positive contribution of video-based practicing on oral communication skills correlates with the findings of previous research studies (Fukkink, Trienekens, & Kramer, 2011). The uniqueness of the present research is that it showed the possibility and indeed a recommendation to start at a younger age than usually posited (Gwee, 2015). The improvement that occurred concurs with Bandura's (2011) and Vygotsky's theories of learning, especially in the interval between trial 1 and trial 2 where an opportunity was given to the pupil and the instructor to assess and improve the outcome. The improvements in the parameters of self-regulation may contribute to better academic achievement in later years as suggested by previous reports (Torrano & González, 2004; Zimmerman & Schunk, 2001). Analysis of both quantitative and qualitative findings demonstrates both the progress made by pupils and the reasons behind it. Given that the test's duration for every child was approximately 10 minutes, there was no expectation of drastic progress for such a single short learning event. On the other hand, this study evaluated overall progress based on a prefacing program of 10 sessions, in which the pupils underwent repeated experiences in speaking to the instructor's smartphone video camera, thereby building and internalizing an agreed rubric together with the instructor, with practice in giving and receiving feedback. Statistically, in all parameters checked during the study, the pupils improved in the second trial. The improvement can be attributed to several factors, some of which derive directly from the sessions prefacing the test, and some of them occurring in the test itself, especially during the interval between trial one and trial two. Pupil and instructor video analysis of trial one, combined with words of encouragement from the instructor, created safe atmosphere in which most of the pupils were able to improve. In regular classrooms where lessons are taught frontally, the opportunities for a pupil to self-

express are limited. A smart-phone video camera, a common device in the pocket of every teacher, can and should be considered as an effective pedagogical tool to improve young pupils' abilities in verbal construction and coherent speech.

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