



Enhancing short academic presentations through extended independent practice using VoiceThread

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Abstract

This study examines the potential of VoiceThread (VT) as a learning tool to enhance learners' performance and confidence while facilitating ongoing independent practice in a 10-week English for Academic Purposes (EAP) programme in an Australian university. Students carried out weekly academic presentations on topics of personal interest using VT for recording and rehearsal. Their recordings were shared for peer review and teacher feedback. The recordings were analysed in relation to a number of features to measure utterance fluency, including speed, repairs and pauses. Questionnaires were used to investigate students' perceptions of the value of the task, of their performance on the task, and of changes in their performance and confidence over time. Interviews were conducted to investigate the potential of recording and rehearsal for long-term independent practice. In total, 34 students participated in 10-week courses, 22 students using the VT software, and 12 students in a comparison class following the same curriculum, but without the VT software. The findings suggest that regular VT tasks, over time, help students develop their spoken English performance and confidence. Such voice-recording activities hold promise for improving oral performance by encouraging independent practice in oral activities, effectively addressing the time limitations, constraints practice opportunities, and feedback challenges inherent in classroom-based courses.

Keywords: *speaking, voice recording, fluency, academic presentation, independence.*

1. Introduction

University students in many subjects are required to deliver presentations as part of their academic work, and these often form part of their assessed coursework (Grez, Valcke, & Roozen, 2009; Kerby & Romine, 2009). Helping students develop the skills required to effectively plan and deliver well-structured presentations is therefore an important element in many English for Academic Purposes (EAP) courses (Ferris, 1998). The current study was intended to tackle problems identified in the literature on oral skills (e.g. Ferris, 1998; Morita, 2000; Zareva, 2009, 2016), and by the teachers on an EAP course in an Australian university.

The main issues which the teacher identified as limiting progress were lack of time for students to practise presentations in class, or to learn from and discuss each other's presentations, and limited time for teacher feedback. Providing students with the means to rehearse and refine their presentations in their own time

using voice recording software was seen as a possible solution to this problem, and part of the course was redesigned to incorporate *VoiceThread* software (<http://voicethread.com/>), a cloud-based video or audio discussion application available through the university Learning Management System – *StudyDesk*. This would allow students to revise their performance until they were happy with their recordings but would also provide opportunities for feedback from the teacher, and from other students.

2. Literature Review

2.1 Academic presentations

Studies of academic presentations in L2 language learning focus on grammatical, lexical and discourse features (Swales, 2004; Zareva, 2016), or on different approaches between L1 and L2 students. The study from Zareva (2009) suggested that L1 students tend to interpret academic presentations as an opportunity to present information in an informal way, but also to interact with the audience. L2 students, however, tend to take a more formal approach focusing more on presenting information and taking less account of the reactions of their audience.

The findings of a training programme with university students in Hong Kong (Bankowski, 2010) suggest students develop analytical and thinking skills relevant to organisation, content and delivery of a presentation, but have difficulty in selecting appropriate topics. Radzuan and Kaur (2011) suggest students lack basic presentation skills and confidence in delivering a presentation, and Stapa, Murad, and Ahmad (2014) highlight the role of anxiety based on low self-perceived language proficiency in delivering effective presentations. Siddons (2008, pp. 1-2) suggests the need for academic presentations to take account of the audience, the presenter, and the presentation itself.

2.2 Fluency

The concept of fluency in speaking is not well understood and is difficult to define. Lennon (1990) defines fluency in both a broad (overall speaking proficiency) and a narrow (smoothness and ease of oral linguistic delivery as measured in terms of rate of speech) sense, and Segalowitz (2010) suggests three aspects to fluency: cognitive (the speed and manner of the underlying mechanics of speech production); perceived (the particular reaction from listeners to the cognitive fluency of the speaker); and utterance fluency (the measurable aspects of speech fluency which reflect the cognitive fluency underlying speech production). Speech rate (i.e., the number of syllables per minute, including pause time) and mean length of run (i.e., the mean number of syllables between two silent pauses) are strongly associated with the development of L2 oral fluency (Cucchiari et al., 2002; Kormos & Denes, 2004) and with perceived fluency (Kormos & Denes, 2004; Suzuki & Kormos, 2023).

2.3 Voice-recording and VoiceThread

Many studies (e.g. Volle, 2005, Kay, 2012), have investigated techniques such as video- and audio-recording, podcasts and video-conferencing (VC) with L2 learners. Tecedor and Campos (2019) investigated voice-recording (VR), VC and face-to-face (F2F) techniques in interpersonal and presentational tasks. VC proved most effective in promoting fluency in presentational tasks, while F2F and VC tasks were equally effective in promoting complexity. The activities were, however, carried out in-class, rather than independently.

VoiceThread (VT) (<https://voicethread.com/>) is a cloud-based video or audio discussion application linked to a Learning Management System (LMS) such as Moodle. It allows students to plan, record, review and re-record their presentation, a process which can facilitate learners' reflection and foster the development of metacognitive strategies for monitoring their progress in oral presentations (Richardson, 2006), and provide potential for improving attitudes towards reducing language anxiety, and for increasing L2 motivation and self-confidence (Kern, 2014; Brunvand & Byrd, 2011).

To our knowledge, no research has been carried out on utterance fluency in L2 learners' academic presentations using recording applications for extended independent practice. The aim of this study was therefore to use VT

to investigate its effect on learner performance (fluency), confidence in academic presentations, and its implications for longer term independent practice.

3. Research questions

1. What changes in speaking fluency take place in student performance on an extended speaking task over time? Are the results the same for both the Experimental and Comparison Groups?
2. What are students' perceptions of the value of the recording task in terms of changes in: a. their performance? and b. their confidence in extended speaking tasks?
3. Are the students applying similar independent practice techniques beyond the current course?

4. Methodology

4.1 Course and participants

The participants were studying for 12 hours per week on ten-week EAP courses, with a short academic presentation as a final assessment. Their level on entry to the course was overall IELTS 5.0. They had lived in Australia for varying periods, spanning from one week to six years. A quasi-experimental approach was adopted, with 22 students in total forming an Experimental group (EG) in three courses using *VoiceThread* to rehearse their presentation in their own time, and receiving individual, face-to-face, weekly teacher feedback using criteria adapted from IELTS. A Comparison group (CG) consisting of 12 students, followed the same curriculum, but without using *VoiceThread*. The 34 students were from a variety of nationalities (i.e., Afghanistan (2), China (4), Taiwan (1), Congo (2), Syria (5), Iraq (14), South Korea (3), Sudan (1), Uganda (1), and Venezuela (1)).

4.2 Data collection and analysis

Utterance fluency was analysed using automatic transcription, *Otter* (<http://otter.ai>), and histogram software, *Praat*, (<http://www.fon.hum.uva.nl/praat/>) to identify speed, pause and repair features. Student perceptions of fluency and the value of the *VoiceThread* tasks were investigated using weekly surveys and an end-of-course questionnaire (see Chang & Windeatt, 2021, pp. 16 and 21). A follow-up semi-structured interview lasting 20-30 minutes was conducted with 10 students three to six months after the course (when most of the participants had moved on to the next level of the EAP programme, EAP2). During this interview, they were asked whether they continued to use any methods they had practiced in the course, and how and why they used them.

5. Results and discussion

R1. What changes in fluency take place in student performance on an extended speaking task over time? Are the results the same for both groups?

Mean scores were compared for the EG and CG presentations in weeks 1 and again in week 10 using a t-test, and for the EG a t-test was used to compare changes in scores from week 1 to week 10.

In the week 1 self-introduction presentation task, there was no significant difference between the groups. In the week 10 academic presentations significant differences were identified in speed ($p < .05$) and mean length of silent pauses ($p < .01$). Within the EG there was a significant difference in mean length of silent pauses ($p < .05$) for the two presentations (week 1 and week 10), i.e. the length of silent pauses (one measure of fluency) were longer in week 10. In a survey using criteria adapted from IELTS (Chang & Windeatt, 2021, Supplementary Appendix 1), significant changes were noted in self-perceived fluency in the EG between week 1 and week 10 in four areas; 1) fluency and coherence, 2) lexical resource, 3) pronunciation, and 4) grammatical range and accuracy: significant differences in the areas of fluency and coherence ($p < .05$), and lexical resource ($p < .01$).

R2. What are students' perceptions of the value of the recording task in terms of changes in: a. their performance? and b. their confidence in extended speaking tasks?

Participants in the EG agreed or strongly agreed that recording activities helped them improve their short presentations, public-speaking skills, pronunciation, and vocabulary, and organise their ideas. They felt their fluency and grammar improved and noted that the recording and listening features of VT helped them identify their weaknesses and strengths and monitor their progress. They also agreed that they learned from other students' recordings, agreed or strongly agreed that confidence in their ability to improve their English independently had improved, and they were more relaxed when speaking to a group of people in English (though some participants, despite claiming to have grown in confidence, disagreed or strongly disagreed that they were relaxed or could speak English easily) (see Table 1).

Table 1. End-of-course questionnaire: descriptive statistics (Chang & Windeatt, 2021, p. 16)

Experimental group			
Statement		Mean*	SD
Recording activities help me to improve my	1. short presentations.	4.6	0.5
	2. speaking fluency.	4.2	0.6
	3. public-speaking skills.	4.5	0.5
	4. pronunciation.	4.3	0.7
	5. grammar.	4.1	0.5
	6. vocabulary.	4.8	0.4
	7. ideas.	4.4	0.5
Recording activities help me to	8. learn from listening to other students' recording.	4.1	0.7
	9. monitor my progress.	4.3	0.6
	10. identify my weaknesses in speaking.	4.6	0.6
	11. identify my strengths in speaking.	3.8	1.0
18. I have developed my confidence to improve English independently from the recording activities.		4.4	0.6
19. I want to keep doing the recording activities in the future.		3.7	0.6

comparison group vs. experimental group						
Statement	Mean*		SD		df	p
	CG	EG	CG	EG		
12. When I speak English, I feel cheerful.	4.0	4.1	0.8	0.5	1	0.4161
13. I am relaxed when speaking in English.	2.6	3.6	1.1	1.2	1	0.0316*
14. I can discuss and give my opinion in English.	4.0	4.4	0.8	0.5	1	0.0661
15. I will speak to a group of people in English.	3.8	4.4	0.5	0.5	1	0.0157*
16. I can be interviewed in English.	3.3	3.7	0.7	0.8	1	0.0729
17. I can speak English easily.	2.8	3.4	0.9	1.2	1	0.0782

Findings of a positive relationship between voice recording and speaking skills in previous research (Kay, 2012; Volle, 2005) were confirmed in our study, with most participants perceiving as positive the overall development of their language skills, content knowledge, digital literacy and developing autonomy. They also valued regular individual teacher feedback, which encouraged them to continue regular practice with the recording tasks.

Weekly surveys revealed a similar pattern throughout the course, with students rehearsing, then recording and listening to their recordings before uploading them to Study Desk. They accessed others' work to look for ideas about content and delivery, as part of their preparation for recording. If they found problems in their presentation (i.e. speech flow, intonation, and, less commonly, grammatical mistakes), they recorded their presentation again until they were satisfied. Being able to rehearse and listen to their own recordings as often as possible before uploading a final version appeared to help students' language skills.

R3. Are the students applying similar independent practice techniques beyond the current course?

In the end-of-course survey, 15 participants agreed or strongly agreed that they wanted to carry on using a recording activity after the course. In a post course interview with 10 participants three to six months after the course, eight students claimed that they had continued using recording to improve their speaking skills in the EAP2 course, though using mobile phone applications, which they found more convenient and user-friendly than *VoiceThread*. They focused on using techniques in the EAP2 course which they had learned on EAP1. They also adapted the recording activities to suit their own needs, for example by recording words, reading aloud, and texting voice messages.

6. Conclusions

The aim of this study was to use recording software – *Voicethread* - as a tool to enhance learners' performance on, and confidence in, extended speaking tasks in the form of academic presentations, to investigate aspects of fluency in their performance of those tasks, and to provide the basis for longer term independent practice. Our data suggest, for the experimental group, significant improvements in fluency and coherence, and in lexical resource, between weeks 1 and 10, but no significant perceived changes in pronunciation, or grammatical range and accuracy. The results for speed, pauses and repairs, show a significant change only in the mean length of silent pauses between weeks 1 and 10. The experimental group therefore appeared to improve the fluency and coherence of their presentation, used a wider range of vocabulary, but, although their rate of speech was much faster, and their silent pauses much shorter, than for the comparison group in week 10, their silent pauses were longer than in week 1. While there does, therefore, appear to be some relationship between the length of silent pause and speed of delivery, the relationship between pauses and other measures of performance such as fluency remains unclear.

Most students in the Experimental Group were positive about the benefits to be derived from the use of *VoiceThread*, including opportunities for the rehearsal, recording, re-recording, self-reflection, teacher feedback and access to peers' recordings. This was confirmed in post-course interviews with a sample of participants, who confirmed that they had continued to make use of the strategies and techniques they had developed in their EAP course, albeit with voice-recording software. This study provides sufficient evidence to justify further investigation into the potential impact of voice-recording activities, particularly on aspects of fluency, including the location, purpose and effect of pauses.

Notes

This paper summarised an article published in 2021:

Chang, H. & Windeatt, S. (2021). Using *VoiceThread* for extended independent practice in giving short academic presentations. *Computer Assisted Language Learning*, <https://doi.org/10.1080/09588221.2021.2003407>

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