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Using VoiceThread in an EMI Classroom

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## Using VoiceThread in an EMI Classroom

### 一、本文 Content

#### 1. Introduction

It appears that the landscape of higher education may have undergone a transformative shift in recent years, possibly influenced to some extent by the introduction of digital tools such as VoiceThread (VT), which are well-aligned with the changing learning preferences of millennial and Generation Z students. VoiceThread creates an environment in which students' interaction and engagement are notably enhanced due to asynchronous dialogue, which clearly resonates with the digital inclination of contemporary learners (Gazza, & Hunker, 2014; Shatto & Erwin, 2017; Skinner, Sarpong, & White, 2018).

Concurrently, Taiwan is actively making progress toward achieving a bilingual status by 2030, a goal that is strongly supported by government initiatives. This ambitious plan highlights the pressing need to improve the English proficiency levels of both educators and students in order to facilitate a smooth transition into a bilingual education system (Chang, 2010; Huang, 2020). This shift encourages the incorporation of innovative, computer-mediated methods with EMI to potentially establish a dynamic and participative learning environment. The fostering of community bonds within the digital sphere of education may be a cornerstone in ensuring the sustained success of higher educational institutes (Swan & Ice, 2010; Young & Bruce, 2011).

Moreover, according to the Bilingual Policy of the National Development Plan initiated in 2021, there is a growing recognition of the limited opportunities available to students in Taiwan to effectively hone their English speaking and writing skills, which are essential competencies for succeeding in EMI classrooms. In other words, while the majority of students can proficiently read comprehensive English textbooks and comprehend English lectures, some of them confess that they need to grapple with the challenge of crafting articulate English reports or actively participating in class discussions in English. Hence, proficiency in both "speaking and writing" English becomes critical for Taiwanese students to fully immerse themselves and succeed in English-intensive courses as outlined in the Ministry of Education's Program on Bilingual Education ("National Development Council," n.d.). In this scenario, VoiceThread is an outstanding example of a promising platform that provides an avenue for audio and video submissions, potentially alleviating the communication barriers students face in class discussions and the writing of reports (Panettieri, 2013).

The growing global emphasis on EMI methodologies and the initial research on the integration of VoiceThread in this domain warrant a deeper exploration into its potential impact. Therefore, the purpose of this research is to employ Q-methodology to analyze and categorize students' perception of utilizing VT in Taiwanese EMI classrooms with the aim of providing insights into the continuous refinement of this innovative educational approach. The process of this study will encompass several phases, including (i) an exploration of theoretical and empirical backgrounds, (ii) a literature review, (iii) a meticulous delineation of the methodological approach, and (iv) a conclusion and implications of the study. The research questions are as follows:

1. What perspectives do students hold about using VT in EMI courses?
2. How can study findings refine teaching practices in EMI business education?

#### 2. Literature Review

##### 2.1 Use of VoiceThread in Classrooms

VoiceThread (VT) is accessible by various devices. It is a dynamic platform that enables instructors and students to communicate by video, voice, and text using interactive multimedia presentations (see Figure 1). Users can upload diverse electronic materials, including YouTube videos and PowerPoint slides, thereby fostering a more engaging learning environment (McCormack, 2010).

The implementation of VT in classrooms has been shown to be linked to students' higher engagement and satisfaction by fostering active participation and cultivating learning communities where students can engage collaboratively with course materials (Brunvand & Byrd, 2011; Ching & Hsu, 2013). Moreover, the platform helps to enhance self-directed learning abilities and presentation skills, as well as providing an avenue for teachers to offer personalized audio feedback, which further enhances students' understanding of the course content (Delmas, 2017; Fox, 2017). However, it has also been observed that VT usage can increase students' workload due to the need of thorough preparation before posting, and that it may potentially cause discomfort for some students when sharing oral content, which tends to have a negative effect on their linguistic confidence (Fredricks, Tierney, Bodek, & Fredricks, 2016).

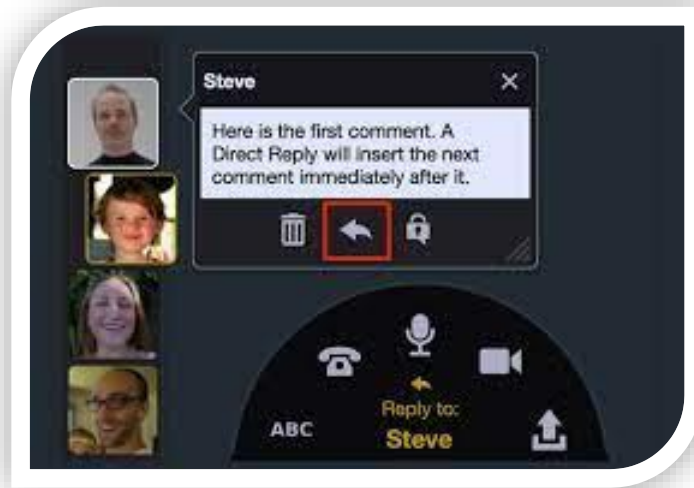


Figure 1 Functions of VoiceThread (<https://voicethread.com/>)

## 2.2 EMI in Higher Education

The utilization of English as a Medium of Instruction (EMI) in higher education has sparked both enthusiasm and skepticism. On the positive side, EMI has emerged as a powerful tool for globalizing business education because it offers students the opportunity to immerse themselves in a linguistically diverse and international academic environment. Students can enhance their language proficiency by studying subject concepts in English, while simultaneously preparing for a career in the international marketplace. The multicultural classroom dynamics of EMI programs also foster cross-cultural competencies, which are increasingly valuable in today's interconnected world (Yeung, 2020).

Nevertheless, the adoption of EMI is not without its challenges and detractors. Critics argue that EMI can inadvertently discriminate against non-native English speakers or students with weaker language skills, raising the questions of fairness and access within EMI institutions. Additionally, some fear that an excessive focus on language acquisition may compromise the depth of students' disciplinary knowledge and critical thinking skills. Hence, it is crucial that the primary aim of EMI should not be to teach English, but to provide students with a robust understanding of comprehensive knowledge, skills, and abilities. Achieving this equilibrium is paramount to ensuring that EMI programs offer a truly enriching educational experience (Huang, 2012; Huang, 2020; Chien, & Valcke, 2020)

## 3. Method

### 3.1 Course Design

The research was conducted during a Human Resource Management (HRM) course, which is a crucial

component of the undergraduate dual degree program in Business Administration offered by business schools in Taiwan and the UK. The aim of the course is to prepare students for careers in either general management or specialized HRM roles by encompassing various facets of HRM, such as recruitment, selection, placement, training and development, performance appraisal, and global practices. Over an 18-week period, VT was integrated into both in-class and out-of-class activities that included case study discussions conducted either individually or in groups. The class consisted of ten sophomores (three international and seven domestic students) who were familiar with web-based learning and were acquainted with each other and the moderator.

Each session followed a structured format:

1. Introduction to ten technical terms.
2. Lecture supported by PowerPoint slides.
3. Case study analysis.
4. Individual or group discussions on the case study, reported through VoiceThread.
5. Self-evaluation facilitated by ten multiple-choice questions devised by the instructor.

Assessments were based on attendance, participation, performance of sixteen VT activities, and scores in the midterm and final exams. Classes were held in a traditional setting, with three one-hour sessions each week, where VT was effectively utilized to enhance the learning experience in the HRM course.

### **3.2 Course Implementation**

The course was administered by an instructor who is proficient in using VT, having honed the skill in a complementary asynchronous workshop on the VT website, and it was supported by a single-site VT user license.

The link of the weekly VT activities was housed by a Moodle Learning Management System (LMS), which provided space for sophomore students to post direct comments. The instructor in this project wore multiple hats as participant observers, trainers, and curriculum designers. The integration of VT in the weekly in-class activities enabled students to resolve case studies, either individually or in pairs, and upload their voice or audio solutions. Additionally, students' ability to engage in weekly in-class or out-of-class VT activities, including discussing case study queries and reflecting on recent learning, fostered their ongoing engagement and application of newly acquired knowledge (see Figure 2). The instructor guided them with necessary instructions, grading rubrics, and additional resources in each VT discussion module.



Figure 2 Screenshot of Course Implementation

At the beginning of the course, students' English oral communication skills were thoroughly evaluated by a Business English instructor. Their speaking abilities were classified on a scale from 1 to 3, with 1 indicating low proficiency, 2 representing average proficiency, and 3 indicating high proficiency. The initial assessment determined each participant's skill levels and subsequent systematic pairings each week promoted varied competencies within each group. Post-discussions, participants uploaded audio or video files of the sessions to VT using their mobile devices. They enjoyed the flexibility of deciding how to approach weekly assignments and the opportunity to practice more by creating and potentially discarding multiple attempts at each task. Final submissions, in either a video or audio format, were uploaded for evaluation and feedback by both peers and the instructor. If students missed an in-class activity deadline, they were given an extended window of a week to complete their activity. This encouraged persistent participation by enabling students to refine their response before the final submission.

### 3.3 Research Design: Measuring Subjectivity

In this study, Q-methodology, which has been characterized by McKeown and Thomas (2013) as a fusion of psychometric principles and statistical techniques, was used as a critical tool to investigate the subjective aspects of human behavior in a quantitatively rigorous manner. Despite its inability to uncover causes or generalize the results across large populations, Q-methodology can facilitate a scientific study of human subjectivity that honors diversity and individuality (Churrua et al., 2021). Its strength lies in unraveling group opinions and perceptions, and it usually requires a modest sample size ranging from 12 to 40 participants, each of whom offers a unique 'variable' in the study. Occasionally, the participants may be fewer than 11 (Lundberg, de Leeuw, & Aliani, 2020). This choice of a smaller, purposeful sample size emphasizes the quality of data over quantity and a focus on eliciting rich, varied insights, rather than representing a specific population (Alanazi et al., 2021).

The data collection adhered to a structured protocol that involved purposive sampling based on specific inclusion criteria, and was spearheaded by an experienced researcher adept at qualitative research techniques. The participants, or the 'P-set', were encouraged to share their views freely during semi-structured interviews and on the class Interactive Response System (IRS) discussion board, with each session being meticulously recorded and later transcribed verbatim to maintain data fidelity. This ensured that the capture of the participants' perspectives was comprehensive and truthful, setting the

stage for substantial insights, even with fewer than 12 participants.

### 3.4 Data Collection

Chen (2023) outlined the five stages of Q-methodology as (i) defining the topic perspectives based on a concourse of items, (ii) forming a Q-sample by refining these items for a comprehensive view of the topic, (iii) selecting a non-random P-set consisting of relevant individuals, (iv) executing the Q-sort when the participants order the Q-statements, and (v) conducting a factor analysis and interpreting the results. This last stage involves calculating the correlations between sorts and interpreting the group-related factors revealed by the Q-factor analysis (McKeown and Thomas; Liu, 2013).

After the course concluded, the instructor interviewed ten of the students who had participated in the Q-study to gather feedback about the pedagogy. Representative statements that covered the aspects of technology, content, and participant and teacher perspectives derived from the key ideas conveyed in these interviews were used to develop the research instrument. Students then sorted these statements into a quasi-normal distribution, ranking them from most disagreeable (-4) to most agreeable (+4), which facilitated an unbiased, equal consideration of agreements and disagreements. This process resulted in comprehensive Q-sorts that highlighted the participants' views of this teaching method (see Figure 3).

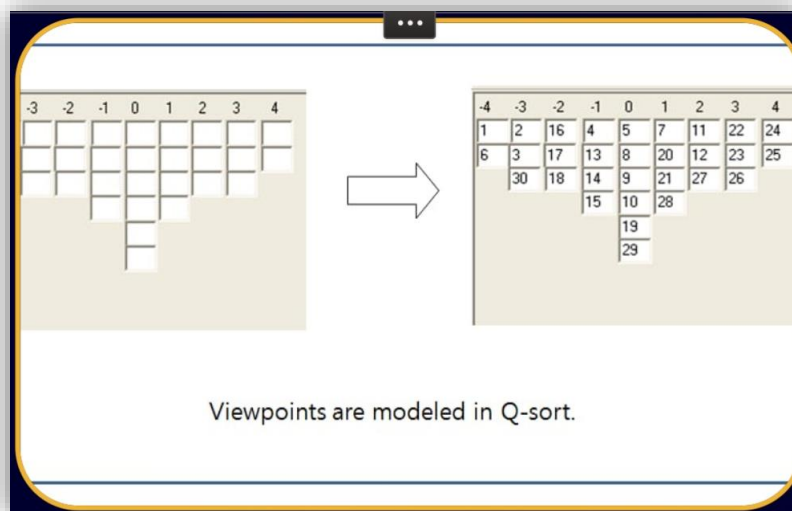


Figure 3 Q-Sorting

### 3.5 Data Analysis

The data and Q-sorts were processed using the PQMethod statistical software and online Q Method Software program, which facilitated an analysis of different factors and reported factor scores. This approach diverged from a Likert survey technique by focusing on examining interrelated statements, and utilizing several statistical procedures, including correlation and a centroid factor analysis to maintain factor reliability. Q-methodology exceeded survey research by identifying the correlation between individuals and their opinions rather than just traits. This process assisted in pinpointing both distinguishing and consensus statements, thereby highlighting the differences and similarities of various factors (Brown, 1993, 1996; van Exel et al., 2015). As a result, it facilitated the categorization of the participants' Q-sorts based on their perception of the instructional method, which helped to make potential adjustments that could better accommodate diverse learning preferences and enhance the effectiveness of the course.

## 4. Results

Three distinctive themes appeared during the analytical process. Factor 1 was shown to be bipolar as it illustrated two contrasting viewpoints: Factor 1a and 1b. These divergent views were corroborated by stark contrasts in the respondents' feedback. Insights regarding Factors 1a, 1b, and 2 were further accentuated by investigating the most characteristic (i.e., ranked +3 and +4) and uncharacteristic (i.e., ranked -3 and -4) statements pertaining to this approach:

### 4.1 Factor 1a - Interaction Advocates:

This group was composed of three Taiwanese student and one Japanese student with a relatively higher level of English proficiency. The findings revealed that these learners had a prevalent positive attitude toward the interactive capabilities. Their most characteristic and uncharacteristic statements can be seen in Figure 4.

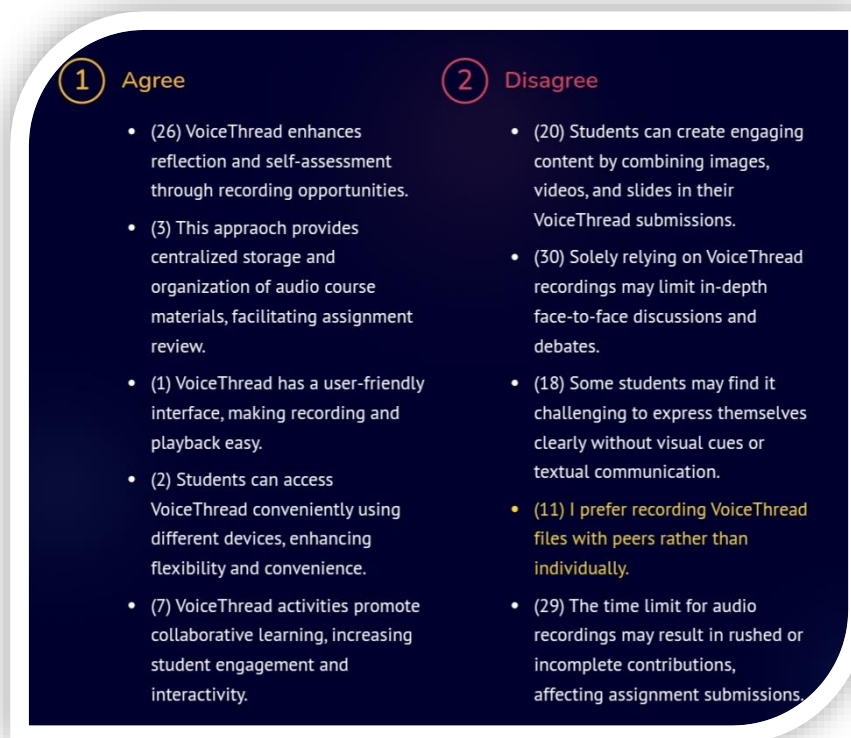


Figure 4 Distinctive statements of Factor 1a

### 4.2 Factor 1b - Interface Enhancers:

This group, which was composed of one Taiwanese student and one Japanese student, had a higher level of English speaking proficiency. They believed that the user experience could be elevated by enhancing the interface and functionality features. Their most characteristic and uncharacteristic statements can be seen in Figure 5.

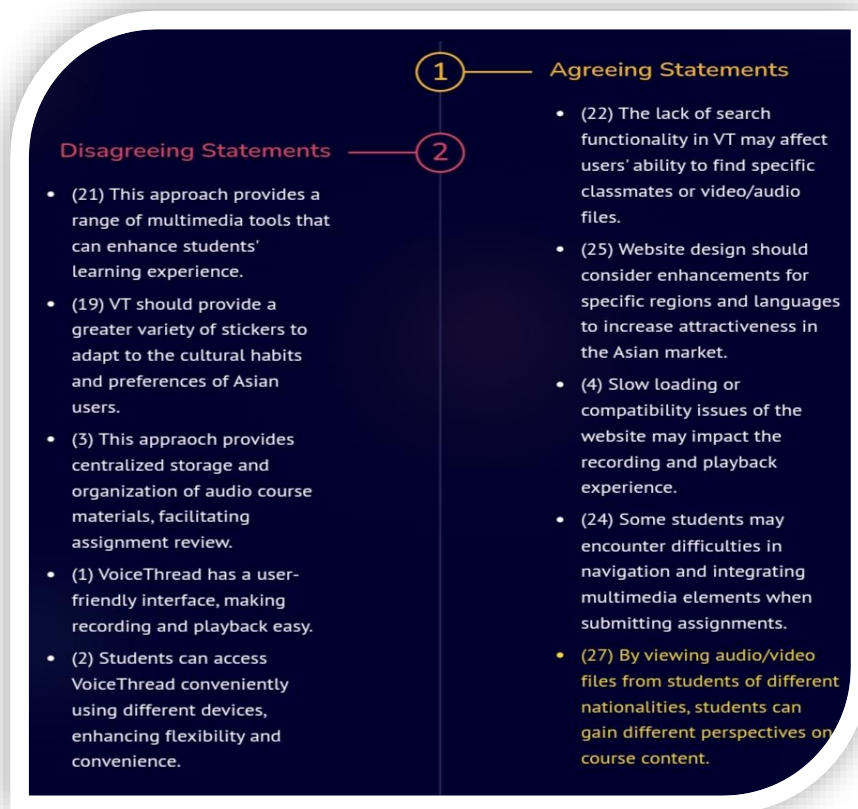


Figure 5 Distinctive statements of Factor 1b

#### 4.3 Factor 2 - Functionality Endorsers:

This group consisted of three Taiwanese students and one Japanese student. Despite having somewhat lower English proficiency levels, these students found that this asynchronous learning approach was effective in aiding them to navigate these challenges. While they appreciated the features VT offered, they also voiced concerns about certain issues they faced while using it. Their most characteristic and uncharacteristic statements can be seen in Figure 6.



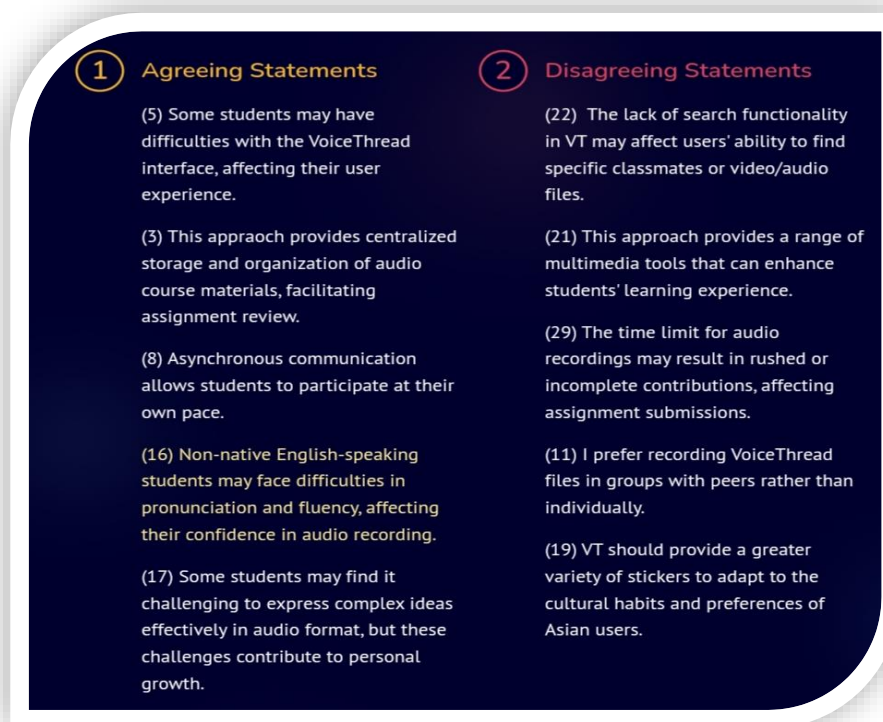


Figure 6 Distinctive statements of Factor 2

The results of the analysis of the students' perception of utilizing VoiceThread within EMI contexts underscored critical aspects in relation to interaction, interface, and functionality. It appeared that the students had a positive attitude toward the platform's potential to amplify engagement and foster collaborative learning experiences. Conversely, they were notably apprehensive about the platform's usability and the prevalence of technical glitches. These findings constitute invaluable insights that steer the trajectory for educators and developers to refine and optimize VoiceThread's applications in educational settings.

## 5. Discussion, Conclusions, and Recommendations

### 5.1 Discussion and Conclusions

The use of VoiceThread in the EMI classroom provided students with a wide range of experiences, which highlighted the potential benefits of this tool, as well as the aspects that need to be improved. The relationship between VoiceThread's efficiency and students' English proficiency was a salient point of the study because it emphasized the need for educators to continually adapt their methods to accommodate students with diverse linguistic backgrounds. Another key takeaway was the apparent influence of collaborative learning, which was particularly emphasized by feedback from Factors 1a and 1b.

Despite the apparent technological advancement of VoiceThread, challenges to users' experience cannot be ignored. Based on the feedback from Factor 2, these challenges provide opportunities to cultivate students' resilience. The results further underscore the increasing relevance of proficient oral communication skills in business instruction. Periodic assessments and adaptations of tools like VoiceThread are crucial to keep pace with the ever-changing demands of the EMI curriculum.

This research highlighted the dual nature of VoiceThread. While it possesses a strong collaborative functionality, it also has areas that need refinement. Factor 2's feedback was particularly instrumental in pointing out the tool's potential alongside its limitations. One of the significant takeaways was the need for foundational linguistic support before students venture into VoiceThread recordings. This

measure could diminish language-related barriers and create a more inclusive educational atmosphere. Personalized content, such as audio and video samples specifically tailored to Asian students, can optimize students' engagement.

This Q-method research facilitated a deeper understanding of students' multifaceted viewpoints and perceptions by highlighting the fact that students may have different reactions to, and perceptions of, the same instructional tool as a result of their personal experience, learning styles, and linguistic abilities, among other factors. At the same time, some shared opinions were identified, with a majority of students concurring that VT's interactive nature had a positive impact on their learning experience. These revelations could guide future researchers in crafting more accurate hypotheses, such as determining the optimal methods for students of varying backgrounds and abilities to choose and employ instructional tools to elevate their learning experience. Moreover, this study could potentially influence practical domains by enabling educators to adjust their methodologies in alignment with these findings, thereby satisfying students' diverse needs.

### **5.3 Final Thoughts**

Like similar platforms, VoiceThread promises to transform the educational domain, particularly for Asian students, who have historically been passive learners. These platforms can substantially elevate learning outcomes by promoting active student participation. One of the more notable capabilities of VoiceThread is the delivery of instructional "input" through auditory and visual channels. Learners' interactions were markedly enhanced in the initial weeks of the semester, when they were equipped with sample questions and sentence-starters, such as "In my opinion", "This reminds me of", or "If one were..., they would...". These guiding prompts not only streamlined learners' reflections, but also enriched the overall discourse.

VoiceThread's diverse output options, in both verbal and written forms, guarantee that every student can articulate his or her understanding of the course content. This versatility allows educators to mold the learning experience in accordance with each student's unique needs. Given the challenges faced by EMI students, educational technology emerges as a beacon of hope with its offer of an avenue to create tailor-made learning environments.

Simultaneously, the research pinpointed several consensual viewpoints, with a predominant faction affirming that the interactive aspects of VT had a favorable influence on their learning experience. These discoveries can steer subsequent students with divergent backgrounds and competencies toward selecting and utilizing pedagogical tools, thereby enhancing their educational encounters. Furthermore, the investigation has the potential to resonate within practical spheres, empowering educators to fine-tune their pedagogical strategies in accordance with the insights gleaned, thereby adeptly catering to the heterogeneous needs of the student populace.

### **5.4 Recommendations**

1. **Adopt Advanced Linguistic Tools:** To address the concerns highlighted by Factor 2, it is crucial that modern AI linguistic software is integrated with an emphasis on enhancing the clarity and accuracy of pronunciation.
2. **Promote Collaborative Interactions:** The positive feedback from Factors 1a and 1b can be capitalized on by encouraging group-based interactions on VoiceThread. Furthermore, fostering a collaborative learning environment, as emphasized by both of these factors, should be a priority.
3. **Strengthen Verbal Skills with Regular Exercises:** Students, especially those from Factor 2, can benefit from the introduction of structured verbal exercises that enable them to practice and enhance their oral communication.
4. **Provide Tailored Feedback and Guidance:** Offering specific feedback can help students, notably those from Factor 2, to pinpoint and address their communication challenges. Additionally, teachers should act as supportive mentors by assisting students to overcome these challenges.

and fostering an ethos of continuous improvement.

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