ReCALL (2022), 34: 1, 95–109
doi:10.1017/S0958344021000136

RESEARCH ARTICLE

Developing students' linguistic and digital literacy skills through the use of multimedia presentations

Baohua Yu
The Education University of Hong Kong, Hong Kong SAR, China (baohuayu@eduhk.hk)

Artem Zadorozhnyy
The Education University of Hong Kong, Hong Kong SAR, China (s1130750@s.eduhk.hk)

Abstract

With the immense presence of English language video content in the online digital environment and students' everyday exposure to multimedia content, this project aims to explore how to replace traditional in-class presentation with video presentation within an autonomous learning environment, examine the impact of doing so on the development of English language and digital literacy skills, and develop assessment rubrics at both individual and group levels. The project was conducted as part of an English language course for undergraduate students majoring in English in the context of a higher education institution in Hong Kong. Data were collected through multiple methods: survey questionnaires, open-ended questions, and face-to-face interviews. The results showed that the video production mode of presentation could not only replace traditional in-class presentation but also improve students' learning autonomy, and language, collaborative, and digital literacy skills. The analysis of videos elucidated how the video production (VPR) group of students use multimodal semiotic resources to design their relationships with viewers while simultaneously adapting their discoursal identities. In addition, the comparison between VPR- and non-VPR-group presentations demonstrates that constructing audio-visual resources in a collaborative environment contributes to a variety of aspects to a higher extent. Implications for foreign language curriculum and instructional design, as well as recommendations for future studies of digitalization of students' oral assessment tasks, are discussed.

Keywords: English language acquisition; digital affordances; digital literacy skills; multimedia presentations; video production

1. Introduction

Due to rapid technological advances, the number of technologies that surround people has become immense and people's quality of life has increased accordingly. Indeed, owning certain technological devices, such as personal cell phones and laptops, is no longer a luxury but a necessity for students. Studies have demonstrated that technologies have become increasingly accessible to younger generations of students, and an average student is usually familiar with basic phone functions from an early age (Kukulska-Hulme, Lee & Norris, 2017). As technologies continue to evolve, teachers and instructors are also expected to adapt and align their teaching practices with the most effective resources available (Zadorozhnyy & Yu, 2019).

English language classrooms have also undergone major changes, and one way of detecting such changes is to consider how students' oral presentations have been altered. As technologies mature, language instructors are urged to adjust their teaching practices and provide instruction to differentiate assignments by building on digital affordances. For example, researchers underline

Cite this article: Yu, B. & Zadorozhnyy, A. (2022). Developing students' linguistic and digital literacy skills through the use of multimedia presentations. *ReCALL* 34(1): 95–109. https://doi.org/10.1017/S0958344021000136

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https://doi.org/10.1017/S0958344021000136 Published online by Cambridge University Press

amendments in student oral presentations by integrating videos as a means of transmitting information (Gromik, 2012; Hafner, 2014; Hawley & Allen, 2018; Stanley & Zhang, 2018). However, there is scarce research on whether video presentations can improve language learners' language and digital skills, not to mention the study of English as a second language (L2) at Hong Kong tertiary level.

This research aims to fill the gap by providing empirical evidence on how to integrate modern technologies into students' oral presentations and to what extent can technology-assisted presentations improve the development of language and digital skills of university English language students. The results and implications of this study will shed light on necessary changes in teaching practices for educators to optimally reshape the English education and instructional design curriculum.

2. Literature review

The abundance of existing video materials, which have penetrated the lives of people and exposed them to video content on a daily basis, is largely attributable to the presence of social networks. According to the International Telecommunication Union, 70% of the world's youth go online regularly (Sanou, 2017). Moreover, data collected by the Pew Research Center demonstrate that 85% of US teenagers use YouTube, and 72% and 69% are engaged with Instagram and Snapchat, respectively (Anderson & Jiang, 2018). These trends are also relatively true for the worldwide community, and a common surface analysis of our lives shows clearly that current exposure to videos is vast, and videos constitute a favorite type of information consumed by online users.

Based on this massive exposure to video content, researchers have investigated the significance of video presence in education. Students are reported to be motivated by the idea of creating their own video materials, presenting their stories, and sharing them not only with their peers but also with a worldwide internet audience (Hawley & Allen, 2018; Koc, 2011). In some studies, students mention flexibility of access and effectiveness of video materials, and emphasize their preference for viewing podcasts and videos over traditional notes, textbooks, or blog posts (Arndt & Woore, 2018; Evans, 2008). In addition, the results of research on flipped classroom learning, in which lesson content is delivered to students in the form of video recordings, indicate that the "flipped" group of students achieved higher grades for their final tasks, and those students were observed to be more engaged in the learning process in comparison with their "non-flipped" classroom counterparts (Lee & Wallace, 2018). Therefore, researchers have focused on the topic of video integration in an attempt to elucidate how the incorporation of videos into educational processes might positively influence students' outcomes.

Integration of videos into educational processes within the field of computer-assisted language learning (CALL) ranges from passive practices, such as when students are engaged in watching videos (Arndt & Woore, 2018; Evans, 2008), to active integration, in which students are required to produce video artifacts themselves (Gong, Kawasaki, Yeung, Zhang & Dobinson, 2019; Hawley & Allen, 2018); from in-class (Nikitina, 2011) to out-of-class video production (Orús *et al.*, 2016); from the usage of open platforms (e.g. YouTube) and everyday devices (Hafner, 2014; Orús *et al.*, 2016) to the usage of closed platforms (Reeves, Caglayan & Torr, 2017); and, finally, usage based on a wide range of target skills (Hawley & Allen, 2018; Zadorozhnyy & Yu, 2019). In general, researchers tend to report positive findings in regard to the implementation of videos. For instance, student-generated videos of class memoirs among pre-service teachers of Turkey showed that the video production tasks assisted to increase students' motivation to learn the subject, enhanced their understanding of the content, and facilitated the construction of professional identity (Koc, 2011). Gong *et al.* (2019) reported that students perceive video-recorded oral assessments as supportive of their self-reflection and effective for language acquisition. Similarly, other scholars emphasize the development of cross-cultural competencies (Orús *et al.*, 2016), target

https://doi.org/10.1017/S0958344021000136 Published online by Cambridge University Press

language vocabulary and speech production (Gromik, 2012), media literacy skills, and communication and presentation skills (Schuck & Kearney, 2006).

Summarizing the findings of extant literature on video projects, it was worthwhile to explore how Hong Kong students, who possess sufficient knowledge and skills to operate everyday technology, could utilize advanced technological means to participate in a video production project. While current trends are more focused on the analysis of recorded classroom interactions (Gabillon & Ailincai, 2017) or utilization of videos as supplementary tools for enhancing the quality of distance learning (Laaser & Toloza, 2017), the significance of the present study is in the fact that, although technologies continue to evolve and become increasingly sophisticated, few studies are focused on the analysis of students' adaptation to the advanced technologies as a supplementary form of students' oral assessment, which might be deemed as essential, especially during the period of COVID-19.

3. Theoretical foundations

Authors within the field of CALL highlight the influence of technologies on the development of cognitive and non-cognitive outcomes and apply particular perspectives and theories to analyze their data. As the development of learners' ability to be autonomous is regarded as one of the primary goals in language education, technologies are viewed as great facilitators; therefore, some researchers adapt the theory of the autonomy of learning to scrutinize outcomes. Student autonomy in education is defined as students' aptitude to regulate their own process of learning while also assuming full control over it (Holec, 1988). Given ability regulates the process of learning, and might be regarded as essential not only for students' out-of-class learning practices but also for learning that occurs in formal contexts. In both cases, digital affordances constitute tools that reshape the student learning experience that might be constructed without regard to formal education (Lai, 2017; Lee & Wallace, 2018) or as a structured process that is guided by instructors for achieving particular educational and pedagogical goals (Hafner & Miller, 2011). Through this perspective, the autonomy of learning does not imply students' ability to be isolated by creating boundaries, but rather denotes students' willingness to work independently or to interact with others while acting in accordance with a certain social and educational context (Lai, 2017). Using the theory of autonomy of learning as a framework, such scholars as Hafner and Miller (2011) and Lai and Zheng (2018) highlight the positive influence of technological learning environments.

Along with the autonomy of learning, the ubiquitous proliferation of technologies into foreign language classrooms has redirected scholars' attention toward multimodality, which refers to the "combination of various semiotic modes (e.g., speech, writing, image, gesture)" (Hafner, 2014: 658). Integration of digital tools expands traditional methods by embedding multimodal approaches (e.g. visual and audial) into the educational process (Hafner, 2014). Kress and Selander (2012) provide deeper insights through the theory of multimodality and conclude that digital affordances provide people with the ability to construct meaning through several modes. For instance, textbooks and movies are two examples of different modes, in which books exclusively represent the mode of writing; writing usually allows readers to construct meaning in a linear and sequential manner, whereas movies are heavily based on the mode of image that obtains other characteristics (Hafner, 2014). The number of semiotic modes is not limited by textual and visual aspects, but consists of linguistic, audio, gestural, and special modalities that enable people to form meanings from what they read, watch, or listen (Cope & Kalantzis, 2016). In educational settings, students' interaction with different modes grants unlimited opportunities to practice their 21st-century skills by managing semiotic resources (Hafner, 2014). However, among possible options to integrate multiple modes with a purpose to use them as a foundation for the development of students' language abilities, the conjunction of modalities is fully and exclusively

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emphasized through digital videos, which are omnipresent and might be frequently utilized by educators.

The present study aims to explore perspectives of implementing innovative technologies in second language teaching. By addressing autonomous collaborative environments to support students' oral presentation skills, the theoretical grounding of this study is established in social constructivism theory, in which learning occurs when "individuals create their own new understandings based on the interaction of what they already know or believe and the phenomena or ideas with which they come into contact" (Richardson, 2005: 3). Vygotsky (1980) noted that learners who are exposed to interactions in small learning communities (e.g. classroom groups or project groups) tend to learn better from other learners due to their constant interaction while sharing responsibilities and negotiating tasks. In other words, the process of learning will be thoroughly analyzed using the interplay of students' personal experiences in autonomous collaborative environments.

In general, there were several rationales behind the integration of multimedia presentations. The design of the project was determined by the university's KPIs (key performance indicators), namely enhancing the quality of student experiences of teaching and learning and promoting and implementing blended learning and e-learning activities in all courses. Therefore, it became an urgent task to integrate advanced technologies into the education of pre-service teachers for equipping the graduates with appropriate digital skills through experiential learning. In addition, the augmented number of students enrolled in the course provided grounds for seeking other alterations in the mode of presentations. Moreover, students' self-generated video presentations can be shared among a big community to facilitate a better understanding of the key concepts of the course. Thus, the study was undertaken to investigate the viability of implementing video production activities in the course titled "Language and Gender" among students majoring in English. The main purposes were to explore the experiences of Hong Kong undergraduate students in constructing audio-visual resources on particular course topics and the video project's influences on students' development of linguistic and digital skills as well as learning autonomy. Accordingly, two research questions are proposed:

RQ1:. To what extent is participation in a video project associated with the development of English language and digital skills among students?

RQ2:. How does participation in a self-generated video project assist students to enhance their autonomy of learning?

4. Research methodology

4.1 Research participants

In total, 45 undergraduate students who enrolled in a 13-week course at an English-medium higher education institution in Hong Kong participated in this study. The course was created with the main purpose of providing students with opportunities to review theories and current issues in the field of language and gender studies related to practical communication. Moreover, it also aimed to develop students' awareness of, and sensitivity to, gender implications of English language use in diverse contexts. The first languages of students were Cantonese, Mandarin, and Korean, and students' ages ranged between 21 to 22 years. All participants were Year 4 and Year 5 students majoring in English who were pursuing their bachelor's degree in English language teaching at different levels (primary, secondary) or in language studies. Of those 45 students, 25 students (seven males and 18 females) expressed a willingness to participate in a video production mode of presentation (VPR group) to fulfill one of two assessment tasks in the course.

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As successful completion of the task was prioritized, all students were asked to voluntarily choose the mode of presentation based on their own preference. The other 20 students chose to give a talk in a traditional presentation format (TP group) and agreed to be recorded for future analysis.

4.2 Research settings: Video Production Room

For creating video projects, students were required to obtain access to the Video Production Room (VPR) to use its facilities. VPR is a specific university facility that was constructed to enhance e-learning implementation and to support university staff and students in producing high-quality video resources with less effort. The room is equipped with cutting-edge technology, such as a one-touch video recording system, a professional lighting system, a chroma-key green screen, mixers, and a high-quality camera. The chroma-key green screen technique allows the editing of videos by replacing the background with images or videos based on color hues for subsequent visual effects production. Such effect is a powerful and responsive tool that is broadly employed for creating special effects in innumerable films worldwide and, especially with the spread of COVID-19, is gaining increasing popularity in connection with online teaching practices. In addition, the VPR is also equipped with several sets of tie-clip microphones that allow hands-free operation and are commonly used for television programs and public speaking events. Currently, tie-clip microphones are frequently used by bloggers to produce videos with good sound quality for their online audiences. Finally, the VPR suite is equipped with a pan–tilt–zoom (PTZ) camera, which is considered highly effective in the video production industry, as it facilitates shooting videos along a flat and horizontal plane (pan moves) or vertical plane (tilt moves), and can add motion to a shot with its zoom feature.

4.3 Data collection and procedures

The data were generated through statistical analysis of survey questionnaires, thematic analysis of students' responses to open-ended questions and interviews, in-depth analysis of students' final videos, and students' reflections of each other's projects. The choice of a mixed methods research design was justified by the researchers' intention to triangulate the obtained data to derive a broader understanding of the phenomenon and eliminate the drawbacks of a relatively small data sample that might be achieved through combining several data collection methods (Creswell, 2012; Saldaña, 2016).

Initially, all students were divided into groups, and they were asked to choose presentation topics in connection with course objectives. Along with weekly sessions on the scheduled course topics, upon the agreement of students to be engaged in a video production process, each VPR group separately attended one-hour workshops organized by the university's IT department and the research investigators. The workshops were framed to assist students to become familiar with the advanced equipment at the VPR. Specifically, the workshop consisted of demonstration and hands-on stages, in which all procedures and specific guidelines on safety were highlighted. Students were given instructions and strategies to utilize all VPR features with a chroma-key green screen and a tie-clip microphone, and were shown how to set and remotely control the PTZ camera depending on specific ideas and goals. During the hands-on stage of the workshop, researchers provided recommendations on PowerPoint presentations, suggested specific software for editing the videos, and explained some practical strategies for attracting the audience's attention. Upon completion of the workshop, research investigators were present in the VPR during the first stage to provide specific recommendations upon the request of students; subsequently, all students received brochures where all key procedures and steps, as well as the contact information of IT specialists, were provided.

The process of video production consisted of several steps, starting from the analysis of literature on topics, which were assigned for every group of students separately. Subsequently,

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students had to construct PowerPoint presentations and find videos and images that would serve as examples of particular topics. For instance, while describing conversational practices, one of the groups included some parts of the Netflix series "The Handmaid's Tale" to provide examples of the dominance model in explaining gender differences in speech styles. Along with the videos, images, schemes, and tables were further inserted in order to visually support students' oral presentations, while creative and interactive elements such as role-playing were used to capture the audience's attention. As a supporting element, consultations with a course instructor were utilized to provide specific suggestions based on the students' needs. Overall, the average length of the video was approximately 30 minutes, with 7.5 minutes allocated per student.

Upon completion, VPR-group students submitted their products to the university learning management system (LMS) and received a personalized link to access an online questionnaire for describing their experience. At the end of the questionnaire, participants had an opportunity to indicate their willingness to participate in personal face-to-face interviews. Along with the VPR group, presentations of TP-group students were recorded and submitted to LMS Moodle, where all students were required to provide their comments on all group performances.

A final procedure comprised a thorough analysis of student-generated video artifacts and recorded in-class presentations. Such strategy emerged as a sequence after encountering a discrepancy between the reported perceptions of students. Following the guidelines of Hafner's (2014) system of multimodal transcription and initial course rubrics, the researchers created specific rubrics for assessing students' video artifacts on individual and group levels. Specifically, to elucidate the input of students on an individual basis, the following categories were implemented: (1) vocabulary and language accuracy, (2) presentation skills, (3) use of visuals in PowerPoint presentations, and (4) content coverage. To assess the quality of videos on a group level, the following categories were applied: (1) use of visuals, (2) use of audio, (3) video consistency, and (4) content coverage (see Appendix A in the supplementary material).

After the standardization procedure, through a blind review process, three independent researchers assessed all VPR-group videos based on the aforementioned categories on a 5-point Likert scale (1 = "not competent" to 5 = "highly competent"). The videos of the TP group were assessed separately based on individual criteria, excluding those not applicable to the VPR-group assessment features (i.e. use of audio, video consistency). The results were initially tested for reliability of rubrics by comparing scores between researchers. In order to gauge interrater reliability, the assessment of all categories was compared by using intraclass correlation coefficients (ICCs) (Koo & Li, 2016). Applying the settings of average measures, absolute agreement, and the two-way mixed-effects intraclass correlation coefficient model, a high degree of interrater reliability was found between the measurements. The average measure ICC was .885 with a 95% confidence interval from .840 to .919, F (99,198) = 8.744, p <.001 (Shrout & Fleiss, 1979).

4.4 Data analysis

During data collection, all standard ethical research procedures were followed. All students familiarized themselves with the purposes of the study, signed the informed consent forms, and agreed to provide their final video artifacts for research purposes. For the data analysis, all students' names were hidden and replaced. Regarding the analysis of quantitative data, descriptive statistical analysis was applied to measure aspects that were influenced by students' participation in the project. Qualitative data obtained through interviews, open-ended questionnaire responses, and students' comments to in-class and video presentations were analyzed by following standard procedures, and a data coding system was developed that further led to the formation of main categories and themes (Saldaña, 2016). After analyzing the data, the following four main categories emerged: (1) target language development, (2) digital skills development, (3) collaboration skills, and (4) authenticity and originality. In the next section, the main findings will be

https://doi.org/10.1017/S0958344021000136 Published online by Cambridge University Press

summarized and presented, along with the comments of participants, followed by the Discussion section.

5. Findings

5.1 Descriptive statistics

The data obtained from the questionnaires were analyzed using SPSS Version 26. As shown in Table 1, participants reported an overall high mean for learning autonomy ($M = 4.16$), collaborative skills ($M = 4.08$), digital literary skills ($M = 4.05$), and language skills ($M = 4.00$) after participating in the video production mode of presentation (see also Appendix B in the supplementary material).

Further analysis of qualitative data such as open-ended questions, face-to-face interviews and diaries, and in-depth analysis of video presentations can help us better understand how the above skills have been enhanced through video presentation.

5.2 Target language development

The most reported skills that were emphasized among the VPR-group students, along with digital and collaboration skills, were presentation and speaking skills. In response to open-ended questions, half the VPR-group students expressed that their engagement in the project had a positive impact on the development of their English-speaking abilities. Many students differentiated the impact of in-class and digital presentations, noting their perfectionism, sometimes excessive, during the video production period. By perfectionism, some students stressed the amount of repetitions and rehearsals in which they were involved during the preparation and video production stages. For instance, one participant commented, " . . . we could record as many times as we were satisfied with our performance. It is very common that we made mistakes during our [in-class] presentation, however, we could correct them by taking another recording" (Student L). In addition to this, while answering the open-ended questions, Student C pointed out that "the [digital] form of presentation allows us [students] to re-record the presentation several times until we are satisfied with what we produced," which she perceived to constitute an advantage compared to the traditional in-class presentation. Student B and Student I supported this position by stating that while the usual in-class presentations take approximately 15 minutes, recording of digital presentations took a few hours. In addition, Student I stated that although she usually does not rehearse prior to in-class presentations due to confidence in her English-speaking abilities, the preparation process for this project required a lot of effort. This marked difference between the two presentation modalities was also noted by the independent researchers, who indicated that VPR-group students worked more deliberately on their presentations, and, as a consequence, they

Table 1. Description of statistical findings

Variable	Item	Min.	Max.	Individual *M*	Overall *M*	*SD*
Autonomy of learning	Item 1	1	5	4.16	4.16	.501
Collaborative skills	Item 2	1	5	4.26	4.08	.562
	Item 3	1	5	3.90		.459
Digital literacy skills	Item 4	1	5	4.21	4.05	.713
	Item 5	1	5	3.90		.737
Language skills	Item 6	1	5	4.21	4.00	.535
	Item 7	1	5	3.79		.535

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had more opportunities to practice their English language skills. Further comparative analysis between the VPR group and the recorded classroom presentations revealed that VPR-group presenters were more consistent and concise in their explanations, produced less grammatical mistakes, and sounded more confident. Finally, all independent researchers also noted that the students, who pre-recorded their videos, demonstrated more skills in regulating their voice volume, intonation, and the rhythm of speech.

Participants recognized that the time that they spent in the VPR promoted flexibility and diversity in their presentation style. Student D noted that "the utilization of advanced technologies in the contemporary VPR has provided me with new insights and new ways of presenting information." He explained that the integration of in-class presentation advantages and technological affordances enabled him to create a final product by building on the strengths of the utilized digital affordances and to demonstrate his speaking skills in the best light. Rehearsals, repetitions, and the procedure of remembering presentation scripts are examples of learning opportunities that students received, and the usefulness of this project was noticed by students to a greater extent. Finally, apart from the direct influence on students' linguistic skills, two students explained that their ultimate purpose to produce a video artifact of good quality ameliorated their non-cognitive skills – that is, motivation and confidence in their English-speaking abilities. Student I noted that "the video project inspires me that the positive relationship between learning motivation and the use of technology in classroom can be remarkable." These findings largely correspond to the results of descriptive statistics.

However, in-depth analysis of students' videos revealed some contradictions between the perceptions of students and the actual quality of videos. The results of individual scores for VPR groups showed that the lowest mean score was assigned for the category of "presentation skills" ($M = 3.48$) with the lowest score across all categories ($M = 2.88$). This appears to be relatively low in comparison to the other categories of "use of visuals" ($M = 4.05$), "content coverage" ($M = 4.20$), and "vocabulary and language accuracy" ($M = 4.00$). The explanation for this finding was reflected in the comments of the independent researchers, who reported that videos show that students rely heavily on their scripts and slides for cues, which resulted in limited eye contact with the camera and poor body language. Indeed, students' unpreparedness and anxiety, along with constant reading attempts, hindered the flow of communication and produced an uneven rhythm of speech that negatively influenced the overall perception of the evaluators. For example, one researcher stated that one student felt comfortable turning the pages in front of the camera while presenting, which is regarded as unacceptable for student in-class presentations and was completely disregarded by some students while producing the videos. Therefore, before initiating multimedia presentations, instructors need to provide students with specific rubrics that will not only emphasize the digital component but also encompass traditional requirements for in-class presentations (see Appendix A in the supplementary material).

5.3 Digital skills development

In addition to the expected topic of language development, students highlighted the enhancement of their skills to work with technologies. In general, students acknowledged that their participation in the project was beneficial for learning video production strategies, developing editing skills, and gaining technology operational skills. As evidence of this, some students showed their full awareness of specifics of the video production stages. For example, one male student justified his knowledge, commenting that "during the production, we needed to ensure that the lighting, camera, microphone, and other equipment were functioning well. After the recording, we had to put the pieces together and add special effects when necessary" (Student A). In this statement, the student demonstrates his awareness of the factors that influence the quality of the video artifact and identifies particular stages of video production. Moreover, the results of the video quality

https://doi.org/10.1017/S0958344021000136 Published online by Cambridge University Press

assessment on both individual and group levels were in agreement with students' comments and demonstrated students' competency in using visual aids.

The analysis of interviews revealed that the preparation stage of the project was perceived by students as similar to in-class preparation with the phases of material research, brainstorming, and subsequent work on PowerPoint presentations. The differences before the actual process of video production were reported to be linked to the design of slides. However, despite similarities in the first stages, the majority of interviewees noted that the creation of videos was more difficult than in-class presentations for a variety of reasons. Most frequently, participants stated that the process was unexpectedly time-consuming. To a major extent, the difficulties were described in relation to students' desire to strive for perfection while using innovative digital tools. The following comment illustrates the perception of one student:

> I think the style of presentation was very different because usually, in class, we just talk about things and when we make some mistakes, we just talk about them again and we continue. But for this one, if we make some mistakes, we start recording the whole thing and edit the whole thing very smoothly. (Student T)

Indeed, despite the fact that participants might be considered "digital natives" (Prensky, 2001), the exposure to professional equipment caused students to be deliberate in their efforts and fully devoted to the process, due to their unpreparedness and the perceived novelty of the task.

Among other issues, students reported that they encountered various technical problems in the VPR. Generally, the mentioned difficulties ranged from issues of student adaptation, to advanced technological means, and to the absence of knowledge about video editing procedures. Several students acknowledged that the technologies they encountered were of an advanced level and, as students majoring in English, they experienced difficulties due to their lack of awareness concerning the procedures necessary to operate the equipment. For instance, one interviewee explained that when her group encountered a problem of recording voice volume, their group decided to speak louder to solve the problem. This issue, however, was reflected in a lower assessment of the group in comparison to others ($M = 3.00$) and demonstrated that such a solution was actually unsuccessful. Furthermore, some other equipment issues were reported to be solved either by asking university IT support specialists or by watching online tutorials.

Irrespective of the difficulties encountered, more individuals claimed explicitly that they felt very comfortable during the process, expressing that in comparison to in-class presentations they had more time to perform the task. For instance, Student G remarked that the project production allowed her to "keep recording the performance until it became flawless," which was perceived as a great advantage in comparison to in-class presentations. Several other participants emphasized that integrating visual elements into their presentations allowed them to create a more vivid and interactive type of presentation that could attract the audience's attention to a greater extent compared to in-class presentations.

In addition to identifying the differences and similarities between traditional and video presentations, some students emphasized specific aspects that emerged out of incorporating the video mode of information representation. One male participant acknowledged that information, which is presented in the form of a video, is perceived by viewers in more detail: "When you are just talking in front of people, you don't need to think about what mistakes you made, and no one will remember what you have said afterwards. But if people watch the video, they can notice something, for example, when you are nervous or when you will make some mistakes" (Student F). Supporting this point, another student noted that her classmates do not pay enough attention to in-class presentations, and although digital presentations might make them more focused, "there are a few people who will listen to you, and even if you make some mistakes, they will just care about your content and not what you say" (Student E). Several students confirmed this view by claiming that multimodal representation of information could engage the audience more and make them more focused

https://doi.org/10.1017/S0958344021000136 Published online by Cambridge University Press

on the content. By stating such opinions, students demonstrate their awareness of 21st-century skills and the importance of multimodal approaches toward information representation.

Finally, the assessment of videos is also in agreement with these points, and the mean scores for the categories of "use of visuals" for both individual ($M = 4.05$) and group levels ($M = 3.79$), along with the score for the "video consistency" category ($M = 4.08$), reflect students' competency in applying digital literacy skills. However, drawbacks in the visual part, such as excessive text on slides, use of overextended videos, and neglected transitions between speakers, were identified as needing to be addressed in order to be evaluated as "highly competent" in the indicated areas.

5.4 Collaboration skills

Based on the responses of the students, the technological learning environment was claimed to provide opportunities for collaborative learning and the enhancement of students' communication skills through problem-solving activities. A common view among participants was that in-group collaboration facilitated better results, accelerated project progress, and reflected positively on the quality of the final product. One participant expressed this as follows: "This [project] allowed us to have more collaboration and interaction, as we needed to figure out the best way ... [to] solve different problems with the help of different people, and eventually we could present our work successfully" (Student E).

In the following interviews, all participants noted that collaboration was essential and stated that they would not feel comfortable repeating this experience alone because they believed that the assistance of peers was crucial. In the same vein, between-group comparison captured more equalized roles of VPR students within the groups, whereas the leading role of particular students was more noticeable during in-class presentations. Furthermore, less-engaged students appeared more confident and more committed than during their previous presentation attempts. Among all the students, only one noted that collaboration impeded the process of video production because of the numerous attempts of his classmates to reshoot the videos. Conversely, all the other interviewees and respondents asserted that interaction with classmates was somehow beneficial for the project. For example, one interviewee expressed that the collaborative learning nature of the project not only helped students to develop their skills by solving problems but also resulted in the development of creativity through which students' original ideas emerged. As this topic was touched upon by several participants in direct and indirect ways in answers to both the survey and interviews, this topic appeared as a separate category.

5.5 Originality and authenticity

Students' originality and authenticity of the task were reflected in their survey responses and answers. The process of video production was denoted as innovative by the majority of students, and some used words such as "unique," "cutting edge," "entertaining," and "remarkable" in their descriptions. In addition to these opinions, students' perceptions resulted in an increase in students' motivation, which was evidenced by their additional actions and ideas in which they were immersed. For instance, several participants included role-playing parts and mini-drama sketches in their final versions, whereas two students explicitly indicated that they would consider incorporating such ideas, acquired skills for their future jobs, and proposed some strategies to implement video projects in school settings. Students' reflective feedback indicated that creativeness was regarded as positively affecting and engaging viewers. Comparative analysis between the groups was aligned with the aforementioned feedback, and the independent researchers concluded that VPR-group students were less timid and more inclined to introduce creative ideas and show their acting capabilities. Therefore, taking into account students' exposure to video materials on a daily basis and the reported use of the video recording function, it is shown

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that the design of a project where students had to operate in an autonomous manner assisted them to increase their creativity.

However, students reported some negative aspects concerning the novelty of the experience. The majority of interviewees and respondents noted nervousness, excessive stress, and anxiety levels that they experienced during the video production process. Several students who had not previously engaged in the creation of video projects stated that they felt more anxious and stressed in comparison with their experienced counterparts. Among such participants, one interviewee admitted that his level of anxiety arose due to understanding that the recorded video might be replayed many times, which could give people an opportunity to notice flaws in his spoken language. Interestingly, some students expressed having similar anxious feelings before oral in-class presentations during their first years of studies, which subsequently disappeared after a sufficient amount of practice.

6. Discussion and conclusion

The current pace of digital innovations allows educators to transform their process of teaching, and changes in the form of assignments are shown in this article as an example of this. The variety of approaches that were created to enhance particular linguistic and non-linguistic outcomes among foreign language learners is vast, and teachers have an opportunity to differentiate their approaches as long as they are aligned with the purposes of particular subjects. As Gong *et al.* (2019) and Hawley and Allen (2018) highlighted, integration of student-generated video projects into curricula is only nascent, and its full potential is yet to be elucidated. By building on the experience of prior studies, in which common everyday technologies were implemented, the current project explores the integration of a student-generated video project and its advantages over traditional in-class presentations.

With the immense presence of video content in English in online digital environments and students' everyday exposure to multimedia content, the design of this project aimed to assist students' understanding of the video production process within an autonomous environment. In accordance with extant literature, students reported that the video production project helped to support authentic learning (Bajrami & Ismaili, 2016; Reeves *et al.*, 2017) and communication skills development (Hawley & Allen, 2018; Toland, Mills & Kohyama, 2016), as well as to experience collaborative learning with technology (Gong *et al.*, 2019; Hafner, 2014). Answering RQ1, reported outcomes might be considered as consequences of fostering students' autonomy. By building on the socio-constructivism approach, learner-autonomy-based pedagogy facilitated the maintenance of students' interaction, participation, and reflection where technological means played a mediation role (Hafner & Miller, 2011). Moreover, the nature of the project enabled learners to be flexible in bringing their previously adapted knowledge and experience participating in similar video production activities, as well as "unique learning characteristics to the social learning context" (Hafner & Miller, 2011: 69). Similar to RQ1, the findings support RQ2 as, along with previous studies (Hafner, 2014; Hafner & Miller, 2011; Schuck & Kearney, 2006), collaborative work on self-generated videos in technological learning environments supported students to independently practice English during all stages of preparation, information processing, rehearsals, and video production in making progress in language development. However, it is possible to summarize additional findings based on the contrast between VPR- and non-VPR-group presentations.

To begin, an alternative to the traditional in-class presentation format allowed instructors to repeatedly watch students' submissions for providing valuable feedback that included evaluations of students' linguistic and presentation skills, where such factors as eye contact with the camera, speech flow, intonation, rhythm of speech, and vocabulary and phrasing were addressed. Finally, as other students were required to provide their evaluation for every group upon submission of their final project to Moodle, each VPR-group member received additional peer feedback, which is usually available solely for written assignments and other discussion tasks.

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Along with the positive aspects, the assessment of VPR groups helped to emphasize several crucial points. The scores of some groups and individuals were lower in cases when it was difficult for students to embrace and exhibit their digital literacy skills, presentation skills, and content knowledge simultaneously. For instance, TP-group members analyzed course materials, prepared their speech, and created a supportive PowerPoint presentation without using advanced technologies. In their cases, students applied the skills that they had already mastered to a sufficient degree by the final years of their studies. However, the discernible complexity of one of the components, which was a major element of video presentations, caused problems in the remaining components. This led to the conclusion that some VPR-group students experienced difficulties in balancing their mastered skills with the appearance of a novel component, which resulted in the complexity of operations and subsequent deterioration of presentation skills.

In accordance with several studies, anxiety and embarrassment were both noted by VPR-group students as a drawback (Toland *et al*., 2016) and reported to be caused by the absence of experience working in front of the camera. Kao and Craigie (2018) found that oral presentations are considered to be the most stressful activity in English language classrooms, and students' academic oral anxiety is common among foreign language learners. Chen (2009) reported that anxiety level might be influenced by social (e.g. peer response, familiarity with the audience) and psychological (e.g. personality, pronunciation accuracy, self-perceived speaking ability) factors. Overall, a novelty of the current project was reflected in students' augmented level of anxiety, which has been associated with the new language learning situation and the reported awareness of possible multiple views of final video artifacts. Admitting the pace of technological development, the discomfort indicated by the students shows their lack of experience in adapting to the advanced technology, and thus this major issue must be thoroughly addressed by educators in the future.

The altered mode of assignment allowed VPR-group students to utilize specific techniques and to apply several modes in practice to transmit their message through visual, audial, and textual representations while designing their relationships with viewers. In contrast to in-class presenters, VPR-group students implemented role-playing parts that demonstrated how they attempted to establish their communication with the audience through additional means. Similar to Hafner's (2014) project, students also adapted different "discourse identities" by presenting information as reporters, journalists, or playing the role of classroom teachers while aiming to explain the material. In agreement with previous implications (Early, Kendrick & Potts, 2015), VPR-group students addressed a range of communicative resources by integrating new technological means that can have a positive influence on students' creativity, which emerges from students' desire to deliver their message by engaging the audience.

From a macro perspective, it is important to acknowledge that the process of video production is constantly evolving in our modern world. The description of the VPR application and integration of similar technological advances does not constitute an ad hoc and unique measure for creating videos among students, but rather exists as an example of integrating available technological advances in a particular context. The quality of videos is improving, the devices that surround us in our everyday lives are becoming "smarter," and therefore students are expected to obtain sufficient skills to operate technologies due to the expectations made of them that increase in accordance with technologies. Therefore, the skills that students have acquired during this project are not constrained by the frames of a VPR, but instead encourage and direct learners to acquire appropriate competencies for creating videos by using everyday means in the future.

7. Pedagogical implications and limitations

Considering the pilot nature of this study, several limitations may exist. The project's relatively small sample size might not reveal the full picture of the effect of a learner-generated video project and constrains the possible generalizability of the findings; therefore, it is advisable that the study

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is replicated and expanded. Another limitation was connected to the absence of complete video materials to show students as a sample prior to the actual video production process, which might help to eliminate drawbacks and increase the overall quality of video materials.

Notwithstanding the limitations of this study, the experience of VPR groups in adapting professional technologies for the purposes of English language acquisition facilitates the generation of several pedagogical implications for further studies. To assist students in creating final videos of higher quality, it is suggested that workshops are conducted for students to learn the steps and particularities of video production and to assign preliminary tasks on video production. For example, students could be guided to create short videos (3–4 minutes) with the tasks to provide main conclusions about the sessions of the course. In addition, students might be taught by examples of successful and unsuccessful video features created by researchers to specify the areas to consider. Indeed, such a technique was advised by Greene and Crespi (2012) and Hafner (2014), who recommended that teachers show students examples of using multiple modes for students' analysis prior to actual video recording. Furthermore, it might be interesting to add another layer to this task by providing students with an assignment to upload the final video to the internet, instead of Moodle, or to their social networks, with open access for understanding how the anticipation of a public audience assessment might affect students' efforts and the final quality of video artifacts.

Following Austen, Parkin, Jones-Devitt, McDonald and Irwin (2016), who necessitated a particular focus of institutions on the diversity of emerging digital resources, the design of the reported project was aligned with global and local policy agendas that incentivize integration of digital resources. By building on the need to enhance the quality of teacher education (Gong *et al.*, 2019) and the significance of students' digital competence, which might vary based on the number of background and socio-economic factors (Orús *et al.*, 2016), university instructors need to facilitate the development of students' abilities to incorporate available digital resources into academic and professional contexts. Therefore, the integration of video production activities as an assessment method was regarded as a transformative pedagogical experience that the described course was lacking in previous years.

Although analogs of VPRs are becoming widespread globally (Shao, Yan, Zhou, Lu & Liu, 2016), educators are advised to build on the digital affordances available in specific contexts. The experience of this project might be also aligned with the constraints that educators experience around the world because of the COVID-19 pandemic. The findings of this project do not suggest that video presentations might completely displace in-class presentations, although they portray how the implementation of advanced technological means might help in adapting and rethinking teaching practices and assignments in alignment with online mode realities and through using everyday devices. To fully evaluate students' achievements, educators need to alter assessment rubrics by establishing categories that accurately reflect the nature of the task. Consequently, the rubrics that were created and implemented in this study appear suitable for similar projects and assignments, but need to be further validated and applied with larger populations.

Supplementary material. To view supplementary material referred to in this article, please visit https://doi.org/10.1017/S0958344021000136

Acknowledgments. This study is supported by the Special Projects Fund (Reference no: 03976) funded by the Faculty of Humanities, Education University of Hong Kong.

Ethical statement. This research project was conducted in accordance with the approval of the Human Research Ethics Committee of the Education University of Hong Kong. All participants were volunteers. There are no conflicts of interest.

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About the authors

Baohua Yu is an assistant professor at the Education University of Hong Kong. Her research interests involve acculturation, learning motivation and strategies in SLA, and digital language learning and teaching. She has published widely in international refereed journals, such as the *Journal of Multilingual & Multicultural Development*, *Language Teaching*, *Higher Education*, *Studies in Higher Education*, *Journal of Studies in International Education*, and *International Journal of Intercultural Relations*.

Artem Zadorozhnyy is a Hong Kong PhD Fellowship Scheme awardee, who is currently a third-year PhD student at the Education University of Hong Kong. His research interests include informal and out-of-class digital language learning and the impact of ICT technologies on the development of English language proficiency.

Author ORCiD. Baohua Yu, https://orcid.org/0000-0002-0321-7374
Author ORCiD. Artem Zadorozhnyy, https://orcid.org/0000-0002-9434-6971

https://doi.org/10.1017/S0958344021000136 Published online by Cambridge University Press