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A Pedagogical Framework for Digital Multimodal Composing in the English Language Classroom

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Abstract

With the increasing recognition in the importance of multiliteracies, this study argues for the need to develop a pedagogical framework to teach and support students' digital multimodal composing practices, such as video production, in the classroom. The framework, informed by Systemic Functional Theory and Design Thinking, organises the knowledge and skills of digital multimodal practices into the critical, creative, and technical domains. Based on the framework, we develop a lesson package, comprising four lessons, which was implemented in a secondary school English Language classroom in Singapore. These findings suggest that rather than assuming students are intuitively capable of digital multimodal composing skills, a pedagogical framework that guides their development and demonstration of these skills can be useful.

Keywords

Digital multimodal composition; pedagogical framework; English Language classroom; multiliteracies; video production

Introduction

With the ever-evolving media and communication landscape, the importance of developing multiliteracies has been increasingly recognised by education systems around the world (The New London Group, 1996; Cope & Kalantzis, 2009; 2015; Scollon & Scollon, 2013; Stornaiuolo, Hull, & Hall, 2017; Mills et al., 2020). It is also essential to bridge out-of-school literacy, such as young people's engagement on social media and digital technology, with the literacy taught and learnt in schools so that students are prepared for the realities of the demands in today's communication environment (van Leeuwen, 2017a; Weninger, 2019).

Our study focuses on the pedagogical support needed for students to develop and demonstrate their digital multimodal composing practices. We pilot a pedagogical framework to scaffold students' composing of digital multimodal texts. Specifically, our study seeks to answer the following research questions: 1) What are the teacher's and students' attitudes towards the teaching and learning of digital multimodal composing skills? 2) How does the pedagogical framework support the teaching and learning of digital multimodal composing skills?

Digital Multimodal Composing

Multiliteracies is about developing students into discerning readers who are able to view multimodal texts critically and represent their own ideas effectively through the multimodal production (Jewitt & Kress, 2003; Jewitt & Kress, 2010; van Leeuwen, 2017b; 'O'Halloran & Lim, 2011). The New London Group (1996) first advocated the concept of multiliteracies and its accompanying pedagogy to broaden the notion of literacy beyond the ability to read and write to the meaning-making activities involved in everyday communication (Cope & Kalantzis, 2009). This involves taking into account both the digital and the multimodal in the out-of-school literacy practices of students (Jewitt, 2008; Lim, 2021).

The concept of multiliteracies was introduced into the literacy landscape in Singapore with the English Language Syllabus 2010, which focused on "making meaning and of communication" (Ministry of Education, 2008, p. 8). These concepts are emphasised in the new Singapore's English Language Syllabus 2020 as viewing and representing skills. In the syllabus, viewing refers to the understanding of a variety of multimodal texts and representing broadens beyond the traditional focus on writing to include students' digital multimodal practices (Ministry of Education, 2018).

Digital multimodal composing is defined as a form of user-generated content, in which students express ideas and construct identities through their artefacts (Yarosh, Bonsignore, McRoberts, & Peyton, 2016). In order to engage the audience and to express ideas clearly, students demonstrate their creativity and critical thinking through the process of making and remixing (Puccio & Gonzalez, 2004; Knobel, 2017).

Digital multimodal composing practices are evident in the growing number of teenagers participating in online video sharing platforms, such as YouTube, the largest community for sharing videos online, as both consumers and prosumers of video production (Ritzer & Jurgenson, 2010; Duncum, 2011). "Prosumer" is a neologism which combines the meanings of producer and consumer. It is often used to describe the generation of digital natives (Prensky. 2001) who are active on social media in viewing, curating, and contributing their creations (Duncum, 2011). However, not all prosumers are equal. The notion of digital natives as having equal digital literacy as a heterogenous group has been challenged (Benett, Maton, & Kervin, 2008). Digital access, skills, and opportunities are constrained by the students' socioeconomic status and family background (Hatlevik & Christophersen, 2013). In this light, it is of even greater imperative for schools to level the playing field and close the digital divide by providing not only digital access, but also the knowledge and skills needed in digital multimodal composing practices amongst students.

In recognition of the influence of multimedia technology in teenagers' daily life, there has been an increasing interest in how digital multimodal texts can be used in the educational context (Williamson, Potter, & Eynon, 2019; Duncum, 2014; Lim &

Toh, forthcoming). As “meanings must be represented in a way that conforms to culturally accepted conventions of representation” (Mills, 2010: 232), the incorporation of digital multimodal composing practices into the language classroom can engage and motivate students who are familiar with such texts in their online social networks outside the classroom.

Studies on students’ learning from digital multimodal composing include a report on EFL students in Japan’s making of digital stories. Nelson (2008) argues for a language pedagogy that values multimodal meaning-making and suggests that multimodal composing can offer students an opportunity to “be her own semiotically ‘more capable peer’” in developing language proficiency (Nelson, 2008: 29). Vasudevan, Schultz, and Bateman (2010) reported that not only did students’ engagement increased, they also developed multiliteracies, in terms of digital skills and multimodal competence. A research project in Australia also reported that primary school students were able to produce effective digital multimodal compositions and explain their semiotic choices made. However, it was necessary for them to learn the metalanguage explicitly so as to clearly articulate their justifications (Thomas, 2012). The need for a metalanguage was also observed in a digital comic creation project in an Australia school to develop students’ attitudinal expressions in digital multimodal composing practices (Mills et al., 2020; Unsworth & Mills, 2020).

Past research has also highlighted the importance of supporting teachers in the teaching of digital multimodal composing. They included the study by Hansford and Adlington (2009) who highlighted the challenges teachers had in supporting students’ digital composing practices. Chandler, O'Brien, and Unsworth (2010) also argued that teachers need to develop pedagogies for the teaching of digital multimodal composing, which includes aspects of non-linear planning development, explicit grammatical design, and playful interaction. Chandler (2017) also highlighted the professional learning and support needed for teachers in the teaching of digital multimodal composing.

In light of past research that emphasised the importance of supporting teachers and providing a metalanguage for the teaching of digital multimodal composing practices, this paper proposes a pedagogical framework to guide students’ digital multimodal composing practices in the language classroom.

This study pilots the pedagogical framework (see Figure. 1) comprising three key domains to support students’ digital multimodal composing of a video. The critical domain scaffolds students’ knowledge of how various semiotic modes make meaning through a metalanguage, a set of vocabulary, which describes the semiotic choices and the effects they bring. The focus here is to extend the learning beyond students’ language skills by guiding them on how they can integrate their use of language with the other multimodal resources in a video production.

Supporting the designing process of video production, the creative domain provides students with a five-stage design thinking process adapted from the Stanford design thinking model (d.school, 2010) to stimulate their creativity and cognitive flexibility

(Soken, 2016) The production of the digital artefacts is addressed in the technical domain, which offers students the production and editing techniques to create their artefact. Overall, these three domains explicate and organise the knowledge and skills students require in their digital multimodal composing.

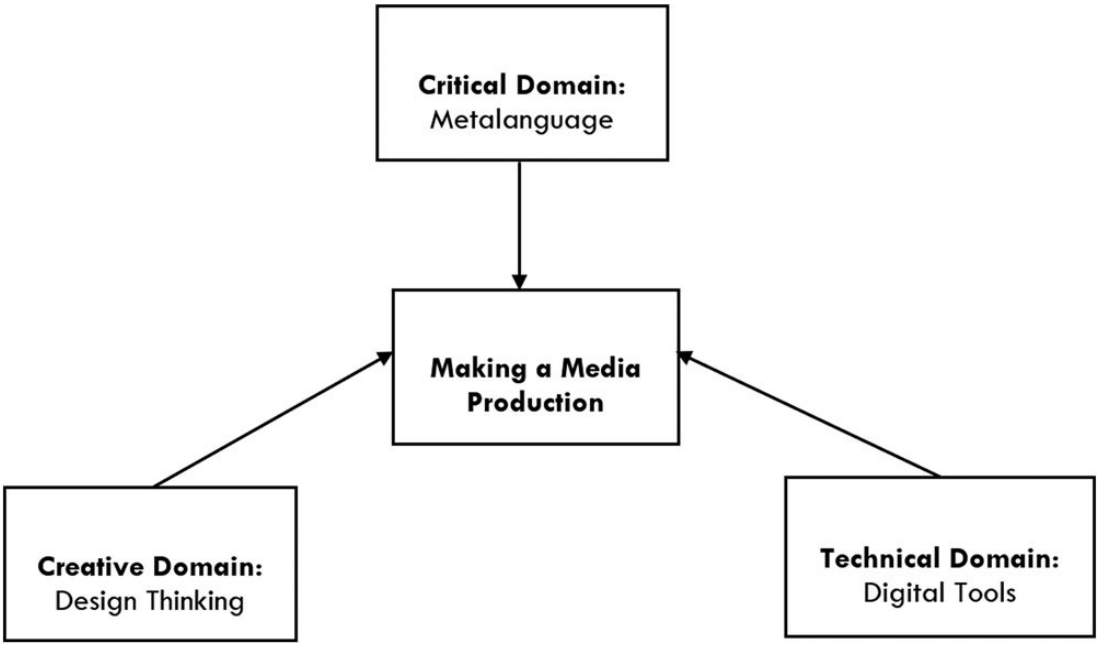

Figure. 1 Pedagogical Framework

Critical Domain: Metalanguage

A pedagogical approach informed by Systemic Functional Theory has been developed for the critical viewing of print advertisements (Lim & Tan, 2017; Lim, 2018), films (Lim & Tan, 2018), and video games (Toh & Lim, 2020). This approach supports the teaching and learning of viewing various multimodal texts with a set of meta-language describing specific features of multimodal texts. The importance of metalanguage has been highlighted by Bernstein as he critiqued the progressive movement in literacy education (Bernstein (1990). Recognising the value of a metalanguage in language development has led to various pedagogic frameworks to teach metalanguage. For example, the curriculum cycle emphasized the deconstruction of writing genres and their grammatical structures (Martin and Rothery, 1993). Other pedagogical approaches such as 'accelerated literacy' proposed by Cowey (2005) and 'reading to learn' introduced by Rose and Martin (2012) further adapted the curriculum circle and explicitly guided students in the use of language as a resource in communication.

The pedagogical framework for digital multimodal composing builds on the previous work done for teaching viewing of multimodal texts and introduces a set of metalanguage (see Figure. 2) for students to describe how various semiotic choices express meanings multimodally. After identifying the metalanguage used to describe

multimodal texts, students are guided to critically evaluate the effects each choice contributes to achieving the communicative purpose of the video production.

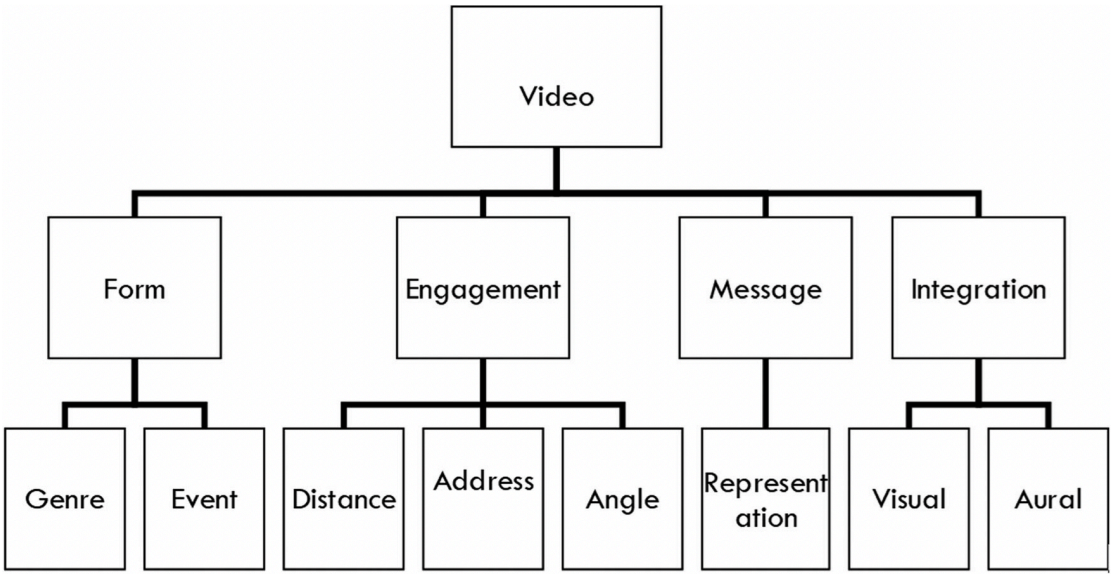

Figure. 2 The Metalanguage

First, with the focus on form, students learn how to distinguish different genres of video production, including narrative, documentary, and presentation. They also learn about the importance of setting and subject required for the particular event. Under engagement, students reflect on how different distance, address, and angle bring across specific effects to enact a relationship with the audience. For example, students learn how a low angle camera shot presents the image of power and a sense of authority. Students also explore how both literal and inferential meanings can be conveyed through video production. Finally, with the integration aspect of video production, students learn how visual and aural semiotic modes can be integrated together to enhance the richness of video production. With the scaffolding offered by the metalanguage, students are able to integrate their learning of writing with the semiotic tools for digital multimodal composing and create a video production that is both compelling and effective.

Creative Domain: Design Thinking

Design Thinking is a collaborative, problem-solving, team-based, human-centred, and inquiry-discovery approach. This approach is applied to address difficulties in different circumstances where problem-solvers are engaged throughout its creative learning process (Leverenz, 2014; Scheer, Noweski, & Meinel, 2012; Aflatoony, Wakkary, & Neustaedter, 2018). With its process-oriented and human-centred features, design thinking is widely applied in cognitive and affective everyday human activities from material to abstract production (Koh, Chai, Wong, & Hong, 2015). This contrasts with traditional approaches to written compositions by providing existing templates and formulas (Leverenz, 2014), which tends to narrow students' innovations and decrease their engagement. Slomp, et al. (2018) also argue that

there is a need to scaffold students' deep thinking, independent writing, and problem-solving skills. In this light, we posit that design thinking can encourage more creative outcomes from students and adopted it as the main approach in the creative domain of digital multimodal composing.

This study adapts the Stanford design thinking model (d.school, 2010) to guide the creation process in students' digital multimodal composing (see Figure. 3). First, students need to have a deep understanding of the target viewers of their video productions. Students then state the purpose of their video productions. The use of design thinking guides students in brainstorming and valuing a diversity of ideas proposed by the group members. These ideas are then discussed, challenged, and refined by the students in the group as part of developing interesting and creative content for the video. Once students have a clear statement for the content, they can explore the use of the most apt semiotic modes to represent their ideas and achieved the intended effect (Purdy, 2014). Just as drafting is the most crucial stage in writing, so is it in digital multimodal composing. By prototyping with storyboards, students are able to visualise their ideas in draft storyboards (Leverenz, 2014). Finally, the presentation of their video artefacts enables students to test their artefacts by soliciting feedback from their peers for the potential revision.

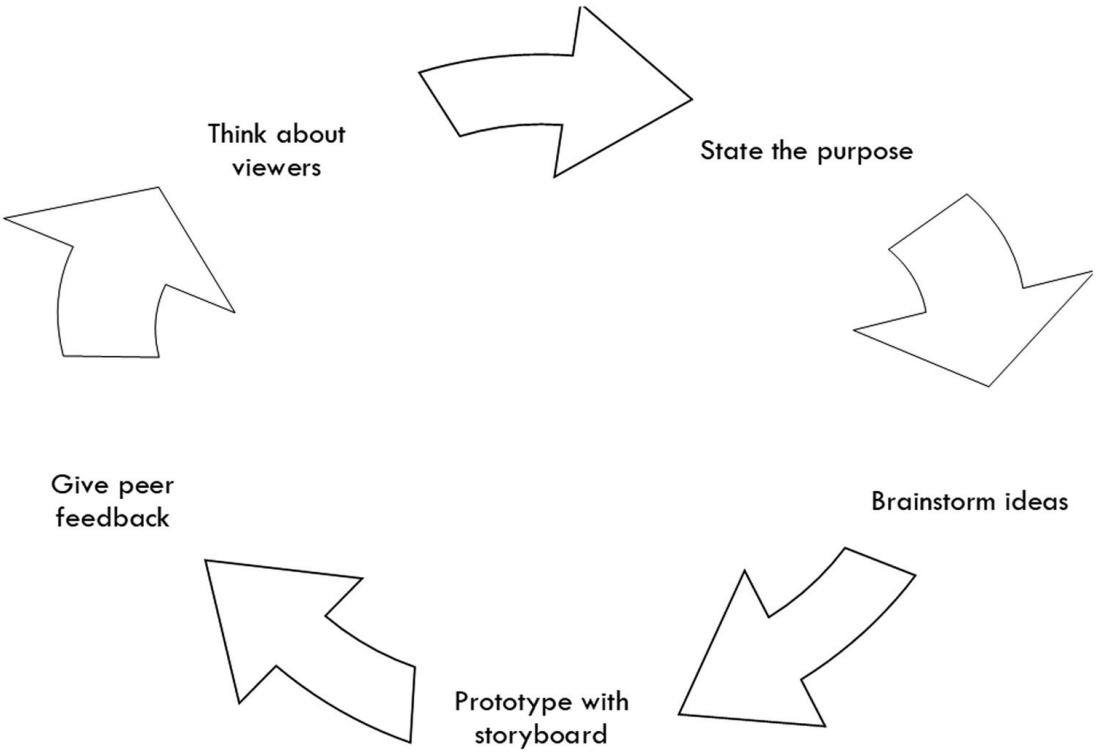

Figure. 3 The Design Thinking Process for Video Production

Technical Domain: Digital Tools

The technical domain is about supporting students with the technological-related knowledge and skills for digital multimodal composing, such as editing, recording,

and producing. In the composing process, students are guided to edit their work with basic editing tools and techniques, such as the use of snipping tool, special effect, filter, and subtitles. The technical domain also offers space for students to explore deeper the multimedia tools that they may already have used in their out-of-school communication. Within the technical domain, rather than for the teacher to introduce and explain every tool and feature, students can be encouraged to explore the tools for themselves, learn from more knowledgeable peers, as well as be guided towards just-in-time tutorials from online instructional videos.

Methods

Our study used a single case study approach to collect feedback from a teacher and students on the use of the pedagogical framework in the teaching and learning of digital multimodal composing. Case study research is productive in bringing about a deeper understanding of authentic issues in the educational context (Creswell, 2002; Grauer, 2012). In case study research, both qualitative and quantitative research methods may be used, including the survey, physical artefacts, direct interviews, and participant observations (Yin, 2008).

Both qualitative and quantitative data were interpreted individually and integrated into the analysis process to reach a holistic comprehension of the lesson implementation. As Grauer (2012) explains, "each data source is one piece of the puzzle, with each contributing to the researcher's understanding of the whole phenomenon" (p. 70). By evaluating the results of various data and sorting them into specific themes, this study hopes to identify students' and teacher's attitudes towards video production as well as to examine how the framework supported the teaching and learning of digital multimodal composing skills.

Context

The importance of multiliteracies and of supporting students' digital multimodal composing practices are expressed in Singapore's English Language Syllabus 2020. The new syllabus encourages teachers to use both print and non-print resources as well as teach the skills of viewing and representing of multimodal texts (Ministry of Education, 2018). Notwithstanding, the gap between the aim of the curriculum and practice in the classroom remains. Lim et al. (2020) reported on a recent study on teachers' perceptions and practices on multiliteracies and highlighted teachers' need for stronger support, both in instructional approaches, as well as resources, for their teaching of multiliteracies in the English Language classroom.

The pedagogical framework for the teaching and learning of digital multimodal composing was piloted in a government (public) secondary school located in the north-western part of Singapore. It is a typical public school surrounded by mostly public housing. One Secondary Two class (14-year-olds) was involved in the pilot. The thirty-nine students involved were considered to be of high ability as they are from the Express stream. In Singapore, the Express stream is a four-year course

leading to the Singapore-Cambridge GCE O-Level examination. The Secondary Two Express class selected for the study was described by the teacher as active, critical, and competent students who are capable of acquiring and applying knowledge effectively.

The teacher has four years of teaching experience. He is positive towards the teaching of multiliteracies and is keen to apply the pedagogical framework to the teaching and learning of digital multimodal composing for his students. The teacher co-designed the lesson packages with the researcher. After a few sessions of discussion on the teaching materials, the teacher then carried out four one-hour lessons with his class to guide students in the digital multimodal composing process.

Lesson Package

The pedagogical framework guides the development of a lesson package consisting of four lessons on digital multimodal composing. In particular, this study focuses on students' video production. Leveraging students' out-of-school experiences with social media such as recording the Instagram story, students were tasked to work in groups to produce a narrative in a video production between one to three minutes in length. Students were informed that their video productions were required to have a clear message and storyline. They also had to apply various engagement strategies taught and to demonstrate their editing skills in video production. The instructional content in the first three lessons was based on the three domains of support in the framework, and the final lesson was the presentation of students' artefact making.

Lesson One: Critical Domain

The objective of the first lesson was to introduce the critical domain. The lesson started with a comparison between writing and making videos so that students can explore the similarities and differences between them. The teacher then introduced the metalanguage - aspects of form, engagement, message, and integration. For instance, students were guided to consider the effects of using different angles on representing the levels of power and significance. Two video activities were also designed for students to discuss the different features used in the video clip and to interpret the effects achieved (see Figure. 4).

Figure. 4 Students' Discussion

Lesson Two: Creative Domain

The second lesson focused on the creative domain of the pedagogical framework. After the teacher introduced the five stages of the design thinking process and demonstrated an example of storyboards, students started to develop ideas for their video productions by working through the stages of empathy, define, and ideate in the design thinking process. Through reflecting on questions such as "Who will be viewing the video?", "What is the main message (moral/coda) that you want to bring across in the video?", and "What kind of engagement strategies (shots) will you use to make your video interesting?", students discussed and identified their target viewers, purpose, and engagement strategies to be used. In the prototype stage, students discussed and drafted their ideas on storyboards (see Figure. 5), delivered peer-to-peer feedback, and made amendments accordingly.

Figure. 5 Students' Drafting of Storyboards

Lesson Three: Technical Domain

The third lesson involved the technical domain of the pedagogical framework. Students were introduced to the basic editing techniques of digital tools as well as given time to film the video production. Tutorial videos such as how to edit videos via iMovie and Power Director were uploaded on Google Classroom for students' reference. Students then acted and recorded the video according to the storyboard (see Figure. 6) and edited the video production, which took place after the lesson.

Figure. 6 Students Making the Video

Lesson Four: Students' Presentations and Evaluation

The objective of the final lesson was for students to present and receive feedback on their video production as part of the final "test mode" in the design thinking model. After the showcase and presentation of each group's video production (see Figure. 7), students gave group-to-group feedback by evaluating peer's artefacts with the peer-assessment worksheet. Simultaneously, individual students also completed a self-assessment worksheet to reflect on their own video production experience.

Figure. 7 Students' Presentation

Discussion

The findings from our study are discussed in relation to the two research questions.

Attitudes towards the teaching and learning of digital multimodal composing skills

Positive responses from the survey indicated that students enjoyed and were engaged in the digital multimodal composing activity. Results from the survey showed that students generally responded positively to the lessons with 74.36% of students indicating that they enjoyed the lesson series and 23.08% of them giving a neutral response. Students, who have a neutral response, explained that they did not have sufficient time during the lesson for their digital multimodal composing practices. This was reiterated during the focus group discussion when students reported that they felt rushed to complete the artefacts within four lessons. Notwithstanding, most of them agreed that they were "enthusiastic" about planning and making video production as a group. The teacher also observed that students enjoyed the lessons because they were given the opportunity to learn something new and different. It was not surprising that students enjoyed the learning as they were provided with an experience that was relatable to them and the youth culture (Mills, 2010).

Findings from the survey and focus group discussion reported that students found digital multimodal composing a creative and exciting way to express their ideas. Most students (84.62%) reported that it was a creative way of expression and 69.23% of them agreed that they were able to express ideas effectively through making the video production. Students shared that the lessons helped them to express their ideas more effectively and creatively. The teacher also felt that the pedagogical framework guided students to "explore more ways of expression".

Both the teacher and students also recognised the importance of developing digital multimodal composing skills. Most students (92.31%) reported that they think it was

important to express ideas through various media and formats. Regarding the connection of digital multimodal composing skills with their experiences in daily life, 76.92% of students agreed that this skill was related to their out-of-school activities. The teacher also agreed that digital multimodal composing was an important life-skill in today's digital age. Although the teacher felt that digital multimodal composing skills did not necessarily help students' writing or speaking skills, he believed that there was "no need to make this connection" as multiliteracies were beneficial to students' self-expression.

However, some students felt that learning digital multimodal composing activities will not help them in the national examinations, which is language-focused. It is useful to note that while most students were aware of the importance of digital multimodal composing skills and were able to apply them, there was still room to further strengthen their learning of such skills. Similarly, one recent study on a citizen journalism video project reported that some students expressed concerns that they did not learn "'proper' essay structures nor improve their writing skills", and perceived multimodal composing as different from writing (Chen, 2019: 11). The teacher, in our study, also shared his concerns that a focus on such skills might not prepare students adequately for the national assessment. This supported the argument that "a clearer alignment amongst pedagogy, curriculum and assessment" for the teaching and learning of multiliteracies is needed (Tan & Guo, 2014).

The usefulness of Pedagogical Framework for the teaching and learning of digital multimodal composing skills

Both the reflective dialogue with the teacher and the lesson observations suggested that the three domains of the framework have helped to organise and support students' learning of digital multimodal composing skills.

In the reflective dialogue, the teacher agreed that the pedagogical framework "covers all the skills that students require to make a video production". He felt that it was a right decision to focus on parts of the metalanguage to teach during the first lesson as "it might be very confusing for the students if we have loaded them with too much metalanguage and packed everything into the same lesson". Such experience from the lesson implementation suggests that there is a need for the teaching and learning of the metalanguage in a gradual progression in further studies. However, the teacher suggested that "time given to it might need to be adjusted", especially for the creative domain, so that students could have more time to work on the content generation. Overall, the teacher felt that the framework offered a "logical way" for students to learn the skills and that it guided the students in the different domains of skills needed to create a video. The teacher observed that the pedagogical framework had made students' learning much "easier".

The focus group discussion and students' survey also indicated that most students agreed that the pedagogical framework had supported their learning of digital multimodal composing skills as they were able to express ideas "more effectively"

through producing the media texts. Students felt that the three domains of the framework were “equally important” as they would not have made the video production without any of them.

In terms of the critical domain, 89.74% of students acknowledged that they were able to identify the metalanguage used in video production and its effects and 87.18% of them reported that they were also capable of applying the engagement strategies in their video production. Students indicated that they learnt how to engage their target viewers “more precisely” with the use of specific engagement strategies. This was also demonstrated in their artefacts as the various uses of address, distance, and angle were employed in each group’s shots to achieve their intended effects. Most groups made good use of close-up shots to show the character’s facial expressions and mood. For instance, the use of a close-up shot in Figure. 8 highlighted the body language, which expressed the character’s nervousness. The effective use of angle was also evident in students’ video production. In Figure. 9, the application of a low angle created a powerful and authoritative image of the father at home and the use of a direct gaze engaged the viewer’s attention.

Figure. 8 Close-up Shot

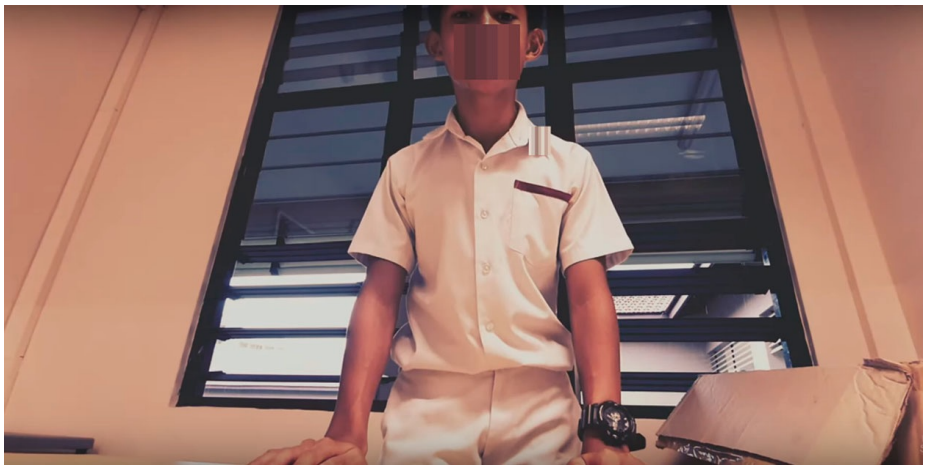

Figure. 9 Low Angle and Direct Gaze

In terms of the creative domain, 82.05% of students indicated that the design thinking process helped to stimulate their creativity and 87.18% of them agreed that they were able to produce the video production in an easier and systematic way through the design thinking process. Students shared that through the stages of design thinking, they were better able to "organise" their ideas and learnt to be more "flexible" with their plans. It can be observed from their artefacts that the students were capable of producing creative storylines that appealed to their target audience, convey a clear message, and apply effective engagement strategies. Figure. 10 shows an example of a storyboard, with detailed planning and description of the plot and engagement strategies used in each scene.

Figure. 10 Example of a Storyboard

However, in terms of the technical domain, only 56.41% of students agreed that they were able to edit the video production with digital tools while 33.33% of them reported a neutral response. This might be due to the lack of direct instruction on digital tools as the researcher and teacher assumed that the students would be familiar with the tools of video production from their out-of-school experiences. Some students felt that it would be more helpful if they could have one more lesson to provide them with a "hands-on learning experience" of the digital tools instead of watching the tutorial videos on Google Classroom. Regardless, most groups produced well-edited and high-quality video productions with smooth transitions and appropriate music. This was because there were students in their groups who were already familiar with the technical domain as they have been using different modes, such as emojis, stickers, short videos, and images with filters to communicate with their friends via social media.

Conclusion

Weninger (2017) has observed that students' engagement with creative and collaborative digital production is absent in most English Language classrooms in Singapore. In our study, we hope to address this gap by offering a pedagogical framework that can guide the teaching and learning of digital multimodal composing activities.

A common phenomenon observed in education systems around the world is that while the curriculum has been broadened to include 21st-century competencies, assessment practices tend to remain narrow, with the continual privileging of traditional language skills. In this study, we have identified that while teachers and students were concerned about the lack of representation of digital multimodal composing in the national assessment, they recognised the importance of these skills, as part of the larger multiliteracies agenda, and in preparing students to be future-ready. As one student surmised, that because curricular time was spent on digital multimodal composing activities, "we might be lagging behind the learning of

examinations, but we might be ahead in other areas of learning. After all, life is not about examinations".

Through the implementation and feedback from the lessons, both the teacher and students found the pedagogical framework useful in organising the learning and structuring the knowledge bases required for effective digital multimodal composing. Students' artefacts also showed evidence of effective digital multimodal composing skills.

Notwithstanding, this study has several limitations that would need to be addressed and improved in future research. This was a small-scale study with only one teacher and thirty-nine students involved. The findings in this study cannot be generalised to schools of different profiles and teachers of different levels of beliefs and readiness to teach multiliteracies. It is also recommended that pre- and post-tests with a more extended lesson intervention in between them be conducted in future studies. This will strengthen the report on the efficacy of the pedagogical framework in the teaching and learning of digital multimodal composing skills.

More time is also needed for students to discuss and create videos. It was challenging for the teacher to devote more lessons to the teaching and learning of digital multimodal composing skills within the constraints of the tight national curriculum. As such, there was only one lesson for each of the following domains: the metalanguage, design thinking process, and digital tools in the current study. Students in the focus group discussion suggested that it would be better for them to have more time to work on video production. As such, it would be useful to have lessons dedicated to the teaching of digital multimodal composing skills in schools.

The need to set aside dedicated curricular time on digital multimodal composing practices is also related to the beliefs and attitudes of the teachers and curricular leaders in schools towards the recognition of its importance. Although the teacher in this study had a positive set of beliefs and attitudes towards the teaching of multiliteracies, some teachers may prefer to focus on language skills rather than multiliteracies as the former is more relevant to the national examinations. This way of thinking needs to change through teachers' professional development. In addition, teachers can also be supported with training to build their capabilities in designing multiliteracies lessons and pedagogical frameworks to guide their teaching of digital multimodal composing skills. The pedagogical framework proposed in this study is one example and needs to be complemented with other instructional strategies and learning resources to support the professional development of teachers.

In conclusion, there has been much progress made in the teaching of multiliteracies in recent years due to the recognition of the need to equip students with 21st-century competencies and the importance of making connections with the students' out-of-school experiences. Educational researchers have also worked on developing instructional practices for multiliteracies in the classroom. We hope that the findings

from the study can contribute to the ongoing global conversations and interest in how best to develop multiliteracies in our students.

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Disclosure statement

No potential conflict of interest was reported by the author(s).

Notes on contributors

Wei Jhen Liang researches on multiliteracies and she is interested in the teaching and learning of digital multimodal com- posing practices, specifically in the form of video production.

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