ORIGINAL PAPER

Thinking and Talking About Digital News in the Singapore Secondary English Classroom: a Pilot Study

思考與討論新加坡中學英語課堂數位新聞：先導性研究

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Abstract

This paper reports on a study to develop a pedagogic metalanguage as a resource to support teachers' thinking and talking about digital news texts in two secondary English classrooms in Singapore. The study uses lesson observation, interviews with the teachers and focus group discussions with the students as its data collection methods. The findings from this pilot study have informed the design of a larger research project on multimodal literacy in Singapore. The implications from the study include highlighting the importance of meeting the diverse learning needs of the students and building on the recognition both students and teachers have on the value of multimodal literacy. This can ensure that sufficient curriculum time and space will be committed to the teaching and learning of multimodal literacy. The implications also point to the importance of strengthening assessment and feedback for the students even as teachers design for more opportunities for students' multimodal meaning-making.

摘要
本研究報告了一項旨在研發一種教學後設語言的研究，來當作支持兩個新加坡中學教師課堂上思考及討論數位新聞文本的資源。本研究使用了課室觀察、教師訪談與學生的焦點小組討論作為其搜集數據的方法。本先導性研究的結果供新加坡一項大型多模態素養研究的設計參考。該研究的啟示包含了強調滿足學生多樣化學習需求的重要性，以及建立了學生和教師對多模態素養價值的認可，確保有足夠的課程時間和空間將投注到多模態素養的教學中。研究啟示也指出了加強對學生的評量及回饋的重要性，即使當教師為學生的多模態意義建構提供更多機會。

Keywords Digital news · Multimodality · Technology · Literacy · Metalanguage · Pedagogy

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Introduction

The media-rich environment today has brought to the fore the importance of guiding students on how to navigate the complex communication landscape in the English classroom. New skills for viewing multimodal texts and composing multimodal artefacts are becoming more important in the contemporary communicative landscape. Jewitt and Kress (2003) describe these skills that students need as "multimodal literacy". van Leeuwen (2017, p. 5) explains that multimodal literacy includes "the ability to use and combine different semiotic modes in ways that are appropriate to the given context, both in the sense of the context-bound rules and conventions that may apply, and in the sense of the unique demands made by each specific situation". Multimodal literacy thus involves the knowledge, skills and semiotic awareness (Towndrow et al., 2013), in the viewing and representing with multimodal texts in contextually appropriate ways (Lim & Tan-Chia, 2023).

Against this backdrop, many education systems from around the world are reviewing their literacy curriculum, particularly on what and how we should be teaching our students in the English classroom (Macken-Horarik et al., 2017; Mills & Stone, 2020; Mills & Unsworth, 2016). In Singapore, where the current study is conducted, aspects of multimodality and the teaching of multimodal literacy have been introduced into the English Language Syllabus for all primary and secondary schools. New areas of language learning, such as viewing and representing of multimodal texts, were added alongside the more traditional speaking, listening, reading, and writing in the 2010 English Language Syllabus. In the English Language Syllabus 2020, where multimodal meaning-making is an emphasis, teachers in Singapore have requested for support in developing instructional strategies to guide students in interpreting and constructing multimodal texts (Chan et al., 2017; Lim et al., 2022a, 2022b).

In tandem with the broadening in the notion of literacy beyond language learning to include multimodal meaning-making (New London Group, 1996), researchers around the world have also explored ways in which multimodal literacy can be taught and learnt. In the Asia context, Liu (2022) proposes a framework that incorporates the social systems, genre, and meaning-making resources to design a curriculum for multimodal text analysis with secondary school students in Hong Kong. Chen and Tsou (2022) applied a translanguaging approach to the teaching and learning with multimodal texts. They draw on Lin's (2012) rainbow diagram of how translanguaging and multimodality could be used in a bilingual classroom in Taiwan to learn mathematical concepts. In Singapore, approaches to multimodal literacy learning include developing instructional strategies for guiding students' viewing of multimodal texts through structured questions (Chia & Chan, 2017) and exploring how students' creation of multimodal artefacts can demonstrate their semiotic awareness (Towndrow et al., 2009; Towndrow et al., 2013). To these works, we add our studies which focused on developing pedagogic metalanguages as resources for teachers and students' thinking and talking about multimodal texts (Lim et al.,

2022a, 2022b). The development of a pedagogic metalanguage, piloted in this study in two secondary one English classes (equivalent to grade seven middle-school) in a mainstream public school, is part of the response to the call for the innovative pedagogies for multimodal literacy teaching in Singapore. In this paper, we report on the implementation of a pilot study to inform the design and development of a larger research study on multimodal literacy in Singapore. While contextualised in Singapore, the implications identified can be of interest and value for researchers and practitioners interested in the teaching and learning of multimodal literacy in Asia and around the world.

The Multimodality of Digital News

News has become increasingly multimodal over the years. While language used to dominate and serve as the main bearer of information in news of the past, digital news has more images and is presented in more attractive colours than ever before. Digital technology has also changed the way in which we access news. Digital news may include videos and is accessed not just from news websites, but also from social media sites, where readers can choose to follow news updates on a real-time basis. In addition to reading the news story, readers can now respond to the story and reply to comments left by other readers, which adds a social dimension to what was once a solitary activity of reading (Cambria, 2011).

In this paper, the term 'digital news' is used to reflect the multimodal nature of news in the digital medium, where meanings are expressed using a combination of semiotic modes, such as images, animation, sound, and music, in addition to language (Kress, 2010). In recent years, advances have been made in the application of Systemic Functional Multimodal Discourse Analysis (SF-MDA) to the study of texts (for example, Bateman et al., 2017; Jewitt et al., 2016; Unsworth & Macken-Horarik, 2015). The study of news from the SFMDA perspective has been charted by scholars such as Bateman et al. (2007), who examined both traditional print and digital news as emergent "multimodal" genres. Focusing on the enactment of relationships in news images, Economou (2008) applied Appraisal Theory, developed by Martin & White (2005), to investigate the selection of news photos in print newspapers across two different cultures—Greek and Australian—and highlighted the ways in which images were used to attitudinally position the readers. She also explored how stance was constructed through the use of language and images in news (Economou, 2013). Other works in the study of news include Caple (2008) who explored news images and discussed their evolving role over time in an Australian newspaper (Caple, 2010). Bednarek & Caple (2012) also developed frameworks that described the ways in which language and image work together in combination across different formats of news, from print to digital and television, to express news values.

The advances in research have led to significant developments in the understanding of digital news. However, there remains a chasm between research and what can be practicable in informing classroom instruction, particularly in the secondary school context. In response to this need, our study seeks to explore the translation of

ideas from research to a pedagogical metalanguage for the teaching of multimodal literacy, particularly, the guided viewing of digital news texts, that is news presented on websites, in the secondary classroom context.

Pedagogic Metalanguage for Digital News

The development of a pedagogic metalanguage (Lim & Tan, 2017; Unsworth, 2006) as a resource for multimodal meaning-making (Tan et al., 2012) follows the trajectory of work by Macken-Horarik et al. (2017) in applying SFMDA through their proposal of a "functional grammatics" in Australian schools. A pedagogic metalanguage is a specific set of conceptual vocabulary that is appropriated from research and used in the school setting as a resource for teachers and students to think and talk with. The goal of such a pedagogic metalanguage is to develop in students "a common terminology to integrate their analyses in an interpretive response in ways acceptable to English teachers" (Macken-Horarik et al., 2017, p. 19) as well as to enable students to "describe meaning in various realms" (Cope & Kalantzis, 2000, p. 24). Unsworth (2014, p. 13) argues that "teachers and students need this kind of metalanguage for talking about language, images, sound, and so forth, and for their meaning-making interactions".

While frameworks for the analysis of multimodal texts, such as the four resource model (Freebody & Luke, 2003; Luke & Freebody, 1999) and the five semiotic systems (Anstey & Bull, 2018), are productive in drawing attention to the role of the reader and the ways in which semiotic resources, such as words, images, sound, gestures, and space, make meaning in multimodal texts, the pedagogic metalanguage trailed in this study focuses on the types of meanings and ways of meaning-making in a specific multimodal genre. The pedagogic metalanguage in our study organises the students' viewing around the meaning potential in the multimodal genre to achieve specific purposes, that is, how the textual features fulfil typical semantic functions. The development of a pedagogic metalanguage for digital news also builds on our earlier work on the teaching of different multimodal text types (see, for example, Liang & Lim, 2021, Lim, 2018; Toh & Lim, 2021).

The pedagogic metalanguage for digital news is organised according to the categories of Message, Engagement, and Form. This is broadly framed around the metafunctional meanings (Halliday & Matthiessen, 2004) following the Systemic Functional Multimodal Discourse Analysis (SFMDA) approach. Message relates to the representation of ideas, that is, the ideational meaning. It is described in relation to how meanings serve the intent of the text producer (Purpose), how the message expresses certain persuasion strategies (Appeal), and how the meaning of the text is circumscribed within the context of production and reception (Context). Form focuses on the organisational meaning in the text based on the type of news and how its positioning and size in the layout is meaningful. Engagement is about the interpersonal meanings and involves the ways of interaction between the text and the reader. For example, students learn how a sense of prominence and distance can be expressed through the choices of images and words.

The process of translation from theory to pedagogy began with the researchers interpreting the theoretical frameworks on multimodal meanings in research and identifying the concepts that are considered to be fundamental and useful for the student to be aware of. This led to the development of pedagogical frameworks for images such as Tan et al. (2012). The concepts and terms in the framework were piloted with teachers and students and modified based on the feedback received (Lim et al., 2015). The feedback involved changing the terms to align with the existing national syllabus, ensuring that the concepts were accessible to a wide range of student profiles as well as focusing on what was deemed as the essential ideas for secondary students. This follows the recognition that the New London Group (1996: 77) made that a pedagogic metalanguage must be "capable of sophisticated critical analysis" for teaching and learning, while "not immediately conjure up teachers' accumulated and often justified antipathies towards formalism". The pedagogic metalanguage, while principally similar in its categories and concepts, differ in relation to the specific text types. In this study, we focus on the pedagogic metalanguage for digital news for the lower secondary school level, where students are at 13–14 years of age.

Through learning the metalanguage, students are supported in their thinking and talking about the meanings in digital news and how these meanings are made. In learning the features of the news texts, students develop familiarity with the genre and are sensitised to what to look out for when they interpret digital news texts in light of the context. One lesson is designed to introduce the concepts in each of the categories to the students. Each concept is illustrated with examples from various sources of authentic news.

Message

Purpose

Students are introduced to the three broad purposes of digital news texts. The purposes are identified as (1) Educational, where the aim is to report on current events and social issues (for example, Current Affairs); (2) Entertainment, where the aim is to provide pleasure and leisure reading materials (for example, Celebrity News); and (3) Economic, where the aim is to sell a product or service (for example, Product Reviews). The purposes are not often discrete though, and there could be, for instance, a news article that serves the purpose of Entertainment and Economic, such as marketing a theatre performance by providing a review.

Representation

Students are also encouraged to probe deeper beyond the literal meanings made in the digital news (Economou, 2008), to explore the possible inferential meanings. They look out for puns, innuendos, as well as metaphors, and discuss if there is any implied message embedded within the news article.

Appeal

Students are introduced to the classical types of persuasions in the form of the Appeal made in the news article (Virtanen & Halmari, 2005). The three types of Appeals are (1) Authority, where experts or celebrities are cited in the text or featured in the image; (2) Reason, where statistics and facts are provided in the text, or charts and figures used as visuals; and (3) Emotion, where personal stories and testimonials are included in the text or evocative photographs are inserted. Students learn to recognise the types of Appeal being used in the digital news and discuss if these Appeal strategies were appropriate and effective in achieving the communicative purposes of the news.

Context

Students are also guided to consider the Context of Production and Reception (Kress & van Leeuwen, 2001), which is essential in viewing news critically. For the Context of Production, students are guided to identify the Source through questions such as "Who wrote/which agency published the article?". They also reflect on the Intent of the producer through reflecting on the motivations and agenda for the publication. This is at finer granularity of understanding beyond identifying the three broad purposes of the news described earlier. For the Context of Reception, students are encouraged to consider the responses that other readers might have toward the news article. The Context of Reception is made more immediate and pronounced in the contemporary digital age. News articles published online may allow for comments from readers at the bottom section of the article (Cambria, 2011). News articles circulated on social media leverage the "like", response, and comment functions of the specific platform and can often garner quick reactions—some insightful, others inane, but all reflecting readers' sentiments to the digital news. The Context of Reception often reveals a range of perspectives, including those concurring with and contradicting the news article. As part of developing students' ability to view news critically, it is important for students to situate their interpretation of the news message within the Context of Production and Reception.

Form

Hard and Soft News

Here, students are introduced to the different types of news—Hard News stories and Soft News stories (Lehman-Wilzig & Seletzky, 2010). Hard News stories report current events and trending issues as soon as possible and the goal is to provide objective reporting. Soft News stories are opinion pieces that provide interpretations and perspectives on trending issues and are conspicuously subjective. Students are also taught that Hard News stories are typically organised according to the 5Ws: (1) "Who is the story about?", (2) "What is the story about?", (3) "Where did the story happen?", (4) "When did the story happen?", and (5) "Why did the story happen?".

Soft News stories, on the other hand, are perspectival and may be based on the writer's personal experiences and beliefs. Thus, it is useful for students to distinguish between Hard News stories and Soft News stories as they are fundamentally different. It is recognised that the categorisation of news into just two types is an intended simplification from the range of existing news genres (Bell, 1991), as well as emerging digital news like those identified by Hiippala (2016) and Caple & Knox (2017), amongst others. Notwithstanding, as a way of introducing digital news to students, the simplification is motivated from a pedagogical stance to present core knowledge accessibly, before building on that foundation for more fine-grained distinction and understanding.

Layout

Here, students are sensitised to the value of the position of the news article. For example, news fully represented on the main landing page of a news website, without the need for scrolling, indicate greater relative importance (Knox, 2007). As discussed earlier under Engagement, the size of the text block and the image accompanying the news article also contribute to the sense of importance as they are conspicuous (Caple, 2008).

Engagement

Prominence

Here, students are introduced to the strategies used to engage readers, reflected in the linguistic and visual choices made in the news. Students learn to recognise how the meanings of Prominence and Distance are communicated through the semiotic modes. For the image, they recognise that Prominence can be achieved through the choices made in Size, Sharpness, Colour Contrast, Lighting, and whether the represented subject is in the foreground (or background), following Kress & van Leeuwen (2006). With language, Prominence can be created through the choice of Active or Passive Voice. While the Active Voice ascribes prominence to the Agent, the Passive Voice emphasises the Event (Fowler, 1991; Fowler et al., 1979).

Distance

Similarly, Distance can be realised through the use of shots in images. Close-ups offer a sense of intimacy as the subject's facial expression is in focus, and this type of shot effects a closer social distance as compared to medium shots. Long shots situate the subject in a context by visually presenting the background. In language, distance is expressed through the use of the First Person or Third Person pronoun (van Dijk, 1988). The use of the First singular personal pronoun invites involvement from the reader and presents a personal perspective in the article, while the use of the Third Person suggests detachment and professional distancing between the writer and the reader.

Having been introduced the pedagogic metalanguage as a way to deconstruct the news, students are also guided, in another lesson, to reflect on how the language and the image interact and interplay in the construction of meaning in the digital news (Caple & Bednarek, 2010). Specifically, they consider if there is semantic convergence or semantic divergence made between the two semiotic modes. While the former results in a reinforcement of the message, the latter leads to creative play and irony, or at worst, ambiguity and a breakdown in communication (O'Halloran, 2008).

The Study

Our study was carried out in a government secondary school in a northern neighbourhood of Singapore. The publicly funded, co-educational secondary school took in students of mostly average academic ability as determined by national assessments. The school offered three courses of study, with the "Express" course for higher ability students who are expected to complete their Singapore-Cambridge General Certificate of Education Ordinary-Level (GCE O-level) certification in 4 years. The "Normal Academic" course is undertaken by students who are expected to either complete their four-year Singapore-Cambridge GCE Normal (Academic) Level (GCE N (A)-Level) course and continue to study vocational courses or continue for a fifth year to complete their O-Levels. The "Normal Technical" course is for students who are expected to complete a Normal (Technical) 4-year course and then progress to either the fourth year of the GCE N (A)-Level course or study vocational courses offered by the Institute of Technical Education.

In this study, we piloted the development of a pedagogic metalanguage on digital news. The study questions were the following:

1. What are the teachers and students' responses to the lesson package?
2. How can the lesson package be improved?

A case study approach (Yin, 2009) was adopted for the study. The data gathered included lesson observations and field notes taken by the researchers, interviews with the teachers, and focus group discussions with students to elicit their experiences with the lessons. The researcher-teacher interactions were guided by the teacher inquiry and knowledge building cycle by Timperley et al. (2007), which involved (1) Identifying learner needs, (2) Lesson planning, (3) Lesson implementation and data collection, (4) Focused data analysis, and (5) Reflective dialogue. A key element of this inquiry cycle is reflective dialogue, which is a process for the teachers to engage critically with the classroom data to review and refine their teaching practices.

The researchers invited the school's Subject Head for English for the study. He was keen to participate as he felt that it could prepare the teachers for the roll-out of the new English Language Syllabus. He identified two teachers and their secondary one classes (of 12–13-year-old students, equivalent to grade seven middle-school) to

participate in this study. Class 1E comprised students from the Express course and class 1 N comprised students from the Normal (Academic) course.

The two teachers, Adrian and Brandon, both pseudonyms, in charge of 1E and 1 N, respectively, co-designed the lessons with the researchers and made specific adaptations based on the profile of the class they were teaching. Before the co-design process, the researchers met with Adrian and Brandon to understand the profile of the students they taught as well as the students' prior experience with news texts in the classroom. While news texts had been used as a resource for the learning of language, there was no explicit focus on the teaching of multimodal literacy. As such, the teachers felt that it was useful to have a set of lessons that could build up the students' awareness and understanding of multimodal meaning-making structures in news.

Six lessons, making up one full lesson package, were collaboratively developed by the researchers and the teachers to guide the viewing of digital news. The lessons were implemented in their regular English Language lessons. The teachers started with determining the learning objectives for each lesson. The researchers then proposed a lesson plan to introduce the pedagogic metalanguage in the lessons. The lessons were subsequently designed and organised with the first lesson on Message, the second lesson on Form, the third lesson on Engagement, the fourth and fifth lessons on integrating and consolidating the understanding across the concepts learnt to analyse digital news texts, and the final lesson on digital news creation. The lesson activities included the teacher-led introduction of the pedagogic metalanguage, the students' analysis of various digital news texts in group discussions, and the creation of a digital news text. The researchers' role involved proposing the learning activities and materials, such as examples of news texts that illustrate the metalanguage. The learning resources, that is, the slides and materials, were offered to the teachers for their adaptation. Both Adrian and Brandon modified the lesson resources based on the profile of their students by adding or reducing the activities suggested and bringing in additional examples to illustrate the pedagogic metalanguage. They then implemented the lessons with their classes.

Data Collection and Analysis

The researchers observed the lessons and took field notes based on their observations. They also had short interviews after each lesson to discuss with the teacher the enactment and the refinements to be made in the next lesson. The lesson plans and lesson materials were also collected. The focus of the inquiry in the data analysis was the feedback on the lesson package, which included the learning objectives, lesson activities, instructional content, and lesson resources. Qualitative data analysis was carried out on the researchers' field notes, the reflective dialogue in the form of interviews with the teachers and focus-group discussions with the students. In particular, content analysis was used to identify themes and topical interests arising from the interviews and focus-group discussions (Neuman, 2014). The analysis based on the themes was performed as a descriptive technique to reveal patterns of experience (Ayres, 2008). The analysis of the data

Table 1 Interview questions with teachers

Interview questions	Relevance to RQ
1. How do you feel about the lessons conducted?	RQ1
• What went well?	RQ1
• What could be improved?	RQ2
2. Is what you now know about the instructional approach, both the pedagogy and content, what you expected?	RQ1
• Are there any parts about the approach that surprised you?	RQ1
• Which part do you like the most?	RQ1
• Are there any parts that you're uncomfortable with or think will be ineffective?	RQ2
3. What adaptations do you hope to make to the lesson package in order to better tailor to your students' needs?	RQ2

Table 2 Focus group discussion questions with students

FGD questions	Relevance to RQ
1. Did you enjoy the lessons? Why?	RQ1
2. Did you find it too difficult? Which part?	RQ2
3. If you could change one part of the lessons, what would it be and why?	RQ2
4. Has the way you think and feel about newspapers changed? Why?	RQ2
5. What new things did you learn? What are they?	RQ1

was guided by the two research questions and with the goal to surface "theoretically connected explanations" from the researchers' observations of the lessons (Berg & Lune, 2017, p. 183).

After the completion of the lesson package, the researchers met with Adrian and Brandon, together with the Subject Head, to discuss their reflections on their implementation of the lessons. Five students from each of the classes, across gender, were invited to participate in a focus group discussion. The guiding questions and their relevance to the research questions are represented in the Tables 1 and 2. Key points from the reflective conversations with the teachers and the focus group discussions with the students were transcribed and served as data which were classified in terms of their relevance to the two research questions.

Findings

In this section, we report on the findings from the pilot study. For each of the themes, we reflect on the issues surfaced from the study and highlight the implications they bring in shaping the focus and nature of the larger research project on multimodal literacy in Singapore which this pilot study seeks to inform.

Meeting Diverse Learning Needs

The researchers observed that students from both classes were mostly engaged and participated in the lessons actively. It was noted that the two teachers' pedagogies differed slightly from each other as they would adapt the lesson based on their interactions with the students. Despite having co-designed and prepared the lessons with the researchers, both teachers brought in additional examples during the lesson and spent more time to provide further explanations whenever they sensed that the students had difficulties understanding specific concepts. Both Adrian and Brandon shared that the "students were interested and genuinely tried to apply what they have learned" [Adrian] and that "the structure is good and the content well-researched" [Brandon]. Brandon felt that for his students, it was useful to have "explicit teaching [and] then have students do an activity to consolidate". He taught the 1 N class, with academically weaker students, and had provided more examples by using Internet resources and videos to help the students to understand the instructional content.

The researchers observed that while the pedagogic metalanguage for the teaching of digital news was initially designed as the same for students of different profiles (1E and 1 N), both teachers saw a need to adapt the lessons for their students, and both made modifications themselves by bringing in different examples. Adrian felt that the "first few lessons were a bit dry" for his students' profile as it involved explicit teaching. Brandon also felt that rather than covering so much instructional content, it was better to "really go in depth". This highlighted the need to develop different sets of resources for students of different learning profiles. This was also reflected by Brandon who felt that "the structure of the lesson might be more suited for [1E student profile] than his class". For his students' profile, Brandon opined that it was better to "focus on depth rather than on width". As such, the first implication of the pilot study on the larger research project is that it is necessary to have specific lesson packages that were customised to the courses of the students, be it Express, Normal (Academic) or Normal Technical. Such differentiation will have to involve partnering and co-designing the lesson packages with teachers who were familiar with the profile and needs of the students.

Learning Multimodal Literacy

Regarding the pedagogic metalanguage, students reported that the lessons were "easy to understand" [1E] and that the "concepts and ideas introduced were manageable" [1 N]. Students "found it useful because previously [they] didn't know how to identify fake news" [1E]. They also liked the opportunity to "work in groups" and that it was "fun and engaging" [1E]. Students from 1 N expressed a wider range of responses. While some felt that it was "quite fun [as they got] to do group work and talk about fake news" [1 N], others felt that it was "average" and "boring because I don't like reading news" [1 N]. Nonetheless, students mused that they were "interested to know more about real or fake news" [1 N] after the lessons. When asked if they felt what they learnt was useful, the students reflected that "since the world is changing and everyone is starting to spread fake news, it is very important to…

learn about it" [1E]. Another student added that "sometimes I won't read the news properly and just forward fake news to others. So now I know better" [1 N]. The candid comments from the students suggested that they saw the value of the lessons, although they felt that some of the learning activities and instructional content could be more "fun… [with] more group work… and hands-on work [so that they] don't just listen to the teacher" [1 N]. The students' responses indicated that most saw the value of multimodal literacy. The students' positive perceptions towards the importance of multimodal literacy resonate with findings from students in other education systems such as Australia (Macken-Horarik et al., 2017).

The teachers also saw the value of multimodal literacy learning. Brandon opined that "it's useful for students to learn this… [as they] have to deal with news on a daily basis". Brandon also argued for the importance in making space in the curriculum for the teaching of digital news because he felt that the series of lessons had given his students "a very real life taste and example of how effective news can be". Given that both teachers spent more time to elaborate on some of the ideas whenever they sensed that some students had difficulty in following the lesson, they took more time than expected to complete the activity. Some of their lessons took two periods of 30 min each, instead of the one period originally planned. It was a discernible challenge for the teachers to carve out more time from the crowded curriculum to accommodate the lessons in this study. In light of the feedback from the students and teachers, the second implication of the pilot study is to build on the recognition both students and teachers have on the value of multimodal literacy. This can ensure that sufficient curriculum time and space will be committed to the teaching and learning of multimodal literacy in the larger research project. In a tight curriculum, this can possibly be achieved through a deeper integration of the learning of multimodal literacy with language learning and aligning closely with the topics in the English Language syllabus, so that it is not perceived as an add-on for both the teachers and students.

Assessing Multimodal Literacy

Another systemic shift needed relates to assessment. While the viewing and representing with multimodal texts has been incorporated in the English Language Syllabus, the national and school examinations are still predominantly focused on language learning. Therefore, it was unsurprising when Adrian expressed preference for "the linguistic elements that were more directly linked to the syllabus and exams, as that was useful to the students". His response highlighted the tension between the syllabus and examinations and that while the teaching of multimodal literacy such as recognising "fake news was very meaningful" [Adrian], there remained the need to have "explicitly linguistic activities… to draw them back to the relevance of exams" [Subject Head]. The teachers reflected on a belief that the use of multimodal texts should be to support language learning rather than to regard multimodal literacy as a learning outcome in itself. This attitude seems to be because multimodal literacy is not a focus in the examinations. This is unsurprising as scholars have highlighted that the national examinations significantly influences the teachers' priorities and

pedagogical practices in the classroom (Lee et al., 2016; Lim & Tan, 2021; Heydon, 2013; Tan et al., 2010). Beyond the assessment of multimodal literacy in the summative assessment that is in the national examinations, it can be of value to also consider how multimodal literacy can be assessed formatively. For example, in the digital news texts creation task which the students were asked to do, the students were not informed on how they will be assessed, such as with the use of a rubric. As such, this could have led to both the teachers and students treating the assignment with less seriousness. This highlights the importance of paying attention to the assessment of multimodal literacy and to offer meaningful feedback to the students on their artefacts in the ensuring research project.

Both Adrian and Brandon expressed a positive attitude during the development and implementation of the lesson package. However, the Subject Head's comments during the interview that "sometimes they may need to be able to see the relevance to commit to it fully" was also revealing of the teachers' concerns. This observation highlighted the importance of making clear the relevance of the curricular innovations to, not just in the syllabus, but also in the examinations, in order for it to achieve full buy-in from the teachers. The need to align changes in the curriculum with reforms in assessment is thus crucial (Unsworth et al., 2019). Although the school and teachers had volunteered to participate in this study, they have expressed their concerns over the amount of time that this curricular innovation would take. This is unsurprising, as it has been well-documented in previous studies that the demands on teachers' time and the pressure to complete the syllabus in the Singapore classroom are high (Teo, 2014). As such, it is understandable that teachers would tend to guard the curriculum time jealously and would often choose the most "efficient" way of teaching, rather than create the space for students' exploration of texts, discussion of meanings, and knowledge building (Curdt-Christiansen & Silver, 2013; Weninger, 2018). In light of this, the third implication from the pilot study for the larger research project is to acknowledge the teachers' valid concern over the weak focus on the assessment of multimodal literacy in the national examinations and to draw attention to how formative assessment and feedback for the students' creation of multimodal texts as an area of growth and can be strengthened.

Designing Opportunities for Students' Multimodal Meaning-Making

The teachers highlighted that more relevant examples would help to make the learning experience more relevant to students' lifeworld (The New London Group, 1996). Brandon shared that "more relatable examples" to illustrate the news features could be more appealing to 13-year-olds and felt that "some activities needed to be supplemented [with examples]". Adrian also agreed that "more interesting and relevant articles" would engage the students better. Students also proposed to "do a workshop" [1E] and "include a learning journey to a media centre" [1 N]. This is so that they can experience the production of news and have an opportunity to meet and interview professionals working in the news industry. While this suggestion may involve more logistics and require further support from the school, possibly beyond the scope of the project, it is a good idea. An excursion could help students bridge

the gap between formal and informal learning experiences and help them to appreciate the value of what they are learning in class as relevant and practical in life. Likewise, the students also wanted better lesson resources that were more relevant to their interests and relatable to the Singapore context. They requested for more "examples of fake news" [1E] so that the lessons would be more "real" [1E]. This is consistent with many scholars who have argued for the value of having authentic materials for the teaching and learning of multimodal literacy (Cope & Kalantzis, 2015; The New London Group, 1996; Weninger, 2018). This, however, does not suggest that a direct appropriation of students' out-of-school literacy practices into the classroom is unproblematic. It is also necessary to address the skepticism and resistance that some students offer towards this endeavour. It is therefore useful for the teachers to recognise how a shift in context fundamentally alters a social practice as a pedagogic practice (Lim et al, 2021).

The teachers and students felt that the approach can be improved through having a greater variety of learning activities, customised resources for different students' learning profiles, further simplification of the instructional content, and inclusion of more relatable examples. The teachers and students reported that the first few lessons were "a bit dry" [Adrian] and "boring" [1 N]. This could be because parts of the lesson were conducted in a lecture style, where the teachers introduced the metalanguage and showed examples from a slide presentation. The main form of engagement with the students was through the questions asked in class. Opportunities for students' meaning-making through small group discussions were only used in the subsequent lessons after the students had learned the pedagogic metalanguage. For example, Brandon felt that the "explicit teaching" followed by having "students do an activity to consolidate" in the next lesson was useful for his class, although he also wondered if it was possible to do both in the same lesson. He suggested having students do a "skit or film a segment" [B] where they performed news reporting. He added that for students to "understand the difference between news reporting and sensationalism", more "hands on [learning] experience" was needed. Likewise, students also expressed that they enjoyed the collaborative learning activities with their peers the most. For instance, students said that the lessons were "quite fun… [as they got] to do group work" [1 N]. However, they also requested for "more group work, and hands-on activities" [1 N]. Based on the feedback, the fourth implication from the pilot study to the larger research project is to plan for more student-centred learning activities even during the teaching of the pedagogic metalanguage, where the teacher's direct instruction forms the main instructional activity. This will create opportunities for students multimodal meaning-making and allow students to represent their ideas and learning with a range of semiotic resources and learn with each other through the negotiation of meanings (Anderson et al, 2017).

Discussion

The pilot study highlights that while the curricular policy adjustments towards the inclusion of multimodal literacy and multimodal texts in the English Language Syllabus has been made, in itself it is not sufficient. A paradigm shift in the mindsets

and beliefs of teachers towards valuing multimodal literacy learning and creating space in the curriculum time for the teaching of multimodal literacy is needed. This could include efforts towards professional learning of teachers as well as assessment reforms to build a culture for curricular innovations.

The systemic constraints on assessment are often a result of the presence of high-stake examinations which directs the teaching and learning in the classroom to be exam-oriented (Lee et al., 2016). These practical constraints of time and mismatched assessment practices have also been surfaced in other educational contexts when attempts to integrate multimodal literacy into the classroom were made, such as in the USA (Hughes & Tolley, 2010) and in Australia (Wyatt-Smith & Kimber, 2005). This results from a "hidden curriculum" where what is not tested is not taught despite it being represented in the curriculum documents. This is reflected in this study from the teachers' interest to have the teaching of digital news focus more on language, which is assessed in the examinations, rather than multimodal literacy, which is not.

The study has shown that while the researchers are mostly preoccupied with the theoretical underpinnings for the curricular innovations, the teachers and students seem to exhibit an implicit trust in the authority of the instructional content. What they are more concerned about is the way in which the content is taught and learned, as well as the accessibility of the content to different profiles of learners. This is consistent with other studies on translational research where the teachers' concern centres on the ease of understanding of the content for their students (Adams & Lim, 2020; Rose & Martin, 2012). In other words, their interest is on the engagement of the students and stage-appropriateness of the content.

The limitations of this pilot study include the scale of the project, where only two teachers from the same school were involved. The prior experiences and beliefs of the teachers in relation to the teaching of multimodal literacy were not examined and could have shaped their use and reception of the lesson package. It must also be acknowledged that the responses from both the teachers and the selected students are personal and are neither representative for all teachers in the English Department nor all students in the two classes. The responses are also not representative of teachers and students in Singapore. In addition, while classroom observation was made with field notes, the lessons were neither video nor audio recorded. As such, the data was limited to the perceptions and reflections of the teachers and selected students interviewed after the lessons.

Notwithstanding, the findings from the study have been helpful in drawing out implications which the larger research study on multimodal literacy in Singapore can address. The learning gained from the pilot has been used to guide the design and development of the multi-phased research project on multimodal literacy in Singapore schools that followed this pilot study.

We situate our work within the global recognition that the English classroom needs to continually evolve in response to the literacy demands of today's digital age (Cope & Kalantzis, 2000, 2015; Unsworth & Mills, 2020; Unsworth, 2014; Weninger, 2019). In our endeavour to develop a pedagogic metalanguage for the viewing of digital news, we hope to equip teachers with the knowledge to teach the viewing of digital news in a systematic and engaging manner. For curricular

innovations to succeed, both aspects of theory and pedagogy are vital and should be given due attention. A value proposition presented to the teachers in this study was that the lesson package would first be developed by the researchers based on theoretical understandings from multimodal studies, which they could then modify and adapt based on the needs of their student profiles. This reduced the time commitment needed from the teachers and gave them the agency to co-develop the final lesson package they used so as to foster a sense of ownership over the learning resources. Building on the experience from the study, it can also be productive to involve the teachers to gradually lead in the design of the next lesson package, in close partnership with the researchers. This shift in responsibility can not only engender a greater sense of agency and ownership from the teachers, but also facilitate a transfer of expertise as part of the teachers' professional growth.

Conclusion

This study has yielded insights on the need to bridge research and practice, as well as to align policy and practice. While situated in Singapore, the issues raised could be instructive for curriculum planners, education researchers, and practitioners interested in multimodal literacy learning elsewhere. Even as many education systems from around the world broaden the literacy curriculum to include new forms of texts from the students' lifeworlds, such as digital multimodal news texts, it is important to support teachers and students with the resources to engage with these texts meaningfully in the classroom. The pedagogic metalanguage is intended to serve as a resource to support the teachers and students thinking and talking about digital news texts in the English Language classroom. Our study has successfully piloted the lesson package designed to introduce the pedagogic metalanguage and informed the refinements to be made for subsequent iterations. Even as the study surfaces implications on the design of the lesson packages, it has also revealed systemic constraints that shape the teaching and learning in the Singapore classroom. The commitment to the broadened notion of literacy needs to be expressed in the creation of curriculum space and time for multimodal literacy to be taught. Assessment shifts also need to be made in tandem to reflect the valuing of multimodal meaning-making beyond the privileging of language. While structural change requires policy makers as well as curriculum and assessment planners' recognition and action, researchers and teachers could pave the way forward by working within the current environment and design opportunities for multimodal meaning-making in the classroom. Through these efforts, possibilities, contestations, and challenges for multimodal literacy learning in the current curriculum and present context can be surfaced. The partnership between researchers and teachers as demonstrated in this study also offers a roadmap towards building up the teachers' confidence and competence to design experience for students' multimodal literacy learning.

Author Contribution　Not applicable.

Data Availability　The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

Declarations

Ethical Approval　Not applicable. The research was conducted when the author was a staff at the Singapore Ministry of Education and ethical approval was not required for the pilot study.

Competing Interests　The authors declare no competing interests.

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