Digital Multimodal Composing as Authentic Assessment in Discipline-Specific English Courses: Insights From ESP Learners

Abstract

In recent years, the advent of educational technology has made digital multimodal composing (DMMC) increasingly common among tertiary students. The current small-scale study explored the perceptions of DMMC of 12 undergraduate students enrolled in a discipline-specific English course at an English-medium university in Hong Kong. In particular, the study focussed on the use of infographics as a digital reflective assessment to communicate the students' learning process. Using semi-structured interviews to explore students' perceptions, the study found the infographics motivating and helpful in enabling them to feel more confident while communicating with peers and clients in their fields. Participants also indicated that infographics empowered them to demonstrate their discipline-specific language skills and facilitated communication of their learning processes. This study highlights pedagogical directions for future discipline-specific courses to move with the advancement of technology and incorporate DMMC to prepare students for their professions.

Keywords: Infographics, Digital multimodal composing, Assessment, ESP, Tertiary students

1.   Introduction

In recent years, digital technology advancements have shifted how tertiary students produce and consume text, which many now view as a process of multiple modes of communication (Hafner, 2018). The ubiquity of technology in teaching and learning has allowed second language (L2) learners to "engage in multimodal composing and literacy practices" (Shin, Cimasko, & Yi, 2020, p. 1) to improve English language proficiency through a variety of text types (Barton & Potts, 2013; Belcher, 2017). Digital multimodal composing (DMMC) in second language writing, defined as "teaching writing as the social practice of meaning making using various semiotic tools" (Kim & Belcher, 2002, p. 86), makes it possible for learners to express themselves more clearly through images, graphs, drawings and photographs. Incorporating DMMC into teaching practices can enable students to compose texts with an improved authorial agency (Dzekoe, 2017: Hafner, 2015), develop critical literacy (Jiang, 2017; Yi & Angay-Crowder, 2016; Yi et al., 2019), enhance vocabulary (Vandommele et al., 2017), and provide

motivation (Kim & Belcher, 2020; Jiang & Luk, 2016). Digital multimodal composing can be incorporated in project-based learning, problem-based learning, blended learning, and other instructional methods (Dyjur, 2016) and may include many different types of forms such as wikis, blogs, brochures, videos, posters, online games, and infographics (Hafner, 2019; Shin & Cimasko, 2008) and meet the demands of a digitally mediated real world (Belcher, 2017).

As a form of DMMC, the multimodal nature of infographics has a positive impact on English language learners in aiding comprehension of content and interaction amongst peers (Bicen & Beheshti, 2019). The authors posit that infographics are particularly suited for English for Specific Purposes (ESP) instruction.The ESP practitioner's role is to understand the ways students will write as members of a particular community and facilitate their acquisition of specialised discourses (Hyland, 2017). Pedagogically, digital multimodal forms of teaching resources can prepare ESP students for authentic scenarios of discipline-specific communication (Hafner & Miller, 2018; Mancho-Bares & Arno-Macia, 2017). ESP educators have access to a range of digital multimodal technological tools and nonlinear teaching approaches (Yi, 2017). To engage and stimulate ESP learners, educators should incorporate semiotic resources in both teaching and assessment, thereby going beyond the linguistic mode alone and preparing students for a digital-dominant workplace. ESP educators should anchor discipline-specific teaching in student language-using communities wherein students seek to embed their writing in their contexts and communities.

It is equally important to create authentic assessments that relate to learning and working in the graduates' professional disciplines (Muller, 2010). In this paper, "authentic assessment" is a "meaningful application of essential knowledge and skills" (Li, 2018, p. 15) incorporating real-life tasks (Muller, 2010). Assessment of ESP learning outcomes in Hong Kong university

courses often employs traditional text-based academic essays and presentations; and this also tends to be the norm in ESP settings outside Hong Kong (Caplan & Johns, 2019; Lee et al., 2019). This traditional assessment process does not always develop the range of skills and knowledge such as problem solving, decision-making, critical thinking, communication, and collaboration that graduates need in their future discipline-related careers (Partnership for 21st Century Skills, 2018). Therefore, there is a need to explore alternative assessment types that can offer affordances for "thinking and practicing in the discipline" (Carless, 2015, p. 964).

The current study explored tertiary undergraduate students' perceptions of the use of infographics as a reflective assessment in an ESP course at an English-medium instruction (EMI) Hong Kong university. The study highlights students' beliefs on whether this digital multimodal assessment helped them to communicate the learning process and was a suitable assessment of language skills. The issue of whether a digital multimodal assessment could influence learners' linguistic self-confidence when communicating in English was also explored. More significantly, the authors have pioneered the use of reflective infographics as an authentic assessment method and demonstrate the assessment's perceived transferability to digitally mediated professional communities. They contribute to a developing body of work assessing the value of DMMC for ESP teaching and assessment.

2.   Literature Review

2.1 Incorporating DMMC into ESP Teaching and Assessment

In a digitally dominant world, multimodality allows ESP learners to define a context and make meaning using multiple modes of communication (Jacobsen & Tønnessen, 2018). It can act as a multimodal competence that combines various forms of knowledge through digital technology to create an authentic language-learning environment to promote multimodality

(Nabhan & Hiday, 2018). By not integrating digital multimodal resources in the teaching of second languages, instructors may "do a disservice to language and literacy learners" (Kim & Belcher, 2020, p. 87). In ESP courses, multimodality can help students understand writing better (Christiansen, 2017), create texts (Chun, 2012), be more willing to speak and contribute to discussions (Ruben & Kang, 2008), improve listening skills (Dai, 2018), and alleviate cognitive overload (Martin, 2012) by using various semantic tools (Siegal, 2012). In ESP, DMMC is increasingly a part of teaching and learning in higher education. ESP learners receive opportunities to engage and process meaning-making in authentic learner-centred scenarios (Bonsignori, 2018; Hafner & Miller, 2011; Kohnke, 2019). With the use of numerous representations of multimedia, learners can experience natural and authentic discipline-specific discourse (Hafner et al., 2018) with detailed content explanation and the ability to manipulate language strategically. In the delivery of ESP content teaching, efficiency has improved through the adaptation of various multimedia modes, including text, graphics, and sound in teaching and learning (Hafner, 2015).

Earlier studies have established that infographics have been an effective tool to teach L2 students, particularly in terms of students' ability to demonstrate their understanding, summarise key concepts, improve memory retention, and improve grammar knowledge (Al Hosni, 2016; Rezaei & Sayadian, 2015). Recently, interest in using infographics in classrooms has increased because they can be beneficially incorporated into a variety of educational settings (Bicen & Beheshti, 2019). Fadzil (2018) studied Malaysian students' use of infographics to improve interest in the learning process and perceived infographics to adequately represent the facts. Cote Parra (2015) found that infographics improve students' learning skills and interaction, and a

study in Saudi Arabia found students evaluated and approved of infographics compared with traditional text-based materials (Dahmash, Al-Hamid, & Alrajhi, 2017).

Studies have found that while some students respond positively to multimodal assignments, others question its merit in developing their academic writing skills (Jiang, 2018). In learning contexts that prioritise testing, students may be concerned about high-stakes test scores and perceive digital multimodal assignments as a poor investment in developing their writing skills (Jiang, 2018). In a similar vein, some have questioned digital multimodality's ability to help L2 students' acquisition goals (Manchón, 2017) as learners shift their focus from language to images (Qu, 2017) and thus become distracted from the target language (Casanave, 2017). This has led researchers to call for continued focus on language and less focus on digital multimodality to ensure L2 students receive the necessary attention on the target language to develop as L2 writers (Polio, 2019). Others, notably Belcher (2017), Kim and Belcher (2020), and Hafner et al. (2018) argued that in a digitally dominant world, instruction needs to acknowledge the importance of DMMC and prepare students to become digital writers. Consequently, integrating digital multimodality to aid students' development of multimodal competence and facilitate transfer of skills to real-world situations is crucial.

2.2 The Use of Infographics for Teaching and Assessment

Infographics are a common digital multimodality that break down complex information by integrating data via diagrams and texts in a graphic format using plain English (Dahmash et al., 2017). Pedagogically, infographics can teach complex ideas or illustrate facts otherwise too difficult to comprehend in a text-only format (Gruber, 2015; Naparin & Sadd, 2017). Thus, as an educational tool, it helps learners to understand a large amount of valuable data in a relatively short time. Visuals are often a component of English language classes, but they are rarely the

focal point of assessments (Caplan & Johns, 2019; Lee et al., 2019). As ESP students need to acquire discipline-specific language and concepts in L2, infographics can simplify this information to help students understand and assimilate content more easily (Manowong, 2017). Accordingly, teachers need to experiment with and incorporate DMMC into their lessons, demonstrating the value and benefits of DMMC to students' linguistic and professional growth.

Previous studies investigated digital multimodal affordances for L2 learners with a focus on the use of multimodal texts and their influence on language and literacy learning (Toohey et al., 2015). Rezaei and Sayadian (2015) found that infographics helped learners understand complex grammatical structures and that the multimodal aspects of infographics particularly motivated learners. Similar studies concluded that learners displayed higher levels of engagement, responded more positively to the learning process, and showed significant improvements (Alrwele, 2017; Dahmash et al., 2017). The affordances of visual and written modes in infographics showed potential in EAP/ESP courses to supplement traditional forms of writing tasks to support students' language acquisition (Kohnke & Chan, 2020). Though digital multimodality is in widespread use in education to assist in student learning, educators nonetheless infrequently employ it in assessing higher education students.

ESP assessment is aligned to reflect a specific area of language use, such as English for nursing, aviation English, and legal English. In designing ESP tests, practitioners should consider the following three qualities: (a) language use varies with context, (b) ESP language is precise, and (c) it covers specific purpose background knowledge (Douglas, 2012). A thorough needs analysis should establish these three components to determine the assessment approach to measure whether students can communicate in the specialised discourse of a specific community (Douglas, 2013; Sabieh, 2018). In today's digital multimodal world, this standard implies that

content and language need to interact with visual modes while ensuring the assessment of student linguistic capacity in the specific purpose context.

There is growing evidence of the value of DMMC at the tertiary level. Digital multimodal composing can help L2 learners to acquire the necessary target language in relation to text-image interaction and to understand how to communicate effectively in their disciplines (Smoak, 2003). However, few studies have investigated the use of infographics as an assessment tool at the tertiary level. To address this research gap, the current study examined students' perceptions of the use of infographics as a reflective assessment in an ESP course at an English-medium university in Hong Kong. The following broad research question guided the study:

RQ: What perception do learners have about infographics as an instrument for an authentic language assessment, and how do these learners believe it helped to communicate their learning process throughout their ESP course?

3.   Methodology

3.1 Pedagogical Context of the Study

This qualitative case study investigated students' perceptions of infographics as a viable assessment in the discipline-specific English course "Professional English for Design Communication" at an EMI university in Hong Kong. The 3-credit course is available to 3rd-year students, and its aim is to develop the English language skills necessary for students to communicate effectively in the context of future professions in social design. This discipline-specific course adopts a project-based learning approach in which the syllabus structure involves stages of completion of a self-directed project proposal. This approach provides design students with "opportunities for language learners to receive comprehensive input and produce comprehensible output" (Beckett, 2006, p. 4). Also, such an approach adheres to the "principles

of learner-centered teaching, learner autonomy, the negotiated syllabus, collaborative learning, and learning through tasks" (Hedge, 1993, p. 276). To achieve this goal, students must use the language and text structure appropriate to the context, select information critically, justify design strategies, and present the impact and significance of their projects. The course takes 13 weeks, with 3 hours of face-to-face instruction each week with blended learning components. There are three assessments of which the reflective infographic makes up 20% of the subject grade. A qualified English instructor with over 10 years' experience in different teaching contexts teaches the course. This instructor has extensive experience of teaching English in the design discipline, including taught similar courses previously in Hong Kong and beyond, as well as having professional experience.

In collaboration with programme leaders from the School of Design, it was decided infographics would be a suitable authentic assessment for the students, as it reflects what students will frequently be tasked to produce in their major subjects as well as in the real world. The purpose of infographics is to visualize an impactful story and persuade, entertain, and inform the readers (Krum, 2013). Infographics can combine quantitative and qualitative data (Li, Carberry, Fang, McCoy, & Peterson, 2014); show relationships between different concepts (Holsanova, Holmberg, & Holmqvist, 2009); improve students' critical thinking, comprehension, thoughts, and ideas (Smiciklas, 2012); and enhance the quality of learning (Vanichvasin, 2013) while combining and representing visual elements (Çakiroğlu et al, 2017). For the assessment under study, students created an infographic that illustrated the reflective learning processes they undertook in their social design projects conducted in their main discipline studies. Students displayed the four stages of reflection (describe, examine, understand/learn, and plan for the future) incorporating graphics and texts (approximately 300 words) to put visuals into context for

their own project. Specifically, students showcased how they considered what was positive and negative about the whole experience and how they incorporated feedback from peers and instructors, if any, into the final product to show growth as designers and thinkers.

Assessment preparation began with a discussion of the differences between an infographic and a poster along with the different objectives of the two approaches. Then students analysed a variety of infographics (e.g., informational infographics, statistical infographics, comparison infographics, hierarchical infographics) in terms of organising the text in a reader-friendly way, guiding the audience through the topic, and assessing how sensible and fluid the division of the text and the appropriateness of language (e.g., formality, purpose, audience) were. These steps are important and conducive to language learning, and they enabled the students to make sense of the meaning-making process and affordances of DMMC (Nation & Macalister, 2020). In these steps, students could notice, reflect on, and compare language use and the use of images, graphs, and photos. Finally, the instructor rated the example infographics in accordance with the assessment rubric to demonstrate the expectations of the assignment and the grading structure. In the classroom, the instructor aided the L2 students with grammar, chunks of language, and vocabulary to enable them to communicate in a pragmatically appropriate way (Polio, 2019).

3.2 Participants

Twelve participants were in the course in this qualitative study at an EMI university in Hong Kong. All were born and received their primary and secondary education in Hong Kong. The participants ranged from 20–23 years old, and there were six males and six females. All 12 participants had Cantonese as their first language; the sample group was culturally and

linguistically homogenous. Students' English level was equivalent to IELTS 6.5, and all had previously completed a general EAP course in their first year of study.

3.3 Data Collection and Analysis

This study adopted a qualitative interpretive paradigm (Richards, 2003) to provide a rich dataset to gain insight into students' perceptions of the assessment. A purposive sampling approach was taken when selecting the participants to provide information-rich cases (Merriam & Tisdell, 2016), and these 12 participants were invited to join the study by the first author. Each participant received verbal and written information regarding the research scope, the use of collected data, and the right to withdraw at any time. Twelve individual interviews lasting approximately 42–58 minutes were conducted in English in a setting of the participant's choosing. The authors recorded and transcribed each interview and assigned each interviewee a pseudonym. Interviews explored topics that included participants' perceptions of infographics as a viable assessment, the impact on quality and depth of learning, whether the assessment represented something that students might encounter in the world beyond the university, growth in self-confidence when communicating in English, and academic engagement. The 12 interviews were thematically analysed to provide a "rich, and detailed, yet complex account of the data," as directed by Braun and Clarke's (2006, p. 78) six steps for thematic analysis. These steps include familiarisation with the data, initial coding, and searching, developing, and reworking themes until they are finally defined. This process was enacted by the first two authors who analysed each transcript manually to work closely with the data. The authors then compared and refined the emerging themes. The analysis involved three phases: seeing, encoding, and interpreting the themes. The authors selected quotations that captured the experiences,

perspectives, and voices of the participants to reinforce the main observations. Two member checks took place via email to confirm the accuracy of the themes (Nowell et al., 2017).

4.   Results

The findings have been organised in accordance with the guiding research question. The analysis suggests four broad themes. Each theme is presented and discussed using extracts from the interviews with participants to illustrate their experiences as accurately as possible and reinforce the main observations.

4.1 Communicating the Learning Process

This theme recognises that the infographic assignment can illustrate the students' authorial decisions, demonstrating the four stages of reflection (describe, examine, understand/learn, and plan for the future) while integrating graphics and text. Participants often began the interviews by discussing how infographics enabled them to show their learning and thinking process by focusing on images and design ideas. For example, one participant, Martin, commented:

> Normally, we need to write an essay. Showing my thinking in my design process is very difficult. But now, I can add my design sketches to show how my design evolved. I can show what I have learned to my classmates, teachers and clients.

Others reiterated this point in the interviews. Vivian and George asserted:

> Before, I was very worried about writing an essay. Now, I can include the initial drawings of my design to show my original design and how my project changed. Using pictures is easier than just using words (Vivian).

It is difficult to write essays in English. This is actually how I'll tell the client my design ideas (George).

Hafner and Miller (2018) suggested that multimodality has become an integral part of the workplace, and the students supported this. For example, the students valued the opportunity to use visuals to communicate design concepts and express the development of their ideas. Students also used key words in their infographics that enabled them to use the target language strategically (Hafner, 2015). The excerpts above illustrate that students' perceptions, which arose out of reflection on the assessment and their future workplace, clearly related to communicative ability in their fields. This resonates with Belcher's (2017) notion that DMMC creates enabling conditions to facilitate transfer to the real world.

4.2 Self-Confidence in the Ability to Succeed

The second widely encountered theme suggests that the multimodal assessment helped participants become more confident in their discipline-specific knowledge and language skills. Participants reported that the infographics imitated scenarios they would encounter in their future workplaces. Jeffrey said:

When I present my proposal to potential clients, I have to include sketches, objectives, creative strategy, and timeframe. Previously, I have used posters, and infographics are similar. This helps me to summarise my project and allows clients to get a clear overview.

Five interviewees described being less nervous about their language abilities. Although producing the infographic and selecting relevant words was challenging, participants stated that the process helped them understand specific words and grammatical structures that could be directly transferred to their disciplines (Hyland, 2012). Anna, George, and Cecilia agreed that

this is directly relevant to their future professional work, and they felt more confident about presenting their ideas to potential clients. Catherine expanded on this point, "Actually, this is what I will do after I graduate when I meet clients. I feel more confident in describing and selling my design ideas."

Improved confidence in their ability to succeed is a positive finding. Because students see the relevance of the assessment and how it is directly related to their professional workplace, the assessment succeeded in creating an authentic scenario in which students engage and embed their writing and designs in the community (Hafner & Miller, 2018; Mueller, 2010). Although students had encouraging comments about the infographic itself, the majority expressed the importance of the teachers' supporting the students and engaging in their language learning to help the students succeed (Belcher, 2017). The participants stated that this support from teachers was not available in other courses, which hampered students' success.

4.3 Suitable Assessment of Language Skills

The third theme describes the interviewee's perception of the infographic as a tool to assess their language skills. Broadly, the interviews revealed that the participants found the assessment reasonable and suitable. Two participants, Annette and Jim, highlighted:

[It] allows me to show that I understand design, words, and concepts and can use them in communicating my ideas (Annette).

It is easier for me to explain what I mean in short texts. You know, when we graduate, we don't have to write long papers, so I don't understand why we should do it while being students (Jim).

One student, Cynthia, talked about previous English assessments and how they have not adequately reflected authentic tasks; instead, students have been asked to compose long and irrelevant texts:

> In an earlier English course, we were asked to write an 800-word essay on a topic not related to our interest. It was difficult and too hard for us. It is more suitable for us to add descriptions and explanations to our designs than writing an essay.

However, one student, Ken, felt that he could improve his language skills better through the longer assignments in the subject. He associated longer work with more opportunities to enhance language skills:

> We are writing very little . . . short things. So, it's kind of like an add-on, and I think we are not really helping our English skills. If we write more I can improve.

Nearly all interviewees mentioned that infographic assessment allowed them to better engage with the discipline-specific language and assess it in its context. In a multimodal assessment, content and language interact with the visual modes while ensuring that students' language skills are appraised (Sabieh, 2018; Seviour, 2015). Overall, students reported positive experiences with the assessment, and in their opinion, it became achievable. This positive experience was vital to their motivation, something that will be discussed in the next theme.

4. 4 Motivation to Learn

Participants acknowledged that multimodality motivated them to better engage with course content inside and outside of the classroom. Most agreed that the combination of images, graphs, and short text made presenting their understanding more interesting and fun. Barbara stated:

One thing I have noticed is that I'm happier to attend the English classes, and I spend

more time preparing and working on the course content.

Martin and Lucy expanded on this point:

Learning is now fun and relevant. To be honest, before I spent very little time to prepare

for classes and to do assignments. And since we are all now working on our own design

project, we can now focus on our major studies in our English course (Martin).

I'm more motivated and confident to speak to clients about my design ideas (Lucy).

These comments are highly pertinent, as ESP courses should target students' needs, but dealing

with diverse student needs can be constraining. Although students have different expectations, it

is vital to ensure that all students have the best learning experience possible. By linking the

context in the ESP course directly to their future workplace settings, students can become

proficient members of the particular community (Hyland, 2017) and increase their linguistic self-

confidence (Garcia-Pinar, 2019). The participants in our study were aware of the challenge of

tailoring assignments to different situations and found that the infographic allowed them to

personalise their learning needs.

5   Discussion

5.1 Student Investment

One of the main justifications of ESP provision is to enable students to communicate in

the specialised discourses of their study field (Hyland, 2017). Student investment in the

infographics was high because of the perceived connection to their future profession in terms of

the format of the infographics and the way they would communicate their design ideas to clients.

Through the infographics, the students could more closely connect with their desired

professional identities, which enabled more possibilities and power (Kramsch, 2006) and a sense

of belonging in their desired imagined community (Lave & Wenger, 1991). These ideas echo Jiang's (2018) findings that DMMC can help to shift learner identities from passive and resistant writers to active composers. The infographic assessment enabled students to reposition themselves from English learners to professional English users. This affordance generated more investment in the learning process.

5.2 Authorial Agency

As well as tapping into the students' desired identities as designers in the field, the infographics enabled authorial agency and empowered the students to communicate their ideas by offering "multiple paths" to text composition (Yi et al., 2019). One of the main reasons for this was that the infographics allowed students to use shorter texts and more images to explain their design process. Multimodality gave them more options to express their ideas and the infographic format, which demanded concise language, forced them to critically assess which information to include or omit. This process helped students to more clearly focus and communicate the key ideas of their design process, resulting in less reported frustration than with longer assignments such as essays and more confidence to communicate. Through expressing their design processes, the infographic created room for agency by enabling students to represent themselves in their work (Cimasco & Shin, 2017). In other studies, Jiang, Yang and Yu (2020) found that DMMC had an empowering role in enabling the expression of self-identity. Hafner (2014) also reported that DMMC legitimated more discoursal identity options than traditional assignment types.

5.3 Language Acquisition

The findings in this study indicate that most students valued the infographic assessment as a learning experience to develop language skills and engage with discipline-specific English.

Though measuring language enhancement was not the focus of this study, the results tend to support those found in other studies (e.g. Rezaei & Sayadian, 2015) that infographics can foster language improvement. The view that DMMC "deprives" students by shifting the focus away from cultivating linguistic skills (Qu, 2017, p. 92) and reduces opportunities for students to "struggle to transform ideas into language" (Mancheon, 2017, p. 94) did not appear to be supported by the students, except one who felt that he would be able to enhance his language skills better in longer assignments. When composing infographics, students needed to transform complex ideas into concise, informative, and memorable messages. This process appeared to challenge the students and facilitate their critical application of language.

6. Conclusion and Implications

This interpretive qualitative case study explored ESP students' perceptions of employing infographics as a multimodal assessment. Overall, participants believed the assessment facilitated the communication of their learning process and demonstrated their discipline-specific language skills. Moreover, students expressed increased motivation to learn and self-confidence when communicating in English to potential clients. Many of the students mentioned that previous English courses and assessments at the university had been unconnected to their discipline and felt infographics to be authentic representations of future workplace scenarios. Students highlighted the ability to integrate design drawings, images, and ideas with explanations as a particular strength of the assessment. Participants generally reported that the assessment allowed them to communicate and express themselves in discipline-specific discourse. Overall, participants valued the assessment as it helped them to communicate the learning process, become more self-confident to succeed in the discourse community, assessed their discipline-specific language knowledge, and motivated them to learn.

Implementing infographic assignments into ESP teaching involves various stages (Kohnke & Chan, 2019). This includes introducing learners to the value and use of infographics, analysing relevant infographics, planning and working on the infographics, publishing, reflecting, peer reviewing, and assessing the infographics. During the analysis stage, learners should be encouraged to discuss how the salient features of infographics (such as the use of visuals, short text, and precise language) combine to convey the author's message. It is important to include this focus on multimodal competence to highlight the value of infographics; this should also be reflected in the assessment rubric. Infographics can be used flexibly in ESP teaching. For example, they could be used to initiate a discussion, practise presentation skills, or showcase student research. On the technical side, there are free-to-use online tools for developing infographics. Students should be supported in selecting and using these tools. One of the strengths of using infographics highlighted in this paper is the connection to the work students' are doing in their discipline. One suggestion is therefore to focus an infographic assessment on a specific project the students are conducting in their major studies. This will enable the students to attend the ESP classes as members of their discipline community, offering affordances for them to exercise more agency in their English classes.

In this qualitative case study, the sample size could be considered relatively small, as only 12 students enrolled in one discipline-specific subject participated. This presents challenges in generalisability to L2 learners in different contexts. However, following interpretive studies, the paper has outlined the context and the interpretation of the results (Guba & Lincoln, 1994; Geertz, 1972), and it is up to the reader to position themselves vis-à-vis the research, deciding the relevance and value to their context (Merriam, 1988). Future research may consider employing multiple levels of data collection (e.g. questionnaire, discourse analysis) to

understand better the pedagogical use of infographics on ESP learners and transferability to their community.

Language teachers should move with digital technology advancement and the professional literacies it redefines. Allowing students to demonstrate communicative expertise in multimodal texts can help them to develop the skills and knowledge graduates need today in their discipline. Infographics are a relevant and motivating option for language teachers to enhance their students' language skills, confidence, and professional literacies.

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