English Teaching, Vol. 75, No. 3, Autumn 2020, pp. 133-146
DOI: https://doi.org/10.15858/engtea.75.3.202009.133
http://journal.kate.or.kr

Invited Teaching Issues

Digital Multimodal Composing: How to Address Multimodal Communication Forms in ELT

Christoph A. Hafner*

Hafner, Christoph A. (2020). Digital multimodal composing: How to address multimodal communication forms in English language teaching. *English Teaching*, *75*(3), 133-146.

Digital media play an undeniably influential role in contemporary communication, facilitating new kinds of multimodal forms of representation. However, ELT pedagogy does not always take these multimodal aspects of communication into account in a systematic way. One pedagogical approach that has been developed for this purpose is ‘multimodal composing’ or ‘digital multimodal composing’. This approach caters to the needs of English language learners in the digital age by engaging with multimodal forms of communication in digital media which are ‘embedded’ alongside the reading and writing tasks that make up the core of traditional approaches to ELT. In this article, I provide an overview of scholarly work that has been done in developing this approach. Drawing on a case study of English language learners in Hong Kong, I demonstrate what the approach looks like in practice and suggest how it might be implemented in other contexts, balancing multimodal forms of communication with the traditional demands of the English language curriculum.

Key words: English for specific purposes, digital multimodal composing, multimodality, digital video, English language teaching pedagogy

*Author: Christoph A. Hafner, Professor, Department of English, City University of Hong Kong, 83 Tat Chee Avenue, Kowloon, HKSAR, China; Email: elhafner@cityu.edu.hk

Received 31 July 2020; Reviewed 1 August 2020; Accepted 5 September 2020

© 2020 The Korea Association of Teachers of English (KATE)

1. INTRODUCTION

This article is based on a plenary presentation of the same title that I gave at the KATE 2020 International Conference. That conference was unique in my experience for being the first hybrid online/onsite conference that I have ever attended: a response to the COVID-19 pandemic that has swept the world throughout 2020. I gave my own presentation in synchronous online mode using the Zoom software, which allowed me to display my PowerPoint slides and interact with the conference delegates, all from the comfort of my office in the Department of English at the City University of Hong Kong. The conference showcased the way that the affordances of digital media have transformed communication to the extent that a major international conference can now be held virtually, allowing delegates to attend at a distance. This idea – that the affordances of digital media change the essential nature of what it means to read, write and communicate – is hardly a new one. As far back as 1996, a group of language and literacy education scholars known as the 'New London Group' pointed to the impact that developments in technology could have on literacy practices. At the same time, they called for language and literacy educators to respond to the changing communicative environment, saying:

> we argue that literacy pedagogy now must account for the burgeoning variety of text forms associated with information and multimedia technologies. This includes understanding and competent control of representational forms that are becoming increasingly significant in the overall communications environment, such as visual images and their relationship to the written word – for instance, visual design in desktop publishing or the interface of visual and linguistic meaning in multimedia (New London Group, 1996, p. 61).

It is interesting to note here that multimodal forms of communication are singled out: 'visual images and their relationship to the written word'. A few years later, Gunther Kress, the founding father of the social semiotic approach to communication known as multimodality, called on TESOL practitioners to engage with other modes beyond language alone, stating, "in fact, it is now no longer possible to understand language and its uses without understanding the effect of all modes of communication that are copresent in any text" (Kress, 2000, p. 337). Around the same time, Shetzer and Warschauer (2000) also drew attention to the implications of changes in digital communication technologies for English language teaching and learning practices. They called for a reconceptualization of the four skills in English language teaching that better takes into account the effects of digital tools. They proposed the following renaming of key terms:

- Speaking/listening > Communication: In digital media, the equivalent of speaking and listening is communication through synchronous or asynchronous communication tools. These pose different kinds of challenges to users, who must learn principles of online netiquette and how to deal with problematic online behaviours of flaming and trolling that can arise. These kinds of communication problems arise in part because of a so-called 'de-individuation effect', i.e. the notion that we tend to see people in online contexts less as individuals and treat them with less politeness as a result.
- Reading > Research: Language learners nowadays need to learn skills of critical literacy in order to cope with the large volumes of misinformation available online. Reading is not just about decoding words and sentences, it is also about a process of research: locating relevant information and critically evaluating that information using a range of strategies.
- Writing > Construction: In digital media, 'writing' involves new forms of representation like hypertext, multimodal web pages, and social media posts that combine word, image and other modes. Furthermore, 'writing' with digital tools is often a highly collaborative process. Rethinking writing as 'construction' acknowledges this, as do related terms like 'digital multimodal composing' (see below) and 'design' (Kress, 2010).

One advantage of Shetzer and Warschauer's (2000) approach, which takes the four skills as its starting point, is that it is very amenable to language and literacy practitioners. It is easy to see how, looking at particular skills, it would be possible to 'update' an ELT curriculum to account for the effect of digital tools and 'embed' (Hafner, 2014) important new skills alongside the old ones. A curriculum that focuses on developing speaking, listening, reading and writing can be extended to include digital literacies represented by 'communication', 'research', and 'construction'. Those who feel so inclined can go further and think about how traditional English language skills have been transformed by the affordances of digital media, which have an effect on ways of doing, meaning, the kinds of relationships we can have, the kinds of people we can be, and even our ways of thinking (Jones & Hafner, 2012). In my own work (e.g., Hafner, 2019; Hafner, Chik, & Jones, 2015; Hafner & Miller, 2019), I have similarly argued that digital media create new, emerging needs for English language learners. In this article, I want to look at how English language teachers and scholars can go about addressing those needs using an approach known as 'multimodal composing' or 'digital multimodal composing' (DMC). First, I consider some of the latest developments in scholarship in this field. Then, I provide a practical example of how English teachers might incorporate multimodality in their lessons, while at the same time still providing a clear focus on language skills.

© 2020 The Korea Association of Teachers of English (KATE)

2. DIGITAL MULTIMODAL COMPOSING: KEY RESEARCH THEMES

For the purposes of this article, digital multimodal composing in ELT means going beyond traditional writing forms to include other modes made available by digital media. It could involve students in the production of digital videos, podcasts, infographics, posters, brochures, comic strips, as well as the combination of visuals and writing in academic genres. Moreover, with digital media these kinds of text types can easily be disseminated to a wide audience on the internet. It is important to emphasize here that what I mean by 'going beyond traditional writing forms' does not mean abandoning the teaching of language. Indeed, language plays a very important role in the DMC approach. However, in addition to teaching language, the approach aims to engage students with other modes: for example, how visual design (or other modes like gesture, layout, sound) can be strategically combined with language to create other kinds of meanings. It also aims to engage students with digital tools to prepare and support them in a world where such tools have become a ubiquitous part of social life.

In ELT and related fields, research in this area has examined potential benefits of DMC, with the aim of expanding the ELT curriculum and developing a systematic pedagogy for DMC. As well as meeting emerging needs in multimodal communication for the digital age, DMC has also been found to bring a range of other benefits to language teaching and learning. These are neatly summarized by Belcher (2017) and include:

- Learner autonomy: A digital video project was found to stimulate independent learning and peer teaching (Hafner & Miller, 2011). Similarly, the affordances of digital video to play back and review recordings often led students to spend considerable time rehearsing and re-recording their linguistic performances.
- Authenticity and motivation: The ability to share multimodal creations with a wide audience on the internet can bring students into contact with authentic audiences and thereby increase motivation.
- Legitimation of identities: Engaging with more popular texts that students encounter outside the classroom legitimates a wider range of identities, empowering students to exercise their creativity, enhancing 'voice', and 'emboldening struggling writers to express themselves' (Belcher, 2017, p. 82).
- Bridging in-class and out-of-class experiences: Vasudevan, Schultz, and Bateman (2010) show how images of out-of-class environments and experiences brought into the classroom by secondary school students can motivate the students to express themselves and engage with in-class literacy work. Cummins, Hu, Markus, and Kristiina Montero (2015) and Cummins and Early (2011) similarly advocate the creation of multimodal

'identity texts' that represent the out-of-class worlds of their EAL learners in their full diversity.

- Genre awareness: Students can be tasked with transforming written texts into fully multimodal ones, for example re-presenting an argumentative essay as a form of video (Cimasko & Shin, 2017). As they do so, their awareness of genre conventions is heightened because they have to ask themselves how a different audience would expect the same (or similar) material in a different medium.

At the same time, some research has highlighted issues with students' perceptions of DMC. In a study by Kim and Belcher (2020), 18 Korean university students carried out both a DMC task and a traditional essay writing task. Asked which task was more helpful for their language learning, about half felt that it was the DMC task. About half felt it was the traditional essay writing task, reasoning that, when writing essays, they were able to focus exclusively on writing. While the majority found the DMC task more enjoyable, a majority also perceived that the essay task allowed them to pay better attention to linguistic form. Taking a multiple case study approach, Jiang (2018) also documents the experiences of a student who struggled to see the benefit in DMC projects. While two of the cases he investigated saw a positive change in their investment, the third case, Jia, 'considered DMC a distraction from his goal of passing tests in English and appeared to be content to take on the institutionally-prescribed test-taker identity in university' (p. 69). Teachers who are interested in using the DMC approach should take some of these perceptions into account when designing their courses, making clear the rationale for adopting the methodology, as well as its benefits for language learning.

Some scholars of second language writing express concern about the potential of DMC to provide a sufficient language focus for students (Manchón, 2017; Polio, 2019). However, responding to these concerns others point out the very important role that language plays in the DMC process. As Lim and Polio (2020) note, 'the use of monomodal writing as a pre-multimodal task production step… might address Manchón's (2017) concern that multimodal tasks may not facilitate acquisition' (p. 6). In addition, Kim and Belcher's (2020) comparison of the language produced by students on traditional essay writing and DMC tasks led them to conclude that the 'lack of difference in accuracy suggests that multimodality use does not lessen attention to language' (p. 98) (though traditional writing was found to involve more complex linguistic structure, a characteristic difference between written and spoken modes). To such observations, one can add that the powerful motivating effect of DMC is likely to lead to more sustained engagement with the English language learning task and, ultimately, better learning.

One other theme that is present in current research is the need to develop an effective metalanguage that teachers and students can use to discuss the various ways of making

© 2020 The Korea Association of Teachers of English (KATE)

meaning in different modes (Hafner & Ho, 2020; Shin, Cimasko, & Yi, 2020; Unsworth & Mills, 2020). To put it another way, there is a need for an effective metalanguage to describe the various semiotic resources that are available when constructing a multimodal ensemble. In the next section, I will take a look at some of the basic principles of multimodality, which could serve as a starting point in this endeavour.

3. BASIC PRINCIPLES OF MULTIMODALITY

An important question for practitioners is: what are the principles of multimodality that students must come to grips with and how can these be incorporated into the language classroom? I will deal with the first question here by referring to literature on multimodality and the second question through my case study in the next section, which provides an example of what DMC instruction might look like in the classroom. When it comes to the first question, research into multimodality sheds light on the way that different modes work and on how they combine together to make meaning. It is helpful for English teachers who are interested in teaching multimodal communication to understand this research, so that they can target some of the basic principles in their classes.

First of all, Kress (2003) points out that different modes have different 'affordances'. What he means is that different modes are more suited to expressing certain kinds of meanings than others. Related to this idea that different modes have different affordances, is the idea that, in a multimodal text, some modes can be used for specialized purposes, to communicate the meanings that they are especially suited to. This is called 'functional specialization' (Kress & Jewitt, 2003). For example, images are especially good at describing a scene (e.g., through a photograph), capturing minute shades of colour that would be lost in a verbal description. Scientists presenting results in graphs can use the visual mode to display complex, ever-changing relationships like the change in the rate of acceleration of an object over time. On the other hand, language is especially good at presenting and analyzing hypothetical situations, possible futures, and complex relationships of cause and effect. If we understand the strengths and limitations of different modes, it helps us to compose effective multimodal texts. There are a number of other important basic principles, listed below. These are taken from Kress and van Leeuwen (2006) except where otherwise indicated.

- Text/image interaction: The way that text and image can combine to make meaning in a multimodal ensemble. According to Unsworth (2008), text and image can enter into a relationship of concurrence, complementarity, and divergence. In concurrence, the meaning of the text and the image are similar and reinforce one another. In

complementarity, the meanings are similar too, but at times the textual meaning colours in gaps in the visual meaning and vice versa. Finally, in divergence, the meanings differ leading to an often humorous or ironic situation where the text and the image contradict one another.

- Narrative and conceptual representations: Two different ways of representing the world. Narrative representations tell a story about doing or happening and usually include a participant engaged in some kind of action. Conceptual representations (often diagrams) are timeless representations of the way the world is and how things relate to one another. For example, the organization chart of a company is a conceptual representation.
- Audience interactivity: The way that a visual image can interact with the audience. This can be achieved by using various resources, including distance, camera angle and gaze. With respect to distance, the closer a shot, the more emotionally engaging it is. Film makers advise that one should only use tight close-up shots for the most emotional scenes. With respect to camera angle, there is a basic choice between: 1) oblique shots, which point across the participant, 'offering' the scene for contemplation; and 2) direct shots, which point straight at the participant, who looks back at the camera engaging the audience with gaze and 'demanding' attention. These two different kinds of images are called 'offer' images and 'demand' images respectively. Camera angle can also look down from above the participant, creating a feeling of power in the viewer, or look up from below, making the represented participant look more powerful and so creating a feeling of awe.
- Modality: The extent to which an image is presented as a 'truthful' representation. For example, we might manipulate an image, blurring it and reducing the colour saturation to make it look more 'dreamy' and less realistic. Or we could make the image look old by applying a 'sepia' filter that reduces the range of colours. In video, we could speed up or slow down the footage to create a sense of 'business' or a sense of 'heaviness'.
- Visual coherence: The extent to which images or a series of images 'cohere', that is, appear to belong together. To achieve visual coherence, designers might ensure that image dimensions are the same, colours are similar, layouts are similar, and so on. When someone is shooting a video, they need to pay attention to visual coherence, for example ensuring that they consistently film in the same orientation. This is an issue that can crop up now that it is so easy to film with mobile smartphones: nothing looks more amateurish than starting out with footage in landscape mode and then inexplicably switching to the portrait mode with wide black bars either side of the moving image.

© 2020 The Korea Association of Teachers of English (KATE)

4. DIGITAL MULTIMODAL COMPOSING IN THE CLASSROOM: AN ILLUSTRATIVE CASE

Of course, one question that is of great interest to teachers is: how does one 'do' DMC? The approach that I take with my English for science course in Hong Kong is one that is based on project-based learning. I, along with my colleague Lindsay Miller, have described the course in detail elsewhere (Hafner & Miller, 2019). In summary, the course is designed for a range of science majors, from applied biologists to mathematicians to veterinary medicine students. It aims to promote communicative competence in English in the scientific domain. In terms of its syllabus, the course is structured around an 'English for science' project, which involves students in a simple, simulated science project, including some kind of experiment or field study. For example, one topic, 'Dim the lights', asks students to use their smartphones to measure light readings in different parts of the city at different times of the day and draw conclusions related to light pollution. Students report their findings in two ways. First, they work in teams to produce a digital video scientific documentary for a wide, public audience, which is uploaded to the internet and shared through YouTube. We have a course blog where videos are embedded and students can make comments and we also run a 'sharing session' where students present their finished videos followed by a brief Q+A session with the audience. Second, students work individually to re-present the findings of their study as a written 'scientific report', which is designed for a specialist audience and will only be read by their English teacher.

Within this framework, classroom lessons target the language and communication skills that students need in a 'just-in-time' fashion (Gee, 2004). That is, relevant skills are introduced in class 'just in time' for students to use them on their projects. For example, at the beginning of the project, students need to conduct internet research in order to find information about their topics. Consequently, in-class work focuses on the skills of 'critical literacy', that is, the ability to find and evaluate information on the internet. During an in-class workshop, students apply these skills to their own projects, identifying relevant, reliable sources to inform their English for science projects. Another set of skills that students need to learn as they are preparing scripts and storyboards for their videos are skills of visual composition. In the rest of this section, I want to illustrate the way that these skills can be addressed in class. The examples should show that students learn about *both* linguistic strategies *as well as* visual strategies. 'Doing' DMC *does not mean neglecting language*. Rather, what it means is *learning how language can combine with other modes* to strategically make meaning. The aim is for students to develop a kind of 'visual vocabulary' that they combine with language and other modes to create powerful, engaging, multimodal texts.

The pedagogical strategy that is adopted in the classroom draws on principles of genre

pedagogy (Hyon, 2018). Here, the particular multimodal genre that we are interested in is the 'scientific documentary' and we use a range of tasks to promote understanding of: 1) contextual factors that influence the genre like the audience, the communicative purpose, and so on; 2) the textual features of the genre like the way it is typically organized/structured and the kind of vocabulary and grammar that is typically used. An important part of this pedagogical strategy is the analysis of samples or models of the genre. This kind of analysis helps students to see how previous writers/designers have strategically drawn on linguistic and multimodal resources in order to craft exemplars of the genre. On the course, we use a number of such exemplars in the form of mini-documentaries composed both by professionals and by previous students on the course. These 'models' are analyzed carefully at a number of levels. First, a rhetorical analysis reveals the way that the genre is organized in terms of its macro structure in order to meet the communicative goals of the genre. Second, a linguistic analysis shows how particular linguistic features are strategically used, again in order to achieve the goals of the genre. Finally, an analysis of multimodal semiotic resources considers the way that language combines with other modes like visuals and sound.

FIGURE 1

In-Class, Genre-Based Language Learning Materials on Engagement

Language focus: Using English to involve the audience

Read the following opening to the BBC documentary and answer the questions below.

NARRATOR: In our BBC website survey, 85% of people think they should drink 2 litres of pure water on top of their normal diet. But in our quest to stay young and look beautiful, is 2 litres really the magic number? To find out, you'll need 1 set of beauty conscious twins –
TWIN: Drink loads of water, it's going to make your skin amazing you'll be a goddess.
NARRATOR: – one skin analyzer, and two extra litres of plain water each day. Then simply add the extra water to one of the twins.

1. What do you notice about the kind of pronouns used (I, you, he, she, it, we, they)? How does the choice of pronoun affect the relationship with the audience?
2. What do you notice about the verb forms (indicative - i.e. the statement form, interrogative - i.e. the question form, imperative - i.e. the command form). How does the choice of verb form affect the relationship with the audience?
3. What do you notice about the vocabulary used? How does the choice of vocabulary affect the relationship with the audience?

© 2020 The Korea Association of Teachers of English (KATE)

Let's consider the way that this works by referring to examples of particular lesson materials. In week five, students are expected to complete a script and storyboard for their own digital video scientific documentary. In preparation, we view example mini-documentaries, one by the BBC (viewed in week three)[1] and another by previous students on the course (viewed in week five)[2]. Then, we consider how language and other modes are strategically used in order to engage the audience. With respect to language, we analyse the language of engagement in the task presented in Figure 1. After viewing the video once and completing a listening comprehension task, students examine the script, which is taken from the very beginning of the BBC video and answer the language-focused questions.

Students are expected to notice the presence of first and second person pronouns (e.g., 'In our BBC website survey', 'To find out, you'll need'), as well as question forms (e.g., 'is 2 litres really the magic number?'), imperatives (e.g., 'Drink loads of water'), and informal, high frequency vocabulary (e.g., 'think' as opposed to some lower frequency word like 'believe'). Students learn how all of these features of the English language can be used in order to engage the audience. When it comes to the visual mode, we examine a number of semiotic resources mainly based on examples from a student video viewed in class. According to the materials, the 'basics of visual composition' include:

- Narrative versus conceptual images
- Engaging audience: Offer and demand
- Engaging audience: Using distance
- Camera angle
- Visual coherence

FIGURE 2

In-Class, Genre-Based Materials on Visual Design for Engagement (PPT)

Source: English for science course materials

[1] https://youtu.be/fK2b6UtVW70
[2] https://youtu.be/mL55njba7IU

Figure 2 provides an example of PowerPoint slides from the course materials. In both slides, students are asked to compare different parts of the video and consider which visual design is more engaging. When it comes to the offer and demand contrast, they should be able to identify the second image, in which the subject gazes directly out of the frame at the audience, as more engaging than the first. And with respect to distance, they should identify the first image, with the medium distance head to waist shot, as more engaging (this is also partly because of the use of gaze, of course). These tasks extend the earlier work on the language of engagement into the realm of visual composition, raising students' awareness of some of the potential that images have to make different kinds of meanings.

At the same time, it is worth emphasizing that the classroom activities involved – i.e. watching videos and listening for meaning, analyzing the verbal and visual texts produced – are not, in and of themselves, especially different from regular teaching procedures. Indeed, teachers reflecting on these procedures should be able to identify many similarities with the kinds of activities that they regularly carry out in their own classes. As noted, whilst watching the video, students are engaged in a listening comprehension task, which is focused by both general, top-down comprehension questions as well as more specific, bottom-up tasks. The video also serves as a model that students analyse in order to understand: 1) the language of engagement; 2) principles of visual design. It is only with this focus on visual design that the classroom procedure perhaps takes something of an unexpected turn. However, the focus on visual design is fully embedded in the rest of the lesson and meshes with the overall aim of learning how to communicate successfully in English and through multiple modes. Once teachers have understood a few principles of visual design, extending the lesson in this way should hopefully not be overly onerous.

5. CONCLUSION

The COVID-19 pandemic has thrown a spotlight on the need for individuals to become competent communicators, mastering not only the linguistic system but also the way that the linguistic system combines with other semiotic modes. This has become especially clear as professionals have relied on digitally mediated communication tools like Zoom, MS Teams and other virtual collaboration platforms as they work from home in an effort to avoid the worst effects of the pandemic. An understanding of multimodal design would seem to be more necessary than ever. As this article has argued, English teachers can respond to this need by adopting the approach of digital multimodal composing, which has been shown to bring a range of benefits to the language learning enterprise. This article reviewed key themes in research on DMC and noted a growing interest in that literature in the development of an effective metalanguage for multimodal meaning making. It then presented some of the

© 2020 The Korea Association of Teachers of English (KATE)

more important principles derived from research on multimodality: concepts like affordances of modes, functional specialization, text/image interaction, among others. Finally, the article examined the question of how to 'do' DMC by considering a case study of classroom DMC practice with respect to linguistic and visual engagement. We saw that the materials adopted focused both on language and on visual design, using procedures that are common in ELT classrooms and accessible to teachers. The DMC approach showcased here provides a useful extension of existing work in the language classroom to cater to the needs of contemporary learners, who must increasingly develop sophisticated multimodal communicative competencies for their social and professional futures.

Applicable levels: Tertiary

REFERENCES

Belcher, D. (2017). On becoming facilitators of multimodal composing and digital design. *Journal of Second Language Writing*, *38*, 80–85.

Cimasko, T., & Shin, D. (2017). Multimodal resemiotization and authorial agency in an L2 writing classroom. *Written Communication*, *34*(4), 387–413.

Cummins, J., & Early, M. (2011). *Identity texts: The collaborative creation of power in multilingual schools*. Stoke on Trent, UK: Trentham Books.

Cummins, J., Hu, S., Markus, P., & Kristiina Montero, M. (2015). Identity texts and academic achievement: Connecting the dots in multilingual school contexts. *TESOL Quarterly*, *49*(3), 555–581.

Gee, J. P. (2004). *Situated language and learning: A critique of traditional schooling*. New York: Routledge.

Hafner, C. A. (2014). Embedding digital literacies in English language teaching: Students' digital video projects as multimodal ensembles. *TESOL Quarterly*, *48*(4), 655–685.

Hafner, C. A. (2019). Digital literacies for English language learners. In X. Gao (Ed.), *Second handbook of English language teaching* (pp. 1–20). Cham, Switzerland: Springer.

Hafner, C. A., Chik, A., & Jones, R. H. (2015). Digital literacies and language learning. *Language Learning & Technology*, *19*(3), 1–7.

Hafner, C. A., & Ho, J. (2020). Assessing digital multimodal composing in second language writing: Towards a process-based model. *Journal of Second Language Writing, 47*.

Advance online publication. https://doi.org/10.1016/j.jslw.2020.100710

Hafner, C. A., & Miller, L. (2011). Fostering learner autonomy in English for science: A collaborative digital video project in a technological learning environment. *Language Learning & Technology*, *15*(3), 68–86.

Hafner, C. A., & Miller, L. (2019). *English in the disciplines: A multidimensional model for ESP course design*. Abingdon, Oxon: Routledge.

Hyon, S. (2018). *Introducing genre and English for specific purposes*. Abingdon, Oxon: Routledge.

Jiang, L. (2018). Digital multimodal composing and investment change in learners' writing in English as a foreign language. *Journal of Second Language Writing*, *40*, 60–72.

Jones, R. H., & Hafner, C. A. (2012). *Understanding digital literacies: A practical introduction*. London: Routledge.

Kim, Y., & Belcher, D. (2020). Multimodal composing and traditional essays: Linguistic performance and learner perceptions. *RELC Journal*, *51*(1), 86–100.

Kress, G. (2000). Multimodality: Challenges to thinking about language. *TESOL Quarterly*, *34*(2), 337–340.

Kress, G. (2003). *Literacy in the new media age*. London: Routledge.

Kress, G. (2010). *Multimodality: A social semiotic approach to contemporary communication*. London: Routledge.

Kress, G., & Jewitt, C. (2003). Introduction. In C. Jewitt & G. Kress (Eds.), *Multimodal literacy* (pp. 1–18). New York: Peter Lang.

Kress, G., & van Leeuwen, T. (2006). *Reading images: The grammar of visual design* (2nd ed.). London: Routledge.

Lim, J., & Polio, C. (2020). Multimodal assignments in higher education: Implications for multimodal writing tasks for L2 writers. *Journal of Second Language Writing*, *47*. Advance online publication. https://doi.org/10.1016/j.jslw.2020.100713

Manchón, R. M. (2017). The potential impact of multimodal composition on language learning. *Journal of Second Language Writing*, *38*, 94–95.

New London Group. (1996). A pedagogy of multiliteracies: Designing social futures. *Harvard Educational Review*, *66*(1), 60–92.

Polio, C. (2019). Keeping the language in second language writing classes. *Journal of Second Language Writing*, *46*. Advance online publication. https://doi.org/10.1016/j.jslw.2019.100675

Shetzer, H., & Warschauer, M. (2000). An electronic literacy approach to network-based language teaching. In M. Warschauer & R. Kern (Eds.), *Network-based language teaching: Concepts and practice* (pp. 171–185). Cambridge: Cambridge University Press.

Shin, D., Cimasko, T., & Yi, Y. (2020). Development of metalanguage for multimodal

© 2020 The Korea Association of Teachers of English (KATE)

composing: A case study of an L2 writer's design of multimedia texts. *Journal of Second Language Writing*, *47*. Advance online publication. https://doi.org/10.1016/j.jslw.2020.100714

Unsworth, L., (2008). Multiliteracies and metalanguage: Describing image/text relations as a resource for negotiating multimodal texts. In J. Coiro, M. Knobel, C. Lankshear, & D. J. Leu (Eds.), *Handbook of research on new literacies* (pp. 377–405). New York: Lawrence Erlbaum.

Unsworth, L., & Mills, K. A. (2020). English language teaching of attitude and emotion in digital multimodal composition. *Journal of Second Language Writing*, *47*. Advance online publication. https://doi.org/10.1016/j.jslw.2020.100712

Vasudevan, L., Schultz, K., & Bateman, J. (2010). Rethinking composing in a digital age: Authoring literate identities through multimodal storytelling. *Written Communication*, *27*(4), 442–468.