

Integrating Technology into Genre-based Writing Instruction for Multilingual Learners

GATESOL Journal
2022, Vol. 32(2), pp. 27–42
doi:10.52242/gatesol.167
ISSN: 2331-6845

Cristiane Vicentini

University of Miami

Luciana C. de Oliveira

Virginia Commonwealth University

Jia Gui

Virginia Commonwealth University

Abstract

Although L2 writing is an essential element in multilingual learners' language and literacy development in K–12 schools, it is often underemphasized and overlooked in lieu of the greater emphasis placed on reading. This lack of focus warrants the need for more specific writing instruction in K–12 schooling, especially since it is through the development of writing skills that learners become better able to communicate and interact with others, achieve academic success and career advancement, and have access to increased opportunities within and outside of instructional settings. The achievement of these goals can be facilitated through the support of educators and the implementation of a genre-based pedagogy. In this article, we discuss how technology can be integrated into genre-based writing instruction, highlighting how different tools can be used at various points in time in both face-to-face and online environments. We also provide examples of tools that can facilitate the implementation of this writing pedagogy, based on research in elementary, secondary, and tertiary classrooms.

Keywords

L2 writing, writing skills, genre-based writing instruction, technology

Introduction

Although L2 writing is an essential element in multilingual learners' (MLs') language and literacy development in K–12 schools, it is often underemphasized and overlooked in lieu of the greater emphasis placed on reading (de Oliveira, 2017). Unfortunately, this lack of focus results in writing unpreparedness in schools across the U.S. According to the latest available reports from the National Assessment of Educational Progress (NAEP), in 2011, only 27% of 8th and 12th graders

Cristiane Vicentini, Doctoral Candidate, University of Miami, Miami, FL; email cxr809@miami.edu (<https://orcid.org/0000-0002-2501-0315>).

Dr. Luciana C. de Oliveira, Associate Dean for Academic Affairs and Graduate Studies and Professor, Virginia Commonwealth University, Richmond, VA; email deoliveiral@vcu.edu (<https://orcid.org/0000-0003-0296-4316>).

Jia Gui, Doctoral Candidate, Virginia Commonwealth University, Richmond, VA; email guij2@vcu.edu (<https://orcid.org/0000-0001-5476-1495>).

performed at or above proficiency level (the remaining were at or above the basic level¹). These results show the need for more specific writing instruction in K–12 schooling, especially since it is through the development of writing skills that learners become better able to communicate and interact with others, achieve academic success and career advancement, and have access to increased opportunities within and outside of instructional settings (Kellogg & Raulerson, 2007; Kellogg & Whiteford, 2009; Wellington, 2010). The achievement of these goals can be facilitated through the support of educators and the implementation of a genre-based pedagogy. Though the genre-based pedagogy that we discuss in this article has been mostly used in face-to-face settings without the need for technology, we show here how different technology tools can be used at various points in time in both face-to-face and online environments and provide examples of tools that can facilitate the implementation of this writing pedagogy, based on research in elementary, secondary, and tertiary classrooms. An additional goal is to provide suggestions on how to incorporate technology tools within each phase of a specific teaching model for writing instruction.

Genre-Based Approach to Writing Instruction

Genre-based pedagogies have been used successfully by educators and scholars teaching writing in English as a second language (ESL)/English as a foreign language (EFL) contexts for more than 15 years (de Oliveira et al., 2020; Hsu & Liu, 2019). Genre-based approaches emphasize that writing pedagogies should provide students with explicit and systematic explanations of how language works in social contexts (Hyland, 2003; Martin, 2009; Rusinovci, 2015). Additionally, they help to improve students' ability to understand and produce texts (Almacioğlu & Okan, 2018; Luu, 2011) in a cohesive and purposeful manner (Luu, 2011). One approach within genre-based pedagogies is informed by systemic-functional linguistics (SFL), which is the one we address in this article. We use the notion of genre based on SFL conceptualizations, as a staged goal-oriented social process. Genre is staged because it takes us more than one step to reach our goals; it is goal-oriented because we should have a purpose to write; and it is social because writers shape their texts for particular audiences (Rose & Martin, 2012).

This specific genre-based approach enables students to become active participants in academic and professional settings and their larger communities (Hammond & Derewianka, 2001). Such genre-based approach informed by SFL has evolved to include a Teaching-Learning Cycle (TLC) originally developed by Joan Rothery (see Rothery, 1989). The TLC has gone through several iterations over time from its original conceptualization but has remained an apprenticeship model for genre-based pedagogy based on SFL (Rose & Martin, 2012). We use the TLC as a model to emphasize scaffolding instruction and to guide learners as they go through different phases of the cycle.

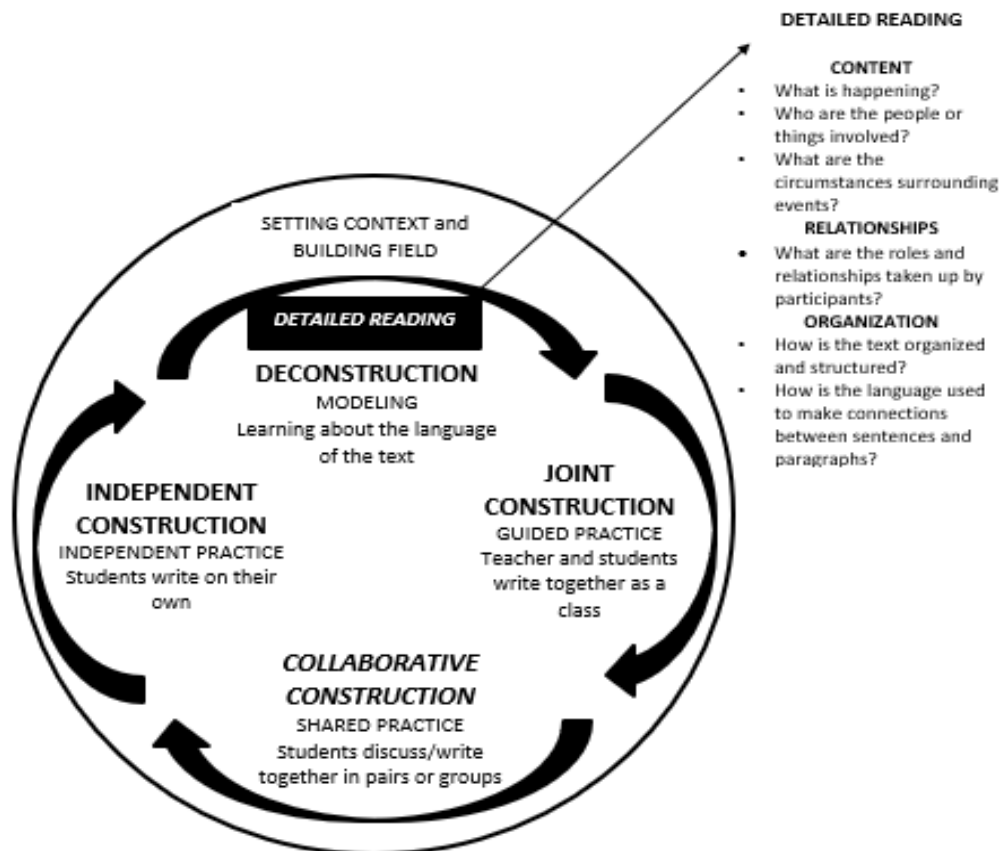
The Teaching-Learning Cycle (TLC)

Through a carefully constructed series of activities, the TLC affords interactive, structured, language-centered instruction for diverse content areas and instructional settings. The TLC was developed for implementation in literacy teaching using the principle of “guidance through interaction in the context of shared experience” (Rose & Martin, 2012, p. 52). This principle refers to the guidance provided by teachers in talking, reading, and writing about a specific text in the context of a shared experience (e.g., a common text, movie, reading). This means that students

¹ The NAEP Basic level refers to partial mastery of the prerequisites that are fundamental for the performance at the NAEP Proficient level. The Proficient level includes mastery of analytical skills, subject-matter knowledge and its use in real world situations (NAEP, 2011).

write about something that they shared as an activity, since shared experiences are critical components of writing. The TLC originally consisted of three phases—Deconstruction, Joint Construction, and Independent Construction (Callaghan & Rothery, 1988)—and over time, the TLC has evolved from the original approach developed by Rothery (1989; see e.g., Brisk, 2015; Feez & Joyce, 1998; Gibbons, 2002; Martin & Rose, 2008; Rose, 2015). With additional work in elementary classrooms over the years, some authors noticed the need to provide increased support for multilingual learners to further explore the genre in pairs or small groups and therefore added an additional phase to the TLC entitled Collaborative Construction (Brisk, 2015, de Oliveira, 2017). This phase of the TLC allows students to actively interact—while working together in pairs or groups—and then write about a shared activity or experience (e.g., a field trip, a movie, a school event) before moving to Independent Construction, when students write on their own. This article is framed upon these four phases due to our belief in its valuable contribution to writing instruction, as shown in Figure 1.

Figure 1
Teaching-Learning Cycle



To set the context, the TLC begins with the overall preparation and development of the necessary knowledge to carry out the writing process. In the TLC, this development and guidance of needed knowledge is known as *building field*. Building field often occurs through Detailed Reading (DR) as a means to develop students' content knowledge in a particular topic and to facilitate instruction. *Building field* continues as students need support for developing knowledge about the topic they are writing about (Rose & Martin, 2012). DR entails teachers' selection of passages from texts to be covered thoroughly (i.e., read sentence by sentence); it is during this time that teachers and students can interpret the textual content, discuss it, and make connections that will facilitate understanding. However, that does not mean that DR is restricted to this particular phase—it can be implemented at all phases of the TLC iteratively; that is, at any time there is a need to activate learners' background knowledge or provide scaffolding during the completion of a task. Particularly for multilingual learners, DR is a vital component within the genre-based approach to writing instruction. Scholars have used the DR phase in different ways. Some have considered it a part of the Deconstruction phase of the TLC (Rose, 2015) while others employ it separately, making it the first step to be completed before initiating the other phases (de Oliveira et al., 2020; Kuiper et al., 2017; Nagao, 2020).

Once DR is complete, it is time for Deconstruction; in this phase, teachers provide mentor texts selected from a specific genre for students to work on and respond to teacher prompts meant to scaffold students' knowledge of language and meaning. Examples of mentor texts include: (i) texts created by multilingual learners themselves; (ii) texts that the teacher and students co-created in past years; or even (iii) published texts that teachers find (i.e., online, in textbooks, magazines, or other sources) that could serve as exemplars for students. For the deconstruction, teachers can perform a variety of tasks through whole class interactions: they can model, call attention to specific features of text, and/or carry out discussions related to how the text is organized, its purpose, and other linguistic styling and choices of mechanics (de Oliveira et al., 2020; de Oliveira & Lan, 2014; Palincsar & Schleppegrell, 2014). Deconstruction can also be performed through the use of graphic organizers (Brisk et al., 2011; Brisk, 2015) or other visual displays (de Oliveira & Avalos, 2018).

The next phase involves Joint Construction, a time when the teacher and students construct a text together that follows the same genre as the mentor text deconstructed previously. Frequently performed in whole class format, this collaboration between the teacher and the students enables learners to apply the language features that were previously highlighted and modeled. In this phase, as both the teacher and students are co-constructing the new piece of writing, the teacher plays the role of the scribe, eliciting information from the class and scribing what is being said (i.e., writing it on the board or projecting it as it is being typed on a word processor). Once this new text is produced, Collaborative Construction (de Oliveira, 2017) may take place. Although not present in the original TLC, this phase was added due to its vital role in supporting the learning of multilingual students or young learners (e.g., in grades K–2) who are novice English language writers. During Collaborative Construction, students work with their classmates (in pairs or small groups) to continue practicing writing in this new genre. Together, they can negotiate ideas, brainstorm, write, review, and revise content; at this point in the TLC, students are working more independently and the teacher only provides scaffolding as needed. After the completion of this optional phase comes the final phase of the TLC: Independent Construction. Here, students write independently and use the previous scaffolded examples and prior experiences deconstructing texts to write a new piece following the same genre (de Oliveira et al., 2020; Derewianka & Jones, 2016).

In other models of writing instruction, such as process writing approaches, mentor texts featuring what is expected are not provided to MLs. Instead, they are left to write on their own from the start, without guidance from teachers on how to accomplish this. Feedback is typically given on what teachers might have seen as “errors” and no discussion that builds MLs’ knowledge about language is included as part of various phases. Teachers ask students to write independently from the get-go and then they provide feedback on various drafts, hoping students will improve. Teachers do not compose texts jointly with their class, a missing but critical step for MLs (Caplan & Farling 2016). This type of approach creates a knowledge vacuum (Rose & Martin, 2012), and students are left to draw on their own experiences without explicit guidance from the teacher. The TLC creates a very different kind of experience for MLs as it is an apprenticeship model that engages them as language users in all phases of activity. Joint Construction is especially important for MLs as they discuss and write together with the teacher in a guided practice, experiential learning environment. MLs experience the principle ‘guidance through interaction in the context of shared experiences;’ that is, guidance about writing provided by the teacher through interactions in the classroom with all students about some kind of shared experience in which all students were involved.

Even though the TLC is most commonly used in face-to-face settings without the need for technology (i.e., pen and paper), tech tools can also be employed to facilitate genre-based writing instruction in both face-to-face and online environments. With this in mind, consider the following scenario, which we include as an example to illustrate how the different phases of the TLC can be implemented in *any* instructional setting and applied to *any* content area, with or without the support of tech tools. In this sense, the choice of tech tool used by the instructor is left to them; that is, they can choose to use a word processor, or a particular website or mobile application accessible on their tablets or cell phones. Please refer to the ‘Infusing Technology into the TLC’ section of this paper for specific suggestions of tools to use in each of the phases of the Teaching-Learning Cycle.

Teaching Scenario

During the Detailed Reading phase, students activated their background knowledge and built their content knowledge of the topic *weather in Florida*. Students learned about the various temperatures in Florida, looked at a map to see which areas were warmer and which were not and what seasons those temperatures occurred. Moving on to the Deconstruction phase, they read and analyzed features present in a mentor text titled “It is Always Sunny, Warm, and Pleasant in Miami Beach” which was a descriptive report about the weather in Miami Beach. Afterwards, the whole class worked together in the Joint Construction of a text in the same genre—a descriptive report—as the mentor text. The teacher elicited ideas from students and acted as a scribe, writing what they said on a word processor projected onto the smart board (or, in pen and paper settings, writing on the whiteboard) in the front of the classroom. They wrote *It is always hot, humid, and uncomfortable in Orlando*. Then, it was time for students to work in small groups and create their own adaptations of the mentor text during the Collaborative Construction phase of the TLC. One small group wrote *It is always windy, cool, and comfortable in Tampa Bay*, while another decided on *It is always sunny, hot, and humid in the Everglades*. Finally, the teacher asked each student to write their own texts in the genre they had practiced during all the phases of the TLC (i.e., Independent Construction). Students started working in class and finished their pieces for homework.

Literature Review

Genre-Based Approach and the TLC

Research on the genre-based approach and the TLC has been carried out in different settings and grade levels to improve English language learners' (ELLs) awareness of genre and writing competence. A case study conducted by de Oliveira and Lan (2014) explored how the implementation of genre-based pedagogy through the TLC in a 4th grade science classroom successfully scaffolded and supported the development of an ELL's writing of procedural recounts in the science genre. Also, in the elementary school setting, de Oliveira (2017) conducted research investigating the implementation of the TLC and the deconstruction of a mentor text specifically developed to teach the book recount genre to students in a first-grade classroom. More recently, de Oliveira and colleagues (2020) co-designed English language arts (ELA) units for first graders, specifically focusing on the implementation of interactional scaffolding practices² to engage and support a group of elementary school students as they progressed through each of the phases of the TLC.

In addition to research at the elementary school level, several scholars across different parts of the world have conducted research on TLC at the college level across disciplines. A case study based in Turkey focused on English Language and Literature students and their teachers, using the three-phase teaching-learning cycle (i.e., deconstruction, joint construction, and independent construction) to facilitate students in building metacognitive awareness of the declarative type. Findings revealed that not only did students' writing performance improve but their attitudes toward writing also changed. Students showed more self-confidence and positive attitudes toward writing, and their essay scores increased (Almacioğlu & Okan, 2018). Similar results were also found in Thailand, where the TLC was applied to support the development of writing competence of 44 Thai university students. Findings revealed that these students were able to develop linguistic features and overall organization of writing, and that the approach afforded an enhancement of genre awareness, text organization, and the use of linguistic features characteristic of a particular genre (Thongchalerm & Jarunthawatchai, 2020). Moreover, in Vietnam, the implementation of the TLC in the development of the biographical recount genre for first-year university students successfully contributed to enhancing their writing, as they were able to identify and use key features of this genre (Luu, 2011). In Japan, 27 EFL college students benefited from the support of TLC in enhancing their lexicogrammatical choices and understanding of metafunctions for analytical exposition essay writing. Through a five-phase TLC approach, the students were able to identify target vocabulary and structures and enhance their ability to write in the target genre. Participants in this study successfully (i) built field; (ii) deconstructed a mentor text; (iii) jointly constructed a new text in the same genre; (iv) worked independently in writing their own texts, and also (v) identified and located similar texts in the same genre (Nagao, 2020). Genre-based writing research in a Dutch tertiary education context revealed that the TLC effectively improved participants' writing skills by enhancing their usage of structure and linguistic features (Kuiper et al., 2017). Furthermore, in South Korea, second-year university students taking English as a foreign language writing classes were taught via the genre-based pedagogy for eight weeks. Results from the analysis of pre-, posttests, and delayed post tests indicated that through each stage of the TLC, participants' writing improvement progressed (Jung, 2017), which corroborates the vital role that implementing this type of instruction can have in better preparing learners to write.

² Interactional scaffolding practices entail initiation-response-feedback (IRF) discourse sequences, which actively engage students in the learning and development of discursive practices (Hammond & Gibbons, 2005).

Genre-based pedagogy is not limited to the teaching of English as a second or foreign language. In fact, Allen and Goodspeed (2018) investigated how 19 students taking a French course at a large public university in the Midwest United States were able to identify (i.e., deconstruct) features from mentor texts and use them in the creation of their own writing in the same genre (persuasive writing – manifestos). Findings revealed that genre-based pedagogy favorably influenced students’ perceptions of its effectiveness in support of foreign language writing.

Genre-based pedagogy and specifically the TLC are ways to implement what the newest edition of the *WIDA English Language Development Standards Framework* calls a functional approach to language development (WIDA, 2020). WIDA defines language development as “an interactive social process that occurs over time to expand what we can do with language” (WIDA, 2020, p. 20). This definition closely aligns with the genre definition provided in this article. A functional approach draws on SFL (see p. 359 of the *WIDA Framework* [WIDA, 2020] for a fuller explanation and details).

The literature demonstrates the positive impact of the TLC in the teaching of learning of second language writing regardless of grade level or linguistic background. However, although the COVID-19 pandemic has brought online learning and the use of technology to the forefront, much of the available literature on TLC supporting second-language writing is still based on face-to-face settings. In these cases, the implementation of technology is welcome but not vital to the delivery of instruction as it is in online learning contexts.

Technology Affordances to Second Language Writing Instruction

Information and communication technologies (ICTs) have become prevalent in our daily lives; the Internet, mobile applications and digital tools, learning management systems, video games, simulations, virtual and augmented reality, among others, have transformed the manner in which we can access information, collaborate, communicate, educate, and entertain ourselves. Within the education field, ICTs have enabled instructors to create content, deliver instruction, and design materials that afford multimodal communication and meaning-making experiences for learners of various linguistic and cultural backgrounds and English language skills. In these rich, multimodal instructional environments, L2 writing instruction can be greatly facilitated. Among the vital roles of integrating technology into L2 writing instruction are (i) to afford collaboration in synchronous and asynchronous settings (Bikowski, 2014; Bikowski & Vithanage, 2016; Martin & Lambert, 2015); (ii) to present material in multimodal formats such as images, motion, speech, sound, text, among others (Boling et al., 2008; Smith, 2014; Vicentini & de Oliveira, 2018); (iii) to provide online feedback and scaffolding (Mohamadi, 2018; Nova, 2018); and (iv) to provide prompt, individualized support for students’ acquisition and development of vocabulary, grammar, and mechanics of writing such as punctuation, capitalization, spelling (Dzekoe, 2017; Yamaç et al., 2020). In this sense, tech tools can greatly enhance teachers’ work—especially those who teach large groups. Technology such as word processors’ spellcheckers, online writing assistants (e.g., Grammarly, Ginger), and corpora-based tools (e.g., Netspeak³, COCA Corpus) assist students with vocabulary and grammar, including collocations, prepositions, and frequently used phrases.

In view of these new digital affordances, this article can fill a current gap by presenting specific technology and digital tools that can be utilized to facilitate the instruction of each phase

³ More information on the affordances of Netspeak can be found here: <https://ittc.co.uk/netspeak-one-word-leads-to-another/>

of the TLC and offering suggestions on how to approach these phases when teaching in face-to-face and in online settings.

Infusing Technology into the TLC

This section details how to infuse a variety of technology tools into each of the four phases of the TLC in both face-to-face and online settings. Then, at the end of each phase, we present classroom-based examples for both settings.

Tools for the Detailed Reading Phase

Tools that can enhance the implementation of this phase include those that serve to build field; that is, to establish the context and content knowledge of the topic. In addition, the tools described in this section afford the introduction of content in an interactive manner. Nearpod, Mentimeter, and EdPuzzle enable educators to create interactive presentations and videos. Nearpod offers a myriad of activities for presenting, brainstorming, eliciting responses, and evaluating students through formative and summative assessments. Similarly, Mentimeter affords the creation of presentations that are both beautiful and interactive, as well as polling and collecting feedback. EdPuzzle allows educators to adapt video content (e.g., from YouTube, TED or TEDEd, Khan Academy, Vimeo) by cropping and editing the videos and then adding annotations, interactive questions, other images, links with additional information, or any content that will serve to enhance the Detailed Reading phase. Kahoot, which has become ubiquitous in educational settings, is another tool that can be used to present content but also as formative assessment. There are also other options for those who prefer to replace Kahoot: Quizlet Live and Quizizz. Quizizz is a great alternative that eliminates the speed in which a Kahoot game is played. Instead of a particular amount of time assigned to each question, learners can answer them individually; that is, they select the proper choices at their own pace. Finally, in contrast to Kahoot and Quizizz, Quizlet Live allows students to work in groups. The software assigns students into small groups (i.e., two to four players) which are then given a mascot (e.g., elephants and koalas) as a means to sort and identify all students. Each member of the group then sits together to play the game and answer the questions correctly. The particularly interesting twist, which can truly enhance collaboration, is that students will not receive all the answers on their devices; they must check with other group members to find the correct answer to the question and then submit it from the device in which the answer appears. One last suggested tool for interactivity in the presentation of content is Flippity, which can turn spreadsheets into flashcards, quizzes in game show format, crossword puzzles, among other interactive formats to introduce or review content, obtain formative assessment, and assign additional practice activities.

Specifically in online learning settings where content is presented asynchronously, it is vital that students be presented with information that is clear; they should also be given opportunities to locate and get access to other sources of information that might enhance the understanding of a particular topic. In view of this, we suggest sharing content through tools such as Explain Everything. Not only does this technology afford brainstorming, placement, and organization of multimodal information (e.g., videos, images, voice annotations) in both synchronous and asynchronous settings, Explain Everything also allows users to share their content as an interactive video that captures sound and object movement. Teachers can add links, comments, post-it notes, writing prompts, export the content as a video link, and share them with learners. Table 1 summarizes the tools described in this section and specifies those that can be used for face-to-face or online learning settings.

Table 1*Technology Tools for the Detailed Reading Phase of the Teaching and Learning Cycle*

TLC Phase	Technology for Face-to-Face Instructional Settings	Technology for Online Settings
Detailed Reading	<ul style="list-style-type: none"> ● Nearpod ● Mentimeter ● EdPuzzle ● Kahoot ● Quizlet Live ● Quizizz ● Flippity 	<ul style="list-style-type: none"> ● Nearpod ● EdPuzzle ● Quizizz ● Explain Everything

Classroom-based example (detailed reading). After selecting a specific passage from *The Empty Pot* (Demi, 1996) short story, Mrs. Ann King (pseudonym), a grade 2 teacher in a public school in Indiana, got ready to start Detailed Reading. She utilized Nearpod to present the passage to students in multimodal format. Each sentence was presented in one slide, where students could hear it being read out loud and see images depicting key words and phrases. Once all the selected sentences were presented, Mrs. King gave students an interactive quiz, created using Kahoot. The quiz had questions about the story, its characters, and also covered some key vocabulary and phrases. Students used tablets to answer the questions and received individual feedback (correct/incorrect) after submitting their answers. At the end of the activity, results were shown to students (top scorers) and the teacher went over each of the questions, highlighting specific parts of the story and answering questions students had. Finally, Mrs. King assigned a quiz for homework. This quiz, created via EdPuzzle, was embedded in *The Empty Pot* YouTube video (Toadstools and Fairy dust, 2021). Similar questions to those presented during class (via Kahoot) were posed to students in the EdPuzzle quiz to consolidate learning. Because EdPuzzle allowed students to replay the video segments related to each question, extra practice opportunities were afforded.

When teaching this same class in a synchronous online setting, Mrs. King utilized Explain Everything, where she recorded step-by-step instructions of what tasks students were going to perform during the lesson, how to create accounts for Nearpod and EdPuzzle and how to log in using their computers. Mrs. King sent the Explain Everything video to students over the weekend, and on the day of the class, she presented the Nearpod slides, covering the content and answering questions. Then, in a similar manner to the face-to-face class, everyone played Kahoot and EdPuzzle was assigned for homework.

Tools for the Deconstruction Phase

Tools that can enhance the implementation of this phase include those that serve to model the deconstruction of texts, highlighting and breaking down specific features present in a particular genre. During the Deconstruction phase of the TLC, educators can use presentation tools such as Google Slides and Microsoft PowerPoint to guide students and elicit information as they emphasize textual features in a more engaging and interactive manner (using images, sound, color, etc.). Besides these two common tools, options such as Adobe Express (previously known as Adobe Spark), Microsoft Sway, and Pear Deck can bring novelty to the lessons. Teachers can also present content in visually rich and multimodal formats by utilizing ThingLink. With this tool, it is possible to add tags to images (or videos) that will enhance their presentation. These tags can

then place text, audio, video, voice comments, website links, quizzes, maps, and many other digital resources onto specific parts of the selected background and allow users to click on the tags and dig deeper into the information you are presenting. Text and slides can be added to the background as long as they are first exported to picture or video formats (e.g., screenshots or screenrecordings of content from presentation slides, online texts, or others). ThingLink also works very well when implementing the deconstruction phase in asynchronous online settings. Because the content is presented (i.e., tagged) in multimodal formats, learners can explore the content at their own pace, and what is best, re-read or replay the information placed in each tag, which is usually not typically the case in face-to-face synchronous instruction. Another option that is especially helpful for text deconstruction in online settings is Kaizena. Kaizena is a Google Docs add-on that embeds multimodal feedback (e.g., voice, text, video) into a Google Doc. Teachers' comments created within Kaizena can even be created and saved as "lessons," which can then be reutilized and reshared with other learners. See table 2 for a summary of the tools described in this section that can be used in face-to-face settings or online.

Table 2

Technology Tools for the Deconstruction Phase of the Teaching and Learning Cycle

TLC Phase	Technology for Face-to-Face Instructional Settings	Technology for Online Settings
Deconstruction	<ul style="list-style-type: none"> ● Google Slides ● Microsoft PowerPoint ● Adobe Express ● Microsoft Sway ● Pear Deck ● ThingLink 	<ul style="list-style-type: none"> ● ThingLink ● Kaizena

Classroom-based example (deconstruction). Ms. Kathy Rodriguez (pseudonym), a grade 7 teacher in a public school in Florida, was excited to present the slides she created using Pear Deck, as they afforded great interactivity and collaboration opportunities. Within the Pear Deck slides, the following activities were embedded: First, a quick poll eliciting students to write what they remembered from the passage they worked during Detailed Reading (e.g., key words, characters, topic, etc.). As all submitted answers gradually appeared on the slides, Ms. Rodriguez praised students and asked further questions to ensure that students were ready to move to the Deconstruction phase. Then, Ms. Rodriguez presented a new slide with a mentor text for students to deconstruct. Ms. Rodriguez guided students as they read a descriptive report highlighting the seven new wonders of the world. She facilitated whole class interactions, calling attention to textual features, key words, and organization of the text. Once the mentor text was deconstructed, Ms. Rodriguez moved on to another slide, which this time afforded students to use the drag and drop feature to answer whether something was Correct or Incorrect based on what they had discussed during deconstruction. Each student used their own tablet to drag their icon to their selected answer choice as the teacher read aloud prompts such as 'The statue of the Christ Redeemer is very tall' or 'The Taj Mahal is made of gold,' along with other prompts that afforded further discussion of the topic. Whenever needed, the teacher would go back to the mentor text and the group would then search for the answers to the prompts they had answered incorrectly. The final slide in Pear Deck was a graphic organizer in which students were asked to write the adjectives, descriptive verbs, and key phrases for each of the new wonders of the world.

When teaching this same class in a synchronous online setting, Ms. Rodriguez used the same activities. However, when she was asked to teach asynchronously, Ms. Rodriguez did not use Pear Deck slides. Instead, to gauge students' understanding, she sent students a poll created with Mentimeter, asked everyone to answer the questions within a specific timeframe (one or two days), and later shared a link containing all students' answers. Ms. Rodriguez shared a tutorial created with Explain Everything, going over the full deconstruction of the text; she also shared a graphic organizer created with ThingLink in which each new wonder of the world had hyperlinks and other attachments (e.g., videos, voice notes, text, and images) to increase students' comprehension of key features presented in the mentor text.

Tools for the Joint Construction and Collaborative Construction Phases

During these two phases of the TLC, it is vital to incorporate tech tools that afford interaction and collaboration. In face-to-face settings, the most commonly utilized technology tools for collaborative writing are Google Docs and Word Online, since both offer opportunities for learners to collaborate in the construction of a new text. In the Joint Construction phase, the teacher acts as a scribe, adding to the document or editing it while students visualize the new content or changes. During the Collaborative Construction phase—which is commonly carried out with students working in pairs or groups—students decide their own roles (including who in the group will be the scribe); students work together and the teacher takes the role of facilitator. When it comes to online learning settings, Google Docs and Word Online afford opportunities for students to be simultaneous co-authors (i.e., who can write/edit the same document synchronously), which is a great opportunity for enhanced interactivity during the Collaborative Construction phase. Google Docs and Word Online can be made even more interactive with the addition of multimodal interactive prompts (i.e., audio, voice notes, text, hyperlinks, among others). We suggest utilizing Kaizena, the Google Docs add-on described in the 'Tools for the Deconstruction Phase' for this purpose. Alternatively, in case teachers are interested in solely adding voice notes to Google Docs, Mote, a free Chrome extension, is suggested. Table 3 summarizes the tools that can be used for to teach in face-to-face or online learning settings.

Table 3

Technology Tools for the Joint Construction and Collaborative Construction Phases of the Teaching and Learning Cycle

TLC Phase	Technology for Face-to-Face Instructional Settings	Technology for Online Settings
Joint Construction and Collaborative Construction	<ul style="list-style-type: none"> ● Google Docs ● Word Online 	<ul style="list-style-type: none"> ● Google Docs ● Word Online ● Kaizena ● Mote

Classroom-based example (joint construction followed by collaborative construction). To start the Joint Construction phase, Mark Smith (pseudonym), a grade 9 teacher in New York, started a Google Doc that contained a writing prompt in the same genre they had been working on: a scientific procedural recount. This time, they were going to write about the extraction of DNA from a strawberry. First, they discussed what needed to be done to carry out each task in the experiment; then, Mr. Smith (i.e., the teacher who acted as a scribe, writing what

students were saying) added the procedural instructions to the Google Doc. After that, students performed the task in the manner that it had been written. Throughout the Joint Construction phase, Mr. Smith constantly asked students to refer to the mentor text and reminded them—through questions and prompts—of key features that should be present in this new piece of writing. Once they finished recounting the procedures of this experiment, Mr. Smith gave students the opportunity to work more independently albeit still in a group setting (i.e., Collaborative Construction). It was during the Collaborative Construction phase that he (i) divided students into groups and gave members the opportunity to decide their own responsibilities; (ii) assigned a project to be presented in two weeks: Each group should start a new Google Doc, come up with an idea for an experiment they would like to carry out, conduct the experiment, and then write a scientific procedural recount of it.

When Mr. Smith taught this same class in an asynchronous online setting, he utilized Mote to record audio feedback and place it in specific parts of the assigned project for Collaborative Construction. By sharing his comments using his voice, Mr. Smith was able to use a friendly tone to facilitate students' comprehension and to highlight key points in a more detailed and personal manner.

Tools for the Independent Construction Phase

To enhance the implementation of this final phase of the TLC we suggest tools that allow learners to create, edit, and share their independently constructed texts, such as Wikis, blogs, digital books, and comic strip builders. Recommended tools which afford the creation of multimodal texts are Canva, Piktochart, Edublogs, and Adobe Express. For writing digital books, Book Creator is ideal, since it offers “app smashing;” that is, the addition of multiple applications that work in combination with one another for the creation of a final product. Examples of app smashing include adding an image to ThingLink, then several tags: one with a hyperlink, another with a screenrecording, and embedding a short TEDEd video to facilitate understanding of a particular topic. Finally, suggested comic strip builders include Pixton, Make Beliefs Comix, and Storyboard That. Particularly when teaching in online learning settings, educators should opt for the use of tools that can incorporate multimodal prompts and feedback so that student engagement can be maintained. Table 4 summarizes the tools that can be used for face-to-face or online learning settings.

Table 4

Technology Tools for the Independent Construction Phase of the Teaching and Learning Cycle

TLC Phase	Technology for Face-to-Face Instructional Settings	Technology for Online Settings
Independent Construction	<ul style="list-style-type: none"> ● Canva ● Piktochart ● Edublogs ● Adobe Express ● Book Creator ● Pixton ● Make Beliefs Comix ● Storyboard That 	<ul style="list-style-type: none"> ● Canva ● Piktochart ● Edublogs ● Adobe Express ● Book Creator ● Pixton ● Make Beliefs Comix ● Storyboard That

Classroom-based example (independent construction). After Dr. Jorge Arruda's (pseudonym) students finished working in groups, it was now time to introduce the last phase of the TLC: Independent Construction. In this college freshman composition class in Virginia, students had been engaged in discussions about pandemics over time, including the most recent pandemic experiences. Because the class had been discussing COVID-19 and how the pandemic affected the population in different parts of the world, students' final project assignment was to use Canva to develop (i.e., write and design) their own COVID-19 narratives. Students could choose among the available free templates in a variety of formats to tell their stories; some chose presentation templates and used separate slides to display their writing; some chose posters or infographic templates that allowed them to showcase the entire text at once. After finishing their work, students were asked to present it to the teacher and their classmates, sharing details of the overall writing experience (e.g., what they learned about a topic, whether they benefitted from the activities, etc.)

Using such digital tools during Independent Construction can be helpful for students who are composing and presenting their own writing; these tools offer students opportunities to engage with text (i.e., write it and present it) in a multimodal manner.

Conclusion

A genre-based approach to writing instruction using the Teaching-Learning Cycle (TLC) with the latest technological tools can effectively support MLs as they go through four phases of activity in the TLC: Deconstruction, Joint Construction, Collaborative Construction, and Independent Construction. When working in each of these phases, students actively engage with the featured genre while the technology tools support them as writers. These tools can be infused in each of the distinct TLC phases in both face-to-face and online settings. In view of this, the provided classroom-based examples for technology-enhanced instruction exemplify how this can be accomplished in meaningful ways for MLs within each of the phases of the TLC.

The technology tools we included in this article are suggestions that can be used in the distinct phases of the TLC to afford as much student interaction as possible. As we demonstrated through the classroom-based examples, when students engaged in writing with the teacher, with other students, and independently, the tools supported instruction by (a) highlighting new content through multimodal formats; (b) facilitating formative assessment and feedback; (c) affording additional opportunities for interaction; (d) showcasing and sharing students' work; and (e) maintaining overall interest and active participation in various writing practices.

We would like to emphasize that since the advent of the COVID-19 pandemic, discussions regarding online learning and tech tools have become more prevalent; however, much of the literature on TLC in support of second-language writing instruction remains based on face-to-face settings. By presenting specific technology for each of the phases of the TLC, we aimed to fill this gap and contribute to the current literature in the field.

References

- Allen, H. W., & Goodspeed, L. (2018). Textual borrowing and perspective-taking: A genre-based approach to L2 writing. *L2 Journal*, *10*(2), 87–110. <https://doi.org/10.5070/L210235331>
- Almacioğlu, G., & Okan, Z. (2018). Genre-based approach to writing instruction for students at an English language and literature department. *Eurasian Journal of Applied Linguistics*, *4*(1), 701–100. <https://doi.org/10.32601/ejal.460635>

- Bikowski, D. (2014). The pedagogy of collaboration: Teaching effectively within an evolving technology landscape. In G. Pickering & P. Gunashekar (Eds.), *Innovation in English language teacher education* (pp. 223–231). British Council.
- Bikowski, D., & Vithanage, R. (2016). Effects of web-based collaborative writing on individual L2 writing development. *Language Learning & Technology*, 20(1), 79–99. <https://doi.org/10.125/44447>
- Boling, E., Castek, J., Zawilinski, L., Barton, K., & Nierlich, T. (2008). Collaborative literacy: Blogs and internet projects. *The Reading Teacher*, 61(6), 504–506. <https://doi.org/10.1598/RT.61.6.10>
- Brisk, M. E. (2015). *Engaging students in academic literacies: Genre-based pedagogy for K–5 classrooms*. Routledge. <https://doi.org/10.4324/9781317816164>
- Brisk, M. E., Hodgson-Drysdale, T., & O'Connor, C. (2011). A study of a collaborative instructional project informed by systemic functional linguistic theory: Report writing in elementary grades. *Journal of Education*, 191(1), 1–12. <https://doi.org/10.1177/002205741119100102>
- Callaghan, M., & Rothery, J. (1988). *Teaching factual writing: A genre-based approach: the report of the DSP Literacy Project, Metropolitan East Region*. Metropolitan East Disadvantaged Schools Program.
- Caplan, N. A., & Farling, M. (2017). A dozen heads are better than one: Collaborative writing in genre-based pedagogy. *TESOL Journal*, 8(3), 564–581. <https://doi.org/10.1002/tesj.287>
- de Oliveira, L. C. (2017). A genre-based approach to writing instruction in K–12. *TESOL Connections*. <http://newsmanager.commpartners.com/tesolc/downloads/features/2017/2017-07-TLC.pdf>
- de Oliveira, L. C., & Avalos, M. (2018). Critical SFL praxis among teacher candidate: Using systemic functional linguistics in K–12 teacher education. In R. Harman (Ed.), *Bilingual learners and social equity: Critical approaches to systemic functional linguistics* (pp. 109–123). Springer.
- de Oliveira, L. C., & Lan, S. W. (2014). Writing science in an upper elementary classroom: A genre-based approach to teaching English language learners. *Journal of Second Language Writing*, 25(1), 23–39. <https://doi.org/10.1016/j.jslw.2014.05.001>
- de Oliveira, L. C., Jones, L., & Smith, S. L. (2020). Interactional scaffolding in a first-grade classroom through the teaching–learning cycle. *International Journal of Bilingual Education and Bilingualism*. Advanced online publication. <https://doi.org/10.1080/13670050.2020.1798867>
- Demi. (1996). *The empty pot* (Demi, Illus.). Square Fish.
- Derewianka, B., & Jones, P. (2016). *Teaching language in context* (2nd ed.). Oxford University Press.
- Dzekoe, R. (2017). Computer-based multimodal composing activities, self-revision, and L2 acquisition through writing. *Language Learning & Technology*, 21(2), 73–95. <https://doi.org/10.125/44612>
- Feez, S., & Joyce, H. (1998). *Text-based syllabus design*. National Centre for English Language Teaching and Research, Macquarie University.
- Gibbons, P. (2002). *Scaffolding language, scaffolding learning: Teaching second language learners in the mainstream classroom*. Heinemann.
- Hammond, J., & Derewianka, B. (2001). *Genre*. In R. Carter & D. Nunan (Eds.), *The Cambridge guide to teaching English to speakers of other languages*. Cambridge University Press.

- Hammond, J., & Gibbons, P. (2005). Putting scaffolding to work: The contribution of scaffolding in articulating ESL education. *Prospect*, 20(1), 6–30. http://www.ameprc.mq.edu.au/_data/assets/pdf_file/0008/229760/20_1_1_Hammond.pdf
- Hsu, W. C., & Liu, G. Z. (2019). Genre-based writing instruction blended with an online writing tutorial system for the development of academic writing. *Digital Scholarship in the Humanities*, 34(1), 100–123. <https://doi.org/10.1093/llc/fqy021>
- Hyland, K. (2003). Genre-based pedagogies: A social response to process. *Journal of Second Language Writing*, 12(1), 17–29. [https://doi.org/10.1016/S1060-3743\(02\)00124-8](https://doi.org/10.1016/S1060-3743(02)00124-8)
- Jung, K. M. (2017). SFL genre-based writing instruction: Expository essay in EFL. *Modern Studies in English Language & Literature (현대영어영문학)*, 61(4), 421–455. <https://papersearch.net/thesis/article.asp?key=3558130>
- Kellogg, R. T., & Raulerson, B. A. (2007). Improving the writing skills of college students. *Psychonomic Bulletin & Review*, 14(2), 237–242. <https://doi.org/10.3758/BF03194058>
- Kellogg, R. T., & Whiteford, A. P. (2009). Training advanced writing skills: The case for deliberate practice. *Educational Psychologist*, 44(4), 250–266. <https://doi.org/10.1080/00461520903213600>
- Kuiper, C., Smit, J., De Wachter, L., & Elen, J. (2017). Scaffolding tertiary students' writing in a genre-based writing intervention. *Journal of Writing Research*, 9(1), 27–59. <https://doi.org/10.17239/jowr-2017.09.01.02>
- Luu, T. T. (2011). Teaching writing through genre-based approach. *BELT: Brazilian English Language Teaching Journal*, 2(1), 121–136. <https://revistaseletronicas.pucrs.br/index.php/belt/article/view/9361>
- Martin, J. R. (2009). Genre and language learning: A social semiotic perspective. *Linguistics and Education*, 20, 10–21. <https://doi.org/10.1016/j.linged.2009.01.003>
- Martin, J. R., & Rose, D. (2008). *Genre relations: Mapping culture*. Equinox.
- Martin, N. M., & Lambert, C. (2015). Differentiating digital writing instruction. *Journal of Adolescent & Adult Literacy*, 59(2), 217–227. <https://doi.org/10.1002/jaal.435>
- Mohamadi, Z. (2018). Comparative effect of online summative and formative assessment on EFL student writing ability. *Studies in Educational Evaluation*, 59, 29–40. <https://doi.org/10.1016/J.STUEDUC.2018.02.003>
- Nagao, A. (2020). Adopting an SFL approach to teaching L2 writing through the teaching learning cycle. *English Language Teaching*, 13(6), 64–75. <https://doi.org/10.5539/elt.v13n6p64>
- National Assessment of Educational Progress (2011). *The nation's report card*. https://www.nationsreportcard.gov/writing_2011/g12_national.aspx?tab_id=tab2&subtab_id=Tab_1#chart
- Nova, M. (2018). Utilizing Grammarly in evaluating academic writing: A narrative research on EFL students' experience. *Premise: Journal of English Education*, 7(1), 80–97. <https://doi.org/10.24127/pj.v7i1.1300>
- Palincsar, A. S., & Schleppegrell, M. (2014). Focusing on language and meaning while learning with text. *TESOL Quarterly*, 48(3), 616–623. <https://doi.org/10.1002/tesq.178>
- Rose, D. (2015). New developments in genre-based literacy pedagogy. In C. A. MacArthur, S. Graham, & J. Fitzgerald (Eds.), *Handbook of writing research* (pp. 227–242). Guilford Press.
- Rose, D., & Martin, J. R. (2012). *Learning to write, reading to learn: Genre, knowledge and pedagogy in the Sydney School*. Equinox.
- Rothery, J. (1989). Learning about language. In R. Hasan & J. R. Martin (Eds), *Language*

- development: Learning language, learning culture* (pp. 199–256). Ablex.
- Rusinovci, X. (2015). Teaching writing through process-genre based approach. *US-China Education Review*, 5(10), 699–705. <https://doi.org/10.17265/2161-623X/2015.10.006>
- Smith, B. E. (2014). Beyond words: A review of research on adolescents and multimodal composition. In R. E. Ferdig & K. E. Pytash (Eds.), *Exploring multimodal composition and digital writing* (pp. 1–19). IGI Global. <https://doi.org/10.4018/978-1-4666-4345-1.ch001>
- Thongchalerms, S., & Jarunthawatchai, W. (2020). The impact of genre-based instruction on EFL learners' writing development. *International Journal of Instruction*, 13(1), 1–16. <https://doi.org/10.29333/iji.2020.1311a>
- Toadstools and Fairydust. (2021, April 9). *The empty pot (read aloud books for children). Chinese folk-tale storytime* [Video]. YouTube. https://www.youtube.com/watch?v=_g7pH9eZLPc
- Vicentini, C., & de Oliveira, L. C. (2018). Using technology tools in writing instruction. *NYS TESOL Journal*, 5(2), 44–51.
- Wellington, J. (2010). More than a matter of cognition: An exploration of affective writing problems of post-graduate students and their possible solutions. *Teaching in Higher Education*, 15(2), 135–150. <http://doi.org/10.1080/13562511003619961>
- WIDA. (2020). *WIDA English language development standards framework, 2020 edition: Kindergarten–grade 12*. Board of Regents of the University of Wisconsin System. <https://wida.wisc.edu/sites/default/files/resource/WIDA-ELD-Standards-Framework-2020.pdf>
- Yamaç, A., Öztürk, E., & Mutlu, N. (2020). Effect of digital writing instruction with tablets on primary school students' writing performance and writing knowledge. *Computers & Education*, 157, Article 103981. <https://doi.org/10.1016/j.compedu.2020.103981>