Journal of Global Literacies, Technologies, and Emerging Pedagogies
Volume 8, Issue 1, December 2022, pp. 1444-1463[1]

Success through College and Beyond: Promoting Multimodal Writing Transfer with Infographics

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Abstract: This paper is part of an ongoing research project on the affordances of infographics in the context of First-Year Composition. Using qualitative research methods such as written reflections and a structured interview, the researcher claims that infographics can help students enhance their multimodal composing skills. While working with infographics, students can learn how to (1) formulate a thesis, support, and purpose, (2) find the balance between different modes, and (3) ensure readability and accessibility of their message–the skills that students can potentially transfer to other multimodal genres.

Keywords: Infographics, First-Year Composition, Multimodal Pedagogy, Writing Transfer, Community College.

Introduction

The goals to teach the first-year composition (FYC) students to compose in "print and electronic environments with multiple technologies" and to help them learn about "tone, formality, design, medium, and structure" were set and outlined in 2014, in the Writing Program Administration's Outcomes Statement for First-Year Composition (Mendenhall & Summers, 2015, p. 360). However, Tan and Matsuda's study (2020) illustrates that even today, there are uncertainties and inconsistencies in how FYC instructors approach

[1] **Production credits**
Founding editors/editors: Marohang Limbu and Binod Gurung
Editorial assistants: Dilli Bikram Edingo and Roland Dumavor
Associate editorial assistant: Sarah Munson

ISSN: 2128-1333

teaching multimodality. In their FYC courses at a two-year community college, the researcher places premium on rhetoric, rhetorical situation, and genre awareness, and thus, similar to some participants of Tan and Matsuda's study (2020), they "allow [their] students some freedom to choose what genres they think might be appropriate to accomplish the task" during our unit on multimodality (p. 10). The researcher believes they have been choosing this "freedom" for the wrong reason. Similar to some instructors from a recently conducted study, the researcher has also been feeling "under-skilled at using – and teaching students how to use – various (and ever-evolving) digital tools that could support multimodal composing" (Tremain et al., 2021). When the COVID-19 pandemic started and institutions worldwide had to switch to remote teaching, many instructors began feeling even more unprepared (Al-Naabi et al., 2021; Kaqinari et al., 2021; Hews et al., 2022;). Seeing how overwhelmed with stress their instructors were over unfamiliarity with online teaching, student engagement, limited resources, and workload, many colleges and universities facilitated workshops and encouraged collaboration across departments to address the challenges brought by the pandemic.

Even before the COVID-19 crisis, writing centers have been providing academic support to instructors and students. However, writing centers became an even more favored resource during the pandemic. Academic coaches from a writing center at the same two-year community college helped the researcher redesign their unit on multimodality by offering knowledge and experience in creating effective infographics and facilitating a workshop on "strategies for reading, interpreting, and creating data-driven arguments and narratives in infographic form" (college website). That collaboration with a Senior Academic Assistant (SAA) from the writing center helped the researcher minimize stress over introducing multimodality to their students. However, the difference in students' abilities to create effective infographics prompted the researcher to question infographics' affordances, challenges, and limitations.

As a part of an ongoing research project on the affordances of infographics in the context of FYC, this interview study aimed to explore a relationship between multimodal composing and writing transfer. A separate study, which is also a part of the ongoing project, reported on students' perspectives on the affordances and limitations of infographics (Anonymous, 2022). This study identified the challenges of teaching how to create infographics from a perspective of an SAA who coaches writing, reading, and speech. Using qualitative research methods such as written reflections and a structured interview, the researcher claims that infographics can help students enhance their multimodal composing skills. While working with infographics, students can learn how to (1) formulate a thesis, support, and purpose, (2) find the balance between different modes, and (3) ensure readability and accessibility of their message – the skills that students can potentially transfer to other multimodal genres. Based on the previous research, the identified through this study skills coincide with the skills students need to effectively create other multimodal genres, including but not limited to podcasts (Faris et

al., 2019; Maiullo, 2022; Sowell, 2022), video essays (Jiang & Luk, 2016; Colvin, 2018), and blogs (Alford, 2019).

Research Context

This paper combines data collected from two FYC courses taught at a two-year community college located in the Midwest region. According to the college's website, student demographics include recent high school graduates, veterans, students with disabilities, students of color, first-generation, non-traditional students, members of the LGBTQ community, athletes, and multilingual students. Some of these students transfer to four-year universities and some take adult ESL classes but recently, the majority has been mainly pursuing associate degrees and career certificates. To meet one of the requirements for any certificate or associate degree, the student has to take the FYC course. As per the "Course Reference Form" created by the college's Division of Educational Affairs:

> [English Composition I] course is designed to help students develop their competence in college-level writing and the analysis of texts so they can enter the dialogue of the academic community. This course includes the analysis and practice of argument and using critical thinking to read, analyze, and produce college-level texts.

So, based on the course description, the researcher usually assigns four or five assignments, each exploring a different genre, in sixteen weeks. Three out of the seven Student Learning Outcomes (that are similar at both colleges) are connected to multimodal composing:

> A. Use questions about rhetorical context (e.g., audience, purpose, and genre) to be an actively engaged reader of various texts and resources.
> B. Assess the effects of rhetorical context (including varied mediums and modalities) on a writer's decisions about content, organization, and language.
> C. Engage with multimodal approaches for generating, investigating, and representing ideas. ("Course Reference Form")

The researcher's collaboration with the SAA provided an opportunity to experiment with "varied mediums and modalities" ("Course Reference Form"). Their recently developed workshop "Creating Effective Infographics":

> ...introduces students to strategies for reading, interpreting, and creating data-driven arguments and narratives in infographic form. The coach emphasizes the

> importance of reliable data, focused topics, and professional graphic design elements. Students identify and discuss the similarities between the writing and infographic design processes and the rationale for the rise of visual data products in academia and beyond. In addition to infographic creation, the workshop introduces students to accessible graphic design platforms and a step-by-step process of drafting and revising visual data. Creating Effective Infographics is easily adapted to support specific assignments in any discipline.

In the English Composition I course to which the researcher invited the SAA, students had just finished working on the Opinion Piece for a Local Newspaper assignment and were about to start the Infographic Project, designed with guidance from the SAA. Students were asked to use the same topics and at least some of the collected sources from their opinion pieces.

Notably, not all community colleges may have well-developed writing center services due to funding and staffing issues, but if possible, collaborating with the writing center specialists can be one of the ways to help inexperienced with multimodality instructors introduce the genre of infographics to their students. Moreover, in their description of the workshop, the coaches also mention the concept of transfer by saying that "[s]tudents [will] identify and discuss the similarities between the writing process and infographic design process and the rationale for rise of visual data products in academia and beyond." This statement confirms the researcher's initial hypothesis that students can acquire, and transfer skills needed to effectively design other multimodal projects by learning to read, interpret, and create an infographic.

Literature Review

Multimodal Composing

The concept of multimodality, in the sense of an alphabetic and visual combination, textile weaving, tattooing, etc., has been around for centuries (de Souza, 2002). However, the concept of multimodality in connection to technological advances and changes in the curriculum was adopted by the ten scholars from Australia, Great Britain, and the United States during their meeting in 1994 in New London, New Hampshire, in the United States (New London Group, 1996). Having different professional backgrounds and research interests, this group discussed "the pedagogical tension between immersion and explicit models of teaching; the challenge of cultural and linguistic diversity; the newly prominent modes and technologies of communication; and changing text usage in restructured workplaces" (New London Group, 1996, p. 62). During that discussion, the group developed the term "multiliteracies," which describes the rapid growth of communication channels and platforms through which people from all around the world design and

exchanges various contents of information despite the differences in languages and cultures (New London Group, 1996, p. 63). In educational contexts, these multiliteracies suggest "a different kind of pedagogy, one in which language and other modes of meaning are dynamic representational resources, constantly being remade by their users as they work to achieve their various cultural purposes" (New London Group, 1996, p. 64). These "modes of meaning" include the textual, the visual, the audio, the spatial, the behavioral, and the multimodal – where more than one mode is being used to create a certain meaning (New London Group, 1996).

Bezemer and Kress (2008) define mode as "a socially and culturally shaped resource for making meaning" and emphasize the importance of learning unique features that characterize each mode (p. 171). For example, when working with images, Bezemer and Kress (2008) advise considering the "position of elements in a framed space, size, color, shape, icons of various kinds—lines, circles," and their relationships to each other (p. 171). However, as Jewitt (2005) notes, to prepare our students to be successful communicators in our technologically advanced society, we, as FYC instructors, need to engage our students in composing processes that involve more than one mode.

In the study about the differences between the terms, "multimedia" and "multimodal" in academic and non-academic contexts, Lauer (2009) concludes that the term "multimodal composing" is "more commonly used in scholarly literature" because of the continuous reflective studies on "the new kinds of texts" students are studying and designing in the first-year composition courses. Interestingly enough, even within academia, multimodality is defined and presented differently; thus, some articles are more accessible than others. For example, those who have studied the semiotic theories would have an easier time understanding Anderson et al. (2006), who present the overwhelming gaps in the ways the instructors across the United States perceived and employed multimodal compositions or Bateman (2016) who goes in depth to clarify "the notions of semiotic modes, media, and genre." However, those who have been introduced to multimodal composition via institutional workshops (like me) may struggle to situate those complex definitions in their classrooms and thus go with something more student-centered like a remix project meeting our students "within their digital comfort zones" (Henry, Hilst, & Fox, 2011).

Many scholars agree that all college writing instructors need to be careful with the idea of "digital native students" (Henry, Hilst, & Fox, 2011; Limbu, 2012; Baldwin, 2015). Since many students were "raised with digital technology," many of them "will respond more favorably to our teaching strategies if we help them build on what they already know, which includes multiple ways of composing in multiple modes of communication" (Henry, Hilst, & Fox, 2011, pp. 3-4). However, as Limbu (2012) points out, there is always a chance that these digital native students do not have enough "analytical digital and multimodal understandings," and thus, the instructor's facilitation may be required (p. 10).

Recent scholarship suggests that no matter the level of their digital proficiency, students need to learn the following key characteristics to create multimodal messages effectively:

- The purpose of the multimodal composition should be clear and aligned with the goals of the course or assignment (Alexander et al., 2011; Hafner & Ho, 2020)
- The audience for the multimodal composition should be considered, and the modes of communication should be chosen to meet best the audience's needs and expectations (Alexander et al., 2011; Hafner & Ho, 2020).
- The different modes of communication should be integrated seamlessly to create a cohesive whole (Lohani, 2019).
- The design of the multimodal composition should be visually appealing and effective in conveying the intended message (Lohani, 2019).
- The multimodal composition should be accessible to all students, including those with disabilities. This may involve using alternative modes of communication, such as captions for audio or transcripts for video (Adsanatham et al., 2013;).
- The multimodal composition should consider ethical issues such as copyright and fair use (Adsanatham et al., 2013).

Transfer

As mentioned above, writing scholars and practitioners have different beliefs and pedagogical approaches to teaching multimodal composing, but there is a common goal we all need to remember. Wardle (2007) stresses that since "nearly every student is required to take FYC, administrators, policy makers, parents, and students expect the course to prepare students for the writing they will do later—in the university and even beyond it" (p. 65). As with the other course learning outcomes, we need to consider how the "[engagement] with multimodal approaches for generating, investigating, and representing ideas" ("Course Reference Form") can be retained and transferred onto other disciplines and "to the complex workplace of the twenty-first century" (Tinberg, 2015, p. 8). Before focusing on one possible way, it is essential to review some research on transfer in the context of FYC.

Relying on the work of Tuomi-Gröhn and Engeström (2003) and Beach (2003), Wardle (2007) reviews the common conceptions of transfer. First, there are task-oriented conceptions which "theorize transfer as the transition of knowledge used in one task to solve another task" (as cited in Wardle, 2007, p.66). Second, there are individual-oriented conceptions that theorize transfer as the learner's responsibility to adopt "'learned intelligent behavior' that will help them seek out and/or create situations in which what they have learned will transfer (Tuomi-Gröhn and Engeström, 2003, p.24, as cited in Wardle, 2007, p. 67). Third, there are context-oriented conceptions which include

"situated", "sociocultural", and "activity-based" which theorize transfer as "patterns of participatory processes across situations", as "interactions between people 'involved in the construction of tasks'" and as the systematic activity of "interactions between individual learners and contexts" respectively (Wardle, 2007, p. 67). Finally, Beach (2003) proposes to view transfer as a "generalization" that "includes classical interpretations of transfer—carrying and applying knowledge across tasks—but goes beyond them to examine individuals and their social organizations, [and] the ways that individuals construct associations among social organizations" (as cited in Wardle, 2007, p. 68). Similar to the terminological inconsistencies within the field of multimodal composing, the term "transfer" has also been put to debate namely because of some negative connotations attached to the term such as the banking model of education in which "the students are the depositories, and the teacher is the depositor." Through this approach, students are only "receiving, filing, and storing" the knowledge given to them by the teacher (Freire, 2018, p.72).

Despite the negative connotations, the term "transfer" is continuously being used in composition and rhetoric studies, and as Tinberg (2015) points out, some writing instructors came to believe that "to perform well in particular situations, writers need to achieve new understandings altogether, rather than to repurpose old knowledge" (p. 9). Other composition scholars, including Meyer and Land (2014) and Adler-Kassner and Wardle (2015), argue that it is possible to teach the core concepts of the discipline "explicitly and [promote] the metacognitive awareness that will enable students to repurpose their knowledge in new writing situations (as cited in Tinberg, 2015, p. 9). Metacognitive awareness here refers to the ability to reflect on one's ways of thinking. In a more recent study, Shepherd (2018) proposes "to think of [transfer] as creating a bridge or connection between one area of knowledge and another inside of the learner's mind" (p.108). In the study, Shepherd's (2018) target audience is the students who actively engage with digital writing and, in some digital spaces like Instagram and Snapchat, even practice multimodal composing skills. While working with this group of students, Shepherd (2018) recommends "building connections between in-school and out-of-school writing" by asking "the students to teach [us, their writing instructors] how to make an effective snap or Instagram post…[or] explain how the images and text work in conjunction to make meaning…[or] explain how the meaning is greater than either of the single modes alone" (p. 111). In addition, Shepherd (2018) suggests asking the students "how these same ideas might be used when creating a written or multimodal text in the current writing class, in future classes, and in other writing contexts" (p.111).

This paper, however, focuses on the students who either need physical access or experience with digital and multimodal writing. Shepherd's (2018) underlying approach can be used with this group of students because, essentially, the author invites the students into a dialogue–an alternative approach to the banking concept of education. As Freire (2018) accurately points out, "without dialogue there is no communication, and

without communication, there can be no true education" (pp. 92-93). Working in such a diverse teaching setting, such as a community college first-year composition classroom can help us, the writing instructors, facilitate a dialogue between students who engage with digital and multimodal writing for non-academic purposes, students who do not have experience and/or access to the digital and multimodal writing, and the instructor, who can "teach the core concepts of the discipline" (Tinberg, 2015, p. 9) but have a minimum experience with multimodal composing (like me). One of the qualities that can ensure such dialogue, as Shepherd (2018) indicates, is transparency, according to which "students should be aware of the connections we want them to make and why we want them to make the connections. It is important to mention transfer directly and to discuss their ideas of writing explicitly, connections they may see between writing contexts, and what those connections mean to them as writers." (p.112). More importantly, "transparency is key to the process of facilitating transfer" (Shepherd, 2018, p.112).

Infographics

The researcher conducted an extensive literature on applications, benefits, and limitations of integrating infographics into undergraduate curricula across the disciplines but with emphasis on FYC courses for the paper called "Potential for digital writing transfer with infographics: Students' perspectives" which is currently under the review for the Journal of University Teaching & Learning Practice. For this study, the researcher describes the existing scholarship on infographics within the context of multimodal composition.

Infographics are a type of multimodal composition that combines text, visual elements, and design to present information in a way that is easy to understand and visually appealing. They are often used to present complex or abstract concepts clearly and concisely and can be effective at explaining processes, comparing data, or highlighting trends and patterns. Infographics can be found in almost every field of study. Recently, academics have focused on using infographics in social work, nursing, public health, design, chemistry, biology, and more. For example, Baglama et al. (2017) investigated the use of infographics in mathematics education. Kothari et al. (2019) researched infographics' ability to explain chemical formulas and symbols to students in biology classrooms. Some of the more prominent applications of infographics are explained by Toth (2013): they can be used in business and professional communication classes to communicate information clearly with a focus on purposes, branding, evaluating document principles, using persuasion techniques effectively, and conducting research summaries. Additionally, Toth (2013) recommended that instructors familiarize students with the following websites: Cool Infographics (http://www.coolinfographics.com), Visual.ly (http://www.visual.ly), and Daily Infographic (http://www.dailyinfographic.com). These sites provide examples of infographics students can analyze and then create themselves. Jones et al. (2019) noted that creating infographics provides students – both those who have and do not have knowledge of and

experience with technology – with the following benefits: improved communication, advocacy, and digital skills.

Creating effective infographics can help students enhance their data visualization skills and become more confident in designing other multimodal projects. By learning the basics of designing an infographic, students can gain insight into the fundamentals of creating graphical representations of data. They can understand the importance of layout, typography, color theory, and visual hierarchy to make their infographics attractive and easy to interpret. Students need to consider the infographic's audience and tailor the content and design to meet their needs and interests. With a better understanding of these techniques, students can apply them to other multimodal projects such as videos, podcasts, and interactive media and create professional-looking results.

Some scholars believe that infographics also have their issues and limitations:

- Lack of information: Infographics rely on concise and accurate information. If the information included in an infographic needs to be corrected or completed, it can be misleading or confusing to the reader (Arslan & Toy, 2015).
- Complexity: Infographics should be designed to be easy for the reader to understand. If an infographic is too complex, with too much information or too many elements, it can be overwhelming for the reader and challenging to interpret (Krum, 2013; Alford, 2019).
- Bias: Infographics can sometimes present information in a biased way, intentionally or unintentionally. Students must learn to present information in an unbiased way when creating an infographic (Krum, 2013; Kelidou & Siountri, 2020).
- Limited audience appeal: Not all audiences may be interested in or receptive to infographics. Some people prefer to read text or watch a video instead. Students must consider the intended audience when creating an infographic and present the information in an alternative way if necessary (Arslan & Toy, 2015; Kelidou & Siountri, 2020).
- Limited use: Infographics may only be suitable for some types of information. Some information may need to be more complex or nuanced to be effectively presented in an infographic and may require a different form of presentation, such as a report or essay (Krum, 2013; Kelidou & Siountri, 2020).

Instructors must discuss these issues and limitations with their students because such conversations can help students make informed decisions about when and how to use infographics in their work, develop critical thinking skills, and understand the importance of presenting information in an ethical and unbiased way.

Research Design

Relying on the theory of high road transfer and "bridging" instructional strategy (Perkins & Salomon, 1989; 1992), the researcher of this study reviewed "general principles among different events in different contexts" and deliberately searched for "connections among their structures" (Hajian, 2019). By "general principles," the researcher means the skills students employ while working with a text, both from a sense of understanding and creating it. By "different contexts," the researcher means written and visual texts between which standard "connections among their structures" are being identified.

Two sets of data were used in this study. The first set, which included the responses from the email interview with the SAA, was collected at the end of a 16-week FYC course taught during the spring of 2022. The SAA gave informed consent to publish interview responses in this paper. The interview was set up a few weeks after the SAA visited the researcher's FYC course and facilitated the Creating Effective Infographics workshop. The interview included the following open-ended questions: (1) based on your experience, what are some challenges you've encountered while working with infographics for your own purposes? (2) What are some challenges you've encountered while teaching students how to read, interpret, and create infographics? (3) Based on your experience as a WRSA coach, the instructors from which disciplines tend to request this workshop on infographics? (4) If this data is available, how many of these workshops on infographics have been requested this past academic year? WRSA stands for Writing, Reading, and Speech Assistance. The interview questions were designed to be reflective to encourage the SAA to think critically about their experiences, actions, and beliefs in working with infographics. With the researcher's part-time employment at the college and the timing of the study (the end of the semester), email interview had "advantages in terms of convenience, eliminating the need for researcher and interviewee to be in the same pre-arranged place at the same pre-arranged time" and it "facilitated an extended period of communication" (Bampton et al., 2013). Also, having the SAA's responses in an email highlighted the transcribing stage of the interviewing process, saving time and allowing the researcher to focus on the coding and analysis stages of the study.

The second set, which included open-ended questionnaires and written responses, was collected at an 8-week summer FYC course taught during the summer of 2022. The study received ethical approval to collect short written responses to the survey questions and written responses before publication. One limitation of this study is the number of participants: out of 16 registered students, only 13 participated. All students gave informed consent. Students completed the surveys and reflections anonymously, using the Ungraded Survey option under the Quizzes, available through the college's learning management system, Canvas. The study was carefully designed so that the researcher could collect students' perspectives at different stages of working with infographics. The first stage was to learn about students' prior infographic-related experiences (Robertson

et al., 2012). The second stage was to provide students with theoretical foundations for designing effective infographics. The third stage was to experiment with the infographic design platform, Canva.com, create rough drafts, and receive anonymous feedback from peers through a Google Doc created by the researcher, who also anonymously provided individual feedback. During the fourth stage, students revised their infographics based on the received comments and submitted their final drafts for a grade. At the end of each of the first three stages, students were asked to respond to a short questionnaire about challenges, questions, and comments they encountered. At the end of the fourth stage, students were asked to compose brief reflections describing their processes of creating their infographics. In this study, only the written responses from the second data set were used because of the common themes between the interview and the students' reflections.

The researcher analyzed both data sets using thematic analysis (TA), which allowed prioritizing participants' experiences over the researcher's interpretations (Braun & Clarke, 2012, p. 59). While applying TA to the collected data, the researcher used "an inductive approach to data coding and analysis [which allowed to] derive [codes and then themes] from the content of the data themselves—so that what is mapped by the researcher during analysis closely matches the content of the data" (Braun & Clarke, 2012, p. 58).

Results and Discussion

The results of the written reflections and the structured interview reveal that infographics can help students enhance their multimodal composing skills. While working with infographics, students can learn how to (1) formulate a thesis, support, and purpose, (2) find the balance between different modes, and (3) ensure readability and accessibility of their message–the skills that students can potentially transfer to other multimodal genres. Also, by practicing these skills in the FYC courses, students can be more prepared when infographics are assigned in other disciplines. During the interview, the SAA confirmed the disciplinary reach of infographics by stating that she "has worked with students on infographic assignments from English, marketing, biology, and speech courses."

Thesis, Support, and Purpose

Based on the results of the structured interview with the SAA, it can be difficult for students to formulate a thesis, find support, and determine the purpose of their intended message when working with infographics:

> *There have been moments when infographics as academic texts have been a hard sell, and students see them as outside of "serious" academic work. As a result, they don't always truly read them and instead just parse them quickly. Students seem less familiar with infographic formats, so they struggle to identify and/or think*

> *critically about thesis statements, support points and evidence, and author/designer purpose.* (SAA)

Students tend to struggle with formulating a clear and concise thesis statement and finding supporting evidence no matter the genre–academic essays (Miller & Pessoa, 2016; Stadler & Gordon Conyers, 2020), chemistry laboratory reports (Sampson & Walker, 2012), or comics (Watkins, 2018). Formulating a strong thesis statement and finding supporting evidence is an important skill for students to develop to effectively communicate their ideas and arguments in any genre or context.

Building on the recent research in infographics (Alrwele, 2017; Gallagher et al., 2017; Bicen & Beheshti, 2019; Krishnan et al., 2020), the researcher recommends that instructors incorporate more infographic analysis and creation activities in their classrooms. This will help students to become more familiar with infographic formats and better understand how to identify and analyze the thesis statement, supporting points, and evidence used in infographics. Specifically, the researcher suggests comparing and contrasting different infographics on the same topic to analyze their effectiveness in thesis and evidence development and reflecting on the process of creating infographics and identifying areas for improvement.

Even though the SAA shared the concern regarding some students' struggles to "identify and/or think critically about" "author/designer purpose," the excerpts from students' written responses illustrate students' levels of confidence:

> *I believe my infographic did its intended purpose, educating people about how blaming mental illness on gun violence is hurting the community that suffers from it, by showing statistics on how people become violent.* (Student 1)

> *I think I was able to create a reasonably strong infographic as I intended to merely inform and state hard facts.* (Student 2)

Student 1 and Student 2 used active verbs–educate and inform–to describe their intended purposes. Thus, using an infographic as a medium for presenting information can help students develop their skills in formulating their intended purposes because it allows them to communicate their message to their audiences visually. The researcher recommends that instructors explicitly teach students about different purposes by making it a part of the assignment. In other words, when instructors assign an infographic project, they can ask students to create two or three infographics on the same topic but with different purposes (e.g., to instruct, to persuade, to inform). That way, students will also get a chance to experiment with the language and tone, which will help them shape their intended purposes.

Formulating a thesis, finding support, and determining the purpose of their intended message are the skills required for successful multimodal composition. Students can transfer these skills to other multimodal projects such as presentations, websites, and video projects.

Balance between the Modes

According to the SAA, students can also struggle with finding a balance between the amount of text and images they need to use to convey their intended messages effectively:

> *When designing infographics, I find that students are challenged by much of what is challenging to me: text and image balance, narrow focus, and design style.* (SAA)

In terms of text and image balance, it is important to ensure that the infographic is visually appealing and easy to understand. Too much text can make an infographic cluttered and overwhelming, while too few images can make it dry and unengaging. Finding the right balance is key to creating an effective infographic. In their written responses, some students noted this challenge as well:

> *A challenge I faced while creating this infographic was picking the right template. Some templates used a lot of text, but I felt like I didn't have enough to fill them in. Other templates didn't use pictures and I wanted to include some. If I had more time I would take a look at more templates and use a different color. If I would've picked another color I would've picked blue. Technology gives me a blue color type of feeling. I would've included more pictures.* (Student 3)

Through these descriptive statements, the student explains the uncertainty over the amount of text and images needed to convey a specific message. In their studies, Yarbrough (2019) and Smothers (2020) confirmed that students are aware that effective infographics are those "where every word and picture communicate meaning and learning purpose." The researcher agrees with Smothers (2020), who recommends encouraging students to use a visual hierarchy or the use of size, color, and other design elements to draw attention to the most important elements to help guide the viewer's eye through the infographic. Showing students examples of well-designed infographics to help them understand the principles of practical design and offering feedback on students' infographics can help them learn how to balance text and images (Yarbrough, 2019; Smothers, 2020). The researcher recommends encouraging students to experiment with different layouts and design elements to find the best balance between text and images.

In their statement, Student 3 also shared their dissatisfaction with the free templates available to students on the Canva website. In Krishnan, Maamuujav, and Collins' study

(2020), students have also "reflected on limitations of the free online platform and tools in the design and development of their infographic" (p.13). The scholars suggested that "students needed additional instructional support and problem-solving skills to guide their understanding of the technical aspects of infographic development" (p.13). Like other scholars, the researcher suggests prompting students to work in groups or to give and receive feedback from their peers because this collaboration can help students develop their problem-solving skills and gain a different perspective on their work (Yarbrough, 2019; Smothers, 2020).

Since the infographic presents students with an opportunity to work with multiple modes, such as text and images, the ability to find a balance between the modes will benefit them while creating other multimodal projects. For example, if a student is creating a video presentation for a class, they can use the skills they learned from creating the infographic to find the right balance between text and visuals in their video. By not overloading the viewer with too much text or too many images, they can effectively convey their message and engage their audience. Thus, finding a balance between modes can be a valuable skill for students navigating today's multimedia-rich world.

Readability and Accessibility

When working with infographics, according to the SAA, students can also have issues with readability and accessibility:

> *I find myself giving a lot of feedback and asking questions about white space or lack thereof, the size of infographic elements (students tend to keep things quite small), and readability.* (Senior Academic Assistant)

The SAA's statement can be interpreted with an emphasis on design, organization, and readability. This paper focuses on the latter with the connection to the audience and accessibility. Creating an accessible message to multiple audiences is a required skill in successful multimodal composing. Reviewing students' written responses helped the researcher to conclude that, after completing a carefully scaffolded infographic project (Howell, 2018), students were able to successfully name most of the rules for creating readable and accessible infographics:

> Make sure you have a well thought and organized infographic. Also making sure all the colors are different and don't camouflage with each other. Only include information that is absolutely necessary. (Student 1)

> Have a title; * don't clutter information; * avoid paragraphs; * don't be too plain but also don't be too crazy with the design; * have a good color scheme; * you can compartmentalize information to make it easy to read; * use pictures that are

> relevant to your topic; * avoid too many colors; * avoid too many graphics. (Student 8)
>
> Follow visual structure and reading structure to synchronize the narrative with traditional reading elements. (English speakers traditionally read top-bottom, left-right. If your audience were to be Arabic, the infographic would be more streamlined if it read top-bottom, right-left). (Student 9)

It is important to note that the statements above illustrate different levels of attention to detail and overall proficiency in creating infographics. The researcher also acknowledges that some students may have more prior experience with multimodal composing than others (Robertson et al., 2012).

By working with infographics, students can develop and enhance their awareness of potential issues with accessibility. Being able to use multiple modes can help students make their ideas more accessible to different audiences. For example, an infographic may include text, images, and charts to communicate information to a visual learner while also including audio or video elements for students who may be more auditory learners. This can help ensure that the information being presented is accessible to a broader range of students rather than just those who prefer one specific mode of learning.

Conclusion

Multimodal composing skills, which involve the ability to create and communicate information using a combination of different modes such as text, images, audio, and video, are essential for students to develop in today's society. With the proliferation of digital media, people are increasingly using a variety of modes to communicate, and the ability to create and interpret multimodal messages is becoming more critical than ever. By using different communication modes, students can choose the most appropriate and effective way to convey their message, which can help make their ideas more transparent and engaging. Also, by creating and interpreting multimodal messages, students can more easily access and understand information from various sources, and they can use this information to solve problems and make informed decisions.

To those instructors who hesitate to incorporate multimodal projects into their courses, many scholars recommend seeking help from other departments, libraries, and writing centers. The collaboration with the SAA from the writing center brought the researcher confidence and excitement to experiment with infographics. Based on the results of this study, the researcher argues that Creating infographics can help students enhance their multimodal composing skills by allowing them to practice essential skills such as formulating a thesis, supporting it with evidence, and having a clear purpose for their message. In addition, students can learn how to find the balance between different

modes, such as text, images, and graphics, to create a cohesive and compelling message. Moreover, by considering readability and accessibility, students can ensure that their message can reach and be understood by a broad audience. The skills that students develop while creating infographics can also be transferred to other multimodal genres, such as videos, podcasts, or presentations. By effectively combining different modes and creating a clear and coherent message, students can apply these skills to various contexts and genres.

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