

# Curriculum Revisions in Teacher Education during COVID-19: The Critical Reflections of Two Professors

**I**n response to the 2020 COVID-19 outbreak, households around the world experienced a surge in remote learning and teaching. However, as many teachers and students can attest, online education was not initiated by the pandemic. Online programs had already become well established over the past few decades—in higher education (Moore, Dickson-Deane, and Galyen 2011), alternative access schools and online classes in public-school settings (Turley and Graham 2019; Sanders and Lokey-Vega 2020), and synchronous tutoring at all levels (Herrera Bohórquez, Largo Rodríguez, and Viáfara González 2019). In particular, the demand for online English tutors and teachers has soared as the number of English speakers around the world increased to nearly two billion (British Council 2013).

Education policy continues to push for the increase of technology skills and use, by teachers and students, in traditional classrooms. In-service teachers often enthusiastically engage their students through Smartboard activities, educational apps, and school-provided Chromebooks to enhance classroom learning (Martin and Carr 2015). Moreover, licensure candidates espouse similar levels of enthusiasm, often enhancing the in-service teachers' technological capabilities (Tatli, Akbulut, and Altinisik 2019). However, in response to the pandemic, it became a necessity for teachers to teach remotely employing these capabilities, which was addressed differently throughout the world. This need demanded greater knowledge regarding instructors' technological confidence and competencies

in an effort to teach *through* the pandemic and *not to* the pandemic.

Our intention with this article is to narrate the path of two higher-education professors' pivots in their own teaching to support in-service and licensure-candidate teachers in the midst of the pandemic. Because of the narrative nature of online course design (Dickerson 2017) that we utilized, we chose to write this paper in first person in keeping with this narrative style. First, Elena King outlines the framework used to design an "Online Pedagogy in Teaching English to Speakers of Other Languages (TESOL)" course. Then we discuss the collaboration initiated and the reflection performed surrounding multiculturalism within technology and equity, as Molly Riddle transitioned from a

traditional post-baccalaureate “technology and assessment” course to one focused on preparing teachers for teaching solely, and equitably, online. We clarify with examples of how to use the Technological Pedagogical Content Knowledge (TPCK) framework and notions of equitable digital access to create an exchange of ideas to enhance learning. We conclude with four takeaways that we hope will guide teacher educators, as well as our current and future teaching force, as we navigate technology both in the classroom and as the classroom.

### **TEACHER EDUCATION AND TECHNOLOGY: THE TPCK FRAMEWORK**

While technology aptitude and continuing education in technology are expectations in teaching, prior to 2020 the conversation often focused on using technology to make delivery more engaging (e.g., adding a YouTube video of a science rap or using ClassDojo as a behavior-management tool) or using technology as a tool for authentic activities. According to the International Literacy Association (2018, 2), “rather than preparing classrooms to plug in, download, or sync new tools, classrooms must facilitate authentic learning goals for students.” Essentially, you have those who are adding bells and whistles to the classroom and those who are using technology to explore the way we communicate. In traditional public schools, it was rare to think of technology as the only means of educational delivery.

One way to unpack the nuances of how teachers utilize technology is through the TPCK framework. At the heart of TPCK is the *PCK*—the intersections of pedagogy (how to teach) and content knowledge (what to teach). When we add the *T*, technology, the notion is further complicated. Mishra and Koehler (2006, 1026) explain “that apart from looking at each of these components in isolation, we also need to look at them in pairs: pedagogical content knowledge (PCK), technological content knowledge (TCK), technological pedagogical knowledge (TPK), and all three taken together as technological pedagogical content knowledge (TPCK).”

What makes this framework so useful is that it complicates the use of technology in a way that makes sense to teacher educators in terms of what needs to be taught to pre-service and in-service teachers. How do we teach knowledge of technology (TCK) as its own content, and how do we teach the use of technology for pedagogical purposes (TPK)?

For example, when using Twitter as a learning tool, we first need to make sure teachers know how to log on and post to Twitter. Then we can analyze the discourse structure of a tweet, including how to use hashtags. We can explore where tweets are used authentically. Then we can work with teachers to explore whether they will use Twitter as a tool to engage students in an authentic voice within the greater community of Twitter and within the social constraints of a particular hashtag—or whether they will, for example, use Twitter as a tool for exploring rhetorical devices of politicians in which the archived tweets become the content. Because the TPCK framework is not new, multiple studies show the positive impact on in-service and pre-service teachers when it is utilized in teacher-education programs (Ali, Thomas, and Hamid 2020). It was with this framework and research in mind that Elena King began designing the course “Online Pedagogy in TESOL.”

### **THOUGHTFULLY DESIGNING THE COURSE “ONLINE PEDAGOGY IN TESOL”**

I, Elena King, first proposed teaching the course “Online Pedagogy in TESOL” well before the COVID-19 outbreak. The students in the MA TESOL program are primarily international teachers who intend to return to their home countries after a three-year teaching contract through Participate Learning, a cultural exchange program that brings international teachers to teach in the southeastern United States, often in English as a second language (ESL) or dual-language programs. As highlighted in the introduction, data (British Council 2013) indicate that the online market for English language tutors and instructors is not to be overlooked. In response to this demand for teaching English online,

our TESOL department developed a Graduate Certificate in Teaching English Online. I was tasked with developing a core course on online pedagogy. I was in the midst of designing the course in spring 2020 when COVID-19 struck. Immediately, my innovative course of teaching through synchronous lessons and asynchronous learning platforms became both opportune and behind the times somewhat simultaneously.

While I planned to have students practice with Skype and Google Hangouts, Zoom emerged as the proprietary platform for video conferencing and meeting. The class that I was designing to support teachers' potential future needs suddenly became a class to support teachers in the moment. Initially, I worried that the assignments I was developing would no longer be relevant. However, a month into the pandemic I realized that many of the students were barely treading water. This class could be the support they needed to practice new ideas and try new technology with each other before they used it with their own students.

I first taught the course in the summer 2020 session, dividing it into five learning modules: *Why online?*; *How do I teach online?*; *Asynchronous learning*; *Synchronous learning*; and *Organizing my ideas*. These modules reflected a structure of narrative course design in which “modules in an online course function similarly to chapters in a book in that they arrange subject matter in a logical, orderly way” (Dickerson 2017). I began the narrative of the course with readings to provide a framework for online teaching and learning to support my students' technological pedagogical knowledge—the TPK component (Mishra and Koehler 2006). As the course progressed, students participated in activities to hone their skills with technology to support their technological content knowledge—the TCK component. However, the crux of the course was in having students use both types of knowledge, working in groups to practice the motions of using the technology in a way that would best support their teaching practice and philosophy.

In the opening module, students responded to

forums highlighting how online learning and teaching creates a space that is similar to, yet different from, the traditional classroom. As the students began the module with thinking about how to create that space, I asked them to read the article “Using the Community of Inquiry Framework to Scaffold Online Tutoring” (Feng, Xie, and Liu 2017). This article describes the Community of Inquiry (CoI) framework, which “suggests that deep and meaningful learning results when there is evidence of sufficient levels of the various component ‘presences’ of the approach (i.e., teaching, social, and cognitive presence)” (Feng, Xie, and Liu 2017, 164). What this means is that learning online occurs within a framework of instructor/tutor presence (giving feedback and defined instructions, moderating forums, etc.), social presence (creating spaces for students to interact), and cognitive presence (guiding students to think with questioning activities or letting students create rather than giving quizzes, etc.). As I designed my online asynchronous course, I thought about how to make sure students were internalizing this framework for their own future course design.

Students also read from the text “Teaching Children Online: A Conversation-Based Approach” (Meskill and Anthony 2019) to explore the advantages of teaching online. Once the pandemic forced us all online, the purpose of this module became more central to current teaching practices. This article defines a paradigm of instructional conversation in contrast to a more traditional transmission of information model, in which the teacher lectures and the student listens and takes in the teacher's knowledge. Meskill and Anthony (2019) contend that teaching and learning are derived through conversations across varying means of remote interactions. The learner learns through speaking and writing their thoughts on message boards or for other online assignments, which helps them develop their thinking. In turn, the teacher responds to these activities, creating a conversation that “teaches.” It was important for me to ensure that my students were not trying to simply transfer their face-to-face teaching to a computer

screen, but thoughtfully adapting and reflecting on the TPCK framework that illustrates how “teaching with technology requires an understanding of the representation of concepts using technologies; pedagogical techniques that use technologies in constructive ways to teach content; [and] knowledge of what makes concepts difficult or easy to learn” (Mishra and Koehler 2006, 1029).

As I stated earlier, the crux of the course was to allow these in-service teachers to explore technology. However, I soon found that just knowing what resources were available was not supporting their TPCK.

In one of the initial assignments of the course, I asked students to create a resource table of 14 websites or apps that they could use in teaching and describe each site in some detail. What I received was exactly what I asked for: a list of websites and simple descriptions of the app. As I revised the course for the second session, I modified the assignment to ask students to explore two websites or apps and then invite their professional learning community (PLC—the grouping of in-class peers) to join them on the app. Instead of asking the students to simply read what the site did and then copy and paste the name of the site and a description of it, this second iteration of the assignment required the in-service teachers to try out the site or app that sought to improve their TCK.

This assignment was extremely helpful for the students, as they generated a list of sites that they critiqued and then used in their asynchronous and synchronous assignments. (See Figure 1 for examples of sites the students highlighted, along with their own opinions of those sites.) For instance, if they chose Padlet, they could add a picture and a video and then invite their PLC to the Padlet. By doing so, they could actually see how to add content and get feedback on the technology from the “student view.” I encouraged them to practice with a synchronous site like Zoom or Google Hangouts to demonstrate screen sharing, playing videos, and switching presenters—all

new skills in the summer of 2020. Then students completed the assignment by writing a short paragraph or list of bullet points highlighting their thoughts on the site. In this way, instead of having just a list of 14 resources, they now had experience with using, and opinions of, up to six sites or apps.

For the next two modules, my students continued with their PLCs and created asynchronous modules; they also taught synchronous courses to each other using ideas from the course materials. After students in the course finished designing their module, they assigned their PLC (who role-played the part of their students) to the course. Each member in the group logged in to the modules of their groupmates and completed the assignments. Again, by completing this activity, they were able not only to practice creating content, but also to see how these platforms worked from the student view. Figure 2 showcases examples of the TPCK framework that I provided using English language instruction as the content. I felt pedagogically that it was important to have students take the time to practice with these elements and provide feedback to each other to increase their understanding of the TPCK framework. Ultimately, I wanted students to understand what technologies were available and how they could support different components of language learning.

#### **What did students gain?**

In the final module, because I was teaching the same course in the second summer session, I added an anonymous forum to gather feedback that could inform revisions I might make to the course. My main concern was that in light of the pandemic, the material was not as advanced as the students would have liked, but I also did not want to “teach to the pandemic,” so to speak. There were three open-ended questions that 11 out of 17 students answered: (1) What elements of the course did you think were helpful (did you like the best)? (2) What elements were not as helpful? Why? (3) What additional information or activities would you have liked to have read/practiced in the course?

Website	Link	Opinion
Formative	<a href="https://www.formative.com/">https://www.formative.com/</a>	I have used Formative with some classes and it is just an amazing, interactive, and reliable online learning/teaching platform. I can track my students' work and assignments in real time, and it gives me fast and accurate data that I can use to improve and reinforce my students' academic performance.
Boom Cards	<a href="https://wow.boomlearning.com/">https://wow.boomlearning.com/</a>	I love to purchase and create my own boom cards. They are interactive cards that help students reinforce or review vocabulary. My students love to play with boom cards because they are colorful, easy to play, and they can even listen to my personalized audios.
Kahoot!	<a href="https://kahoot.com/">https://kahoot.com/</a>	Kahoot! is a valuable tool to transform review activities into fun and interactive ones. It also is a way to assess students.
Google Classroom	<a href="https://edu.google.com/workspace-for-education/classroom/">https://edu.google.com/workspace-for-education/classroom/</a>	Google Classroom is a versatile platform because it lets you create any content that you want—text, audio, video, ppt, etc. It lets the teacher create specific assignments and give the students the freedom to work on them at their own pace.
Wordwall	<a href="https://wordwall.net/">https://wordwall.net/</a>	My students love playing these online games. I notice how they learn vocabulary easily and have fun at the same time. We make online game tournaments and keep track of best scores in the classroom.

**Figure 1. Example of website resource table**

Following is a student response to Question 1 that captured the sentiments shared by most of the class:

Working together in a group to deliver synchronous and asynchronous lessons requires tolerance and commitment. It was not easy because I felt I was going to be evaluated by colleagues, but it turned out [to be] absolutely meaningful in the way you learn a lot from your classmates, and get some professional advice when giving feedback to each other.

In response to Question 2, the majority of comments indicated that the resource-table activity did not give them the practice they

needed. Such comments included “I think the chart with the resources from the first week is a little repetitive” and the blunt “The resource table was not very helpful.”

Only one student responded that they felt the course did not prepare them for teaching during the pandemic, stating:

I consider that the material for the [first] module could have been more context related to the current world-wide situation with Covid-19. Maybe it would be useful to include some articles, videos, or material related to how teachers are developing their online lessons.

Finally, in response to Question 3, most students indicated that anything more would have been excessive in a five-week summer course. Comments included “It would be overwhelming, especially if one is new to technology and has to do all of these assignments in such a short period of time” and “Taking into account that this course is only five weeks long, I think we took and did as much as possible!”

Armed with these responses, I revised the course for the second summer session, including the modified resource-table assignment and an additional reflective piece on how schools in the United States and beyond were responding to the pandemic. During that time, I received an email from one of my colleagues in the education department soliciting support. She would be teaching a graduate course in the fall titled “Responsive Planning, Instruction, and Assessment,” which she intended to revamp to include more support for remote learning and teaching. While she had taught the same course the previous spring, she felt she needed to make changes to move away from the traditional coursework of how technology can enhance face-to-face instruction to focus on how to teach remotely.

### **SHARING MATERIALS AND REVAMPING COURSEWORK: RESPONSIVE PLANNING**

In the spring of 2020, I, Molly Riddle, was tasked with teaching an online graduate course, “Responsive Planning, Instruction, and Assessment.” This was my first time teaching the course, and I relied heavily on the course description in our college’s catalog and solicited any resources from the professor who had previously taught the course to guide my initial outline of student-learning outcomes and the general course expectations. Broadly speaking, I would be designing this course to provide licensure candidates with the foundation that would enable them to utilize effective planning, instruction, and assessment, while integrating twenty-first-century technologies into their classrooms. Candidates in this course would

be charged with designing diversity-responsive lesson plans to encourage K–12 (kindergarten through 12th grade) students to learn content, think critically, solve problems, discern reliability, use information, communicate, innovate, and collaborate with others.

The rapid transition to remote teaching due to COVID-19 was not a barrier, given that the course was already online and asynchronous. However, I soon realized that the pandemic was heavily influencing the course. A brief example is a course assignment that required the licensure candidates to video-record a ten-minute synchronous lesson with their students. Self-, peer-, and instructor-video analyses, reflections, and evaluations were going to be a vital component of this project to support the improvement of each licensure candidate’s own practices. At the time, however, all of the candidates’ districts were prohibiting video recording of students, for various reasons. Rethinking the intended outcomes of the assignment and the course in general, I realized I did not want this course to assess the candidate’s ability to teach; we had pedagogy courses and fieldwork for that. Rather, I wanted this course to give them a space to explore and develop online lessons utilizing different techniques, including synchronous and asynchronous lessons, and employing online platforms such as Moodle, Google Hangouts, Zoom, Google Docs, and others. I wanted to evaluate the candidates based on whether they met the criteria, as opposed to how well they executed the lessons. This did not require that they teach these lessons to their own students.

The course necessitated immediate deviations from the original schedule. The students successfully completed the course in the spring, but at the end of the semester, I was compelled to overhaul the content in light of COVID-19. I reached out to King, knowing that she had recently developed and implemented an online pedagogy course. Based on ongoing conversations with King, I spent the summer of 2020 redesigning the course content. Three questions initially drove the changes to the course: (1) What



expectations of the course are critical for licensure-candidate growth? (2) How would the growth be evaluated? (3) Where could the curriculum be malleable? In other words, where did I need to be strict and structured, and where could the curriculum be more flexible?

While crafting this course, I found myself fixated on a paper I composed in 2017, which was a practitioner-based paper titled “Technology as the Savior Discourse.” The aim of the paper was to critically analyze the technology as *savior discourse*—that is, the positioning of technological advances as the most likely source of educational equality—by examining historical and current literature on technology in schools, specifically with culturally and linguistically diverse learners. At that time, there was a continued effort in schools to place technology in the hands of all students, with hopes of bridging the digital gap between those who are “superserved” by technological advancements and those who are “underserved” (Selwyn 2011, 113). The fundamental assumptions embodied in plans to address disparities in academic achievement by means of technology was something I wanted to critically examine. Despite substantial efforts throughout the twentieth and twenty-first centuries to overcome educational issues by means of technology, the improvements in technology have done little to disrupt inequities within education. One way to address unequal outcomes of technology initiatives is thus through the examination of the intersection of multicultural education and instructional technologies (Gorski 2009).

It was through the reflection of this prior work and King’s resources that I began to envision how the licensure candidates in this course could utilize technology in their own K–12 classrooms in ways that would not exacerbate current systemic issues related to technological equity, while concurrently utilizing (sometimes by requirement) the newest innovations in educational instructional technology. Although the public-school students’ educational

outcomes would eventually be my ultimate concern, I had to focus on creating this course to provide students with a space to practice utilizing these technologies to increase their understanding of the aptitudes “required to function productively, safely, and ethically in diverse and increasingly digitally-mediated environments” (Falloon 2020, 2463). Furthermore, this course needed to contribute to their awareness of how technology applications and practices often do little to disrupt or alter existing digital inequalities. As previously indicated, it was not my stance that technology could not enhance the educational setting, but I argued that advocates of technology in education must work within a framework that promoted equity, not merely access, for all. Given that COVID-19 forced all educators to abruptly begin using the latest technology to teach, this 2020 course could be the catalyst for such equitable promotion.

In the fall 2020 semester, the “Responsive Planning, Instruction, and Assessment” course provided my licensure candidates with a much stronger foundation for effective teaching utilizing advancements in educational instructional technology. The course reached beyond just the use of technology in the classroom and asked the teacher candidates to articulate the pedagogical underpinnings of successful in-person and online teaching. In this way, using many of the resources from King’s class made sense, as they were designed with the TPACK framework to enhance teacher understanding of how to use and teach with technology. Licensure candidates used research as the basis for creating diversity-responsive lesson plans, including equitable digital practices through the use of asynchronous and synchronous learning environments. For instance, the candidates were expected to read equity-literacy articles and were required to identify and assess how their use of technologies in their asynchronous lesson plans contributed to equitable learning environments or exacerbated digital inequities. Not only were my students practicing with technology, they were practicing equity in technology.

## WHAT DID WE LEARN?

One of the reasons we were able to pivot so quickly for supporting our in-service and pre-service teachers was because of the already global-oriented arena of TESOL instruction. The collaboration, combining our interests and knowledge using equitable digital practices and the TPACK framework, was also essential to redesign our courses to address the complexities of new instructional technologies from multiple angles. Through our collaboration, we would like to share the following four takeaways:

- 1.** *Practice makes perfect.* Although it sounds cliché, and we do not truly strive for “perfection,” allowing a space for practice aids in teacher confidence. We both found that having students practice synchronously and asynchronously was vital, even when they were doing this every day with their own students. When we teach with new technology, we are unsure what it looks like. By incorporating this practice, our students had a chance to have their peers tell them what they were seeing before it “counted.” They were able to go through the process from the student view to be aware of what students had to register for or what could be used best on smartphones or with limited bandwidth. By doing this, teachers increased their technology knowledge (TK) and became more thoughtful about when to choose different technologies based on their content needs and pedagogical choices.
- 2.** *Fancy apps can be distracting.* We found that using a video-conferencing site like Zoom or WhatsApp was often all you needed. You could then teach using a whiteboard behind you and have students respond by simply writing answers on a notebook in their home. Students enjoyed playing games like “Bring me something,” where the teacher begins the lesson by saying, “Bring me something that is blue” (if the lesson is about colors). The student then has
- 3.** *We can connect globally.* Through this pandemic, teachers around the world had an overwhelming job—to continue teaching, often without support. Teachers took advantage of this opportunity to use technology to collaborate, and we advocate continuing this trend. As teachers and students become more adept in their TK, we see opportunities for pen-pal activities via Google Docs, virtual field trips to sister cities anywhere in the world, and collaborative work between English programs around the world. As teacher educators, we will continue to encourage our pre-service and in-service teachers to find global connections to facilitate the exchange of ideas worldwide.
- 4.** *Equity is essential.* If we are going to continue on this global path of technology, we must be sure that students are able to access that technology equitably. Every effort should be taken to bridge the chasms that this pandemic emphasized. Teachers should be aware of the technology they ask students to use and be sure that we are teaching students to use those technologies. Teachers should advocate for schools and communities to provide computers and smartphones for students—these are no longer luxuries, but necessities.

## CONCLUSION

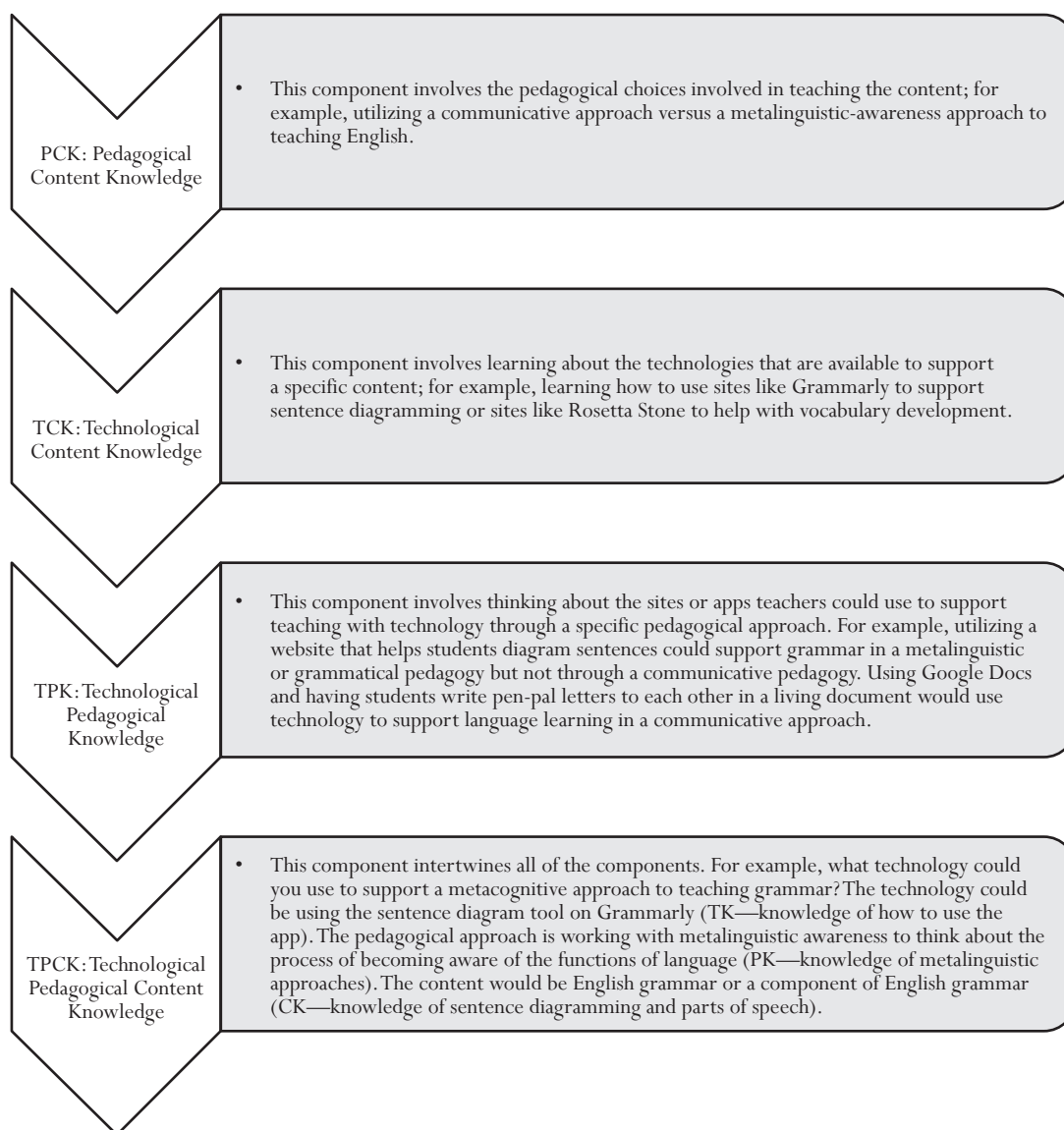
This pandemic did not bring with it online teaching, but it brought online teaching to the masses. Although we do not think



remote teaching will replace the face-to-face classroom (at least not anytime soon), we question how this dramatic shift in current teaching practices will shape the years beyond COVID-19. While we are unable to predict the journeys our students will embark on in their teaching careers, it seems reasonable to suggest that they will continue to encounter modes of online asynchronous and synchronous teaching and learning. However, we feel it is important that we alter the perception that more training leads to richer technological pedagogical content knowledge. As teacher educators, we must prioritize that our pre-service and in-service teachers understand where they need to do the work

(e.g., looking up how to upload a video to YouTube) and where we need to guide the work (e.g., how to use technology to support student learning).

Despite how the current moment in history, given the pandemic, may be characterized, this turned out to be an opportune time for our pre-service and in-service teachers to practice teaching. While restructuring the past and current semesters has certainly been challenging, there was a silver lining. All the disruption in education allowed our brave in-service and pre-service teachers to explore, invent, and discover what the future of education could be. As teacher educators, we



**Figure 2. Technological Pedagogical Content Knowledge explained, with examples**

revised and reflected in an effort to help them navigate these demanding times in teacher education, and we look forward to continuing our own growth along with our students.

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