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Teachers as Instructional Designers: Unearthing the Essence of the Primary School Curriculum for Delivery within the Remote Learning Classroom

Angela Gonzalez

P. K. Yonge, University of Florida, agonzalez@pky.ufl.edu

Michael Poole

P. K. Yonge, University of Florida, mpoole@pky.ufl.edu

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Teachers as Instructional Designers: Unearthing the Essence of the Primary School Curriculum for Delivery within the Remote Learning Classroom

Abstract:

Moving our elementary curriculum to emergency remote instruction presented numerous challenges to our elementary school, as teachers recognized that elementary-age children could not be expected to spend the amount of time on computer screens that they had spent in face-to-face classrooms. Working with our colleagues, we adopted a “less is more” approach, using inquiry processes to make systematic and informed choices as to which state standards would be covered. We acted as instructional designers to develop coherent learning units for remote instruction, using inquiry processes to study the effectiveness of our lessons and adjust instruction accordingly. This work could only transpire because we viewed ourselves (and were viewed by our administration) as professionals, rather than technicians. At, P. K. Yonge, we were empowered to critically examine our curriculum, to modify and adjust our lessons in response to the crisis, and to design innovative ways to deliver our curriculum. Conceptualizing teachers’ work as professional was foundational to our ability to be effective during the pandemic.

Who We Are

When the pandemic began in 2020, Angela had been teaching for 23 years, while Michael had been teaching for 22 years, with both of us co-teaching 4th grade together for the last three years. Across our two classes, Michael focused on teaching reading, language arts and social studies, while Angela focused on teaching math and science. Like other teachers at P.K. Yonge (PKY), we had been studying our teaching practices through inquiry and were engaged in a joint inquiry into the socio-emotional aspects of looping with our students when COVID-19 interrupted our teaching and research.

The sudden, unexpected move to emergency remote instruction at the start of the pandemic brought many challenges to the forefront. In PKY’s initial efforts to re-establish school in a remote learning format, teachers were expected to replicate the schedule and curriculum of the face-to-face (f2f) school day, using remote instruction platforms, such as Zoom and Canvas. We, along with our other elementary colleagues, quickly realized that this type of instruction could not be sustained for elementary-aged children. They could not be in front of computers to learn online for five hours a day. Hence, we turned to the process of inquiry to help us redesign our 4th grade instruction for this unique time in history to meet the challenge of fully remote schooling (Dana & Yendol-Hoppey, 2020).

First, it quickly became apparent as we worked with our students remotely during the lockdown that we were not going to be able to meet all the state standards that were scheduled for the last few months of school in developmentally appropriate ways online. We were aware that resources were available to us that included a standardized, online curriculum, covering the state's standards through multiple worksheets and teacher-driven instruction. We could easily use these resources to cover the entire 4th grade curriculum, but in doing so, we would lose some of our students due to lack of engagement. We were fortunate to have ample technological resources and a leadership team that supported us in creating our own path to meet student needs. We were empowered to make decisions as to what to cover and what to leave out as we endeavored to maintain appropriate development practices. Hence, our first pandemic-focused inquiry question became, "What are the essential learnings that our 4th grade students needed at the end of the 2019-2020 academic year as they prepared to move from 4th to 5th grade during a global pandemic?" We also wondered, "How can we teach these essential learnings effectively using remote learning platforms?"

What We Did

As we established our inquiry questions and first steps, we also collected and analyzed data. We took two actions to address our two research questions respectively. First, we engaged in focused, deliberative dialogue with our colleagues on the 4th grade team. We then initiated structured dialogues with the 5th grade teams about expectations for students who would enter 5th grades next year. These discussions were documented on the school's *Remote Learning Inquiry (RLI)* website (see the introductory piece to this journal for detailed information on how the process of inquiry was adapted in response to the global pandemic). We also observed student responses, collected student outcome data on assignments and standardized tests.

Clear Expectations: Our School Level Teams Identify Essential Learning for the Remainder of the School Year

PKY was organized with two classroom teachers per grade level. The 4th-5th grade level team had an additional teacher assigned as team leader and support teacher for students who struggled. Our discussions regarding modifications to the curriculum were simpler to organize logistically, due to the small size of our teams. The most significant conversations for this inquiry were between the 4th and 5th grade teams as we endeavored to prepare our 4th graders for entering the 5th grade in the Fall of 2020.

As grade level teams, we agreed to deliberate and structured discussions to use our remote teaching tools to deliver more appropriate lessons to our students,

by eliminating some standards in order to highlight other standards. Through our conversations, we were able to derive a subset of grade level state standards that we deemed essential for our students to learn during the remainder of the 2020 school year. For example, at the end of a school year, students in 4th grade are given introductory lessons on fractions, that will be developed extensively later in 5th grade. The 4th and the 5th grade team, however, agreed to devote more time to 4th grade mastery of other complex aspects of the 4th grade math curricula (such as volume) and leave the final units on fractions for the 5th grade teachers to start during the new school year. We gradually developed clarity regarding essential standards in Language Arts. With a subset of standards identified to guide remote instruction, the second action was to develop new ways to teach these standards using remote instruction. In the next section, we illustrate one standard from language arts and another standard from mathematics, presented through remote instruction.

Teaching Plot in a Literary Text: The Usefulness of Dramatic Reading During Synchronous Zoom Sessions

One of the 4th grade language arts state standards we deemed important to cover was *ELA.4.R.1 Reading Prose and Poetry: Explain how setting, events, conflict, and character development contribute to the plot in a literary text* (Florida Department of Education, 2019a). Michael, as the lead teacher for language arts, designed a language arts unit that he believed would maintain student engagement online, while still learning key elements of a plot. To connect with the current emotional climate of the pandemic experience, Michael chose to focus this unit on a book typically not used in his f2f instruction: *The Elephant in the Garden* (Morpugo, 2010). The book is about a zoo worker trying to save the life of a baby elephant in Dresden, Germany, during WWII. As Dresden was bombed, refugees streamed from the city, including the zoo worker's family and the baby elephant. Eventually, a few Allied soldiers, wounded in battle, also joined the group. These events unfolded during an epic historic crisis, disrupting people's lives, relationships, and daily routines. This unusual cast of characters persevered, finding novel ways to save themselves and keep their baby elephant safe. The emotional tenor of the book matched the mood of "pandemic" times. The complexity of the book also lent itself well to studying elements "contributing to the plot."

Students were given the option to read the story on their own time and complete their assignments or attend a daily live, dramatic reading offered by Michael, followed by a discussion of the story. Michael also recorded the readings every day and posted them to Google Classroom. If a student didn't come to the reading, the student could find the reading online and keep up with the lesson. However, most students showed up every day to listen, then went to breakout rooms

for small group discussions. Angela, although teaching math, also became intrigued with daily readings and participated as well. We took turns reading, posing questions, and visiting Zoom breakout rooms for small group discussions. We assigned students to different groups on different days, so that they would see friends from different classrooms. We also posted questions in Google Classroom for students.

Teaching Volume (State Standard) Through Asynchronous Graphics Enactments on Canvas, Google Classroom and YouTube, Followed By Synchronous Zoom Problem Solving Sessions

A second example of developing new ways to teach remotely involved one of the 4th grade mathematics state standards: *MA.4.M.1: Measure the length of objects and solve problems involving measurement. 1: Attributes include length, volume, weight, mass and temperature* (Florida Department of Education, 2019b). Angela typically taught how to measure and calculate volume using experiential and hands-on methods. Left without the manipulatives and math stations she used during f2f instruction, she blended synchronous and asynchronous instructional strategies to keep students engaged. For example, Angela used computer graphic tools to create images that could be manipulated to recreate virtually the concept of *volume* (see Figures 1 and 2 *Screenshots of Volume*).

Figures 1 and 2

Screenshots of Google Classroom Animations of Volume

Volume Formula
 $V = L \times W \times H$

Volume of Rectangular Prisms
SAB page 121

4

4 in. 4 in.

120 X 2 = 240

12 in. 15 in.

5 in. Mid 6 in. 2 in.

Volume of Middle:
L = 6
W = 2
H = 5
 $V = 6 \times 2 \times 5 = 60$

Volume Formula
 $V = L \times W \times H$

Volume of Rectangular Prisms
SAB page 121

4

4 in. 4 in.

Side X 2

12 in. 15 in.

5 in. 6 in. 2 in.

Through animated graphic images available on Canvas, Angela illustrated how to break down problems into specific steps. Students also learned to use the animated imagery to create their own models. Finally, Angela uploaded the lessons to YouTube so her students could watch and re-watch the videos. Students could then attend scheduled Zoom meetings to ask questions.

Additionally, Angela also presented and discussed math problems with her students on Zoom. She attached a white board to her Zoom platform, and used the Screen Share function to problem solve together. She also scheduled individual and small group sessions, and used the Screen Share function to “sit side by side” and solve problems. To achieve a balance, she gave students the flexibility for solving problems and learning independently, but with the assurance that their questions would be answered with “live interactions” on Zoom.

What We Learned

We learned that focusing on essential learning and developing creative remote instruction plans were as effective as our f2f teaching. We also learned that students respond differently to synchronous and asynchronous instruction. A balanced approach, using both forms of remote instruction, were more effective for meeting out students’ varied approaches to learning.

Remote Instruction Efforts Were as Effective as Our F2F Teaching When We Focused on Essential Learnings

When we took the time to focus on essential learnings and used our creative and professional skills to develop key lessons, we were able to create engaging lessons that kept our students online, interacting with us and their peers. We make this claim based on the formal and informal ways we assessed student progress. For example, informal assessments related to *The Elephant in the Garden* unit included our review of student responses to the questions we posed in Google Classroom to help us evaluate whether our students understood story elements and were mastering that 4th grade Language Arts Standard for Florida. A sampling of student responses to the question, “What has happened in the plot?” indicate that indeed, students understood the concept of “how setting, events, conflict, and character development contribute to the plot in a literary text” (Figure 3).

Figure 3

Sample of Student Responses to An Elephant in the Garden

All



Apr 23, 2020

Well the bombs came to Dreston and bombed up their house. Now they are traveling to their aunt and uncle's house and when they get their they don't see anyone and they turn around they see an England soldier muddy grabs a pitchfork and walks toward the soldier and that is all we have read so far.



Apr 23, 2020

what happened was they were still walking to the uncles house and it was super cold plus they were tired. When they final made it there no animals were out and they found one of the enemies laying on the ground



Apr 23, 2020

A war was breaking out, and Lizzie's dad went to fight. They tried to live life normally, but the zoo that Lizzie's mother works at is going to kill the animals, so her mom takes home an elephant. They go on a walk with the elephant, Marlene, and she chases a dog away. They can't stop her and then the enemy starts bombing them. The city breaks out in fire and they run away. Marlene finds them again, and they go to their aunt and uncle's farm, but the farm is deserted and they find an enemy in the farmhouse.



Apr 23, 2020

The city of Dresden has been bombed and most of the people in the city have left. Some people were not able to leave though most were. All the people who had left were in a big cluster and were moving slowly. Motty, Karli, Lizzy, and Marlene took a shortcut to go to uncle Joe's house. There was a stream exactly where Motty told them it would be and the water as cold but they did not mind. When they got to uncle Joe's house there was nobody to be found. There was only some cows in the front, when they went in they did not see any sign's of life. Then they saw a man i the hay and realized it was a British member of the R.A.F. Motty then picked up a pitch fork and got closer to the man. That was the end of the chapter.



[ps://classroom.google.com/c/MzM1OTYwODk1MDda/sa/NzgzNjg5MzU4ODFa/submissions/by-status/and-sort-last-name/all](https://classroom.google.com/c/MzM1OTYwODk1MDda/sa/NzgzNjg5MzU4ODFa/submissions/by-status/and-sort-last-name/all)

1/4

For formal assessment data, our school uses the *Gates-MacGinitie Reading Test* to monitor student reading across the elementary school. When we completed the *Gates-MacGinitie* testing, our 4th grades scores were relatively high, typical of our scores from prior years. Our students did not drop in reading gains. We were pleasantly surprised, since academic lags had been predicted due to the pandemic. Similarly, for math, we monitored students' progress using Curriculum Based

Measurement (CBM) data. Like our reading scores, our math scores indicated that all students had maintained sufficient progress during the lockdown to be promoted to the next grade level.

In addition, while several schools across the county were grappling with “lost” students, those who didn’t show up at all for any kind of remote instruction (Annie E. Casey Foundation, KIDS COUNT Data Center, 2020; National Academic of Sciences, Engineering, 2020), approximately 95% of our students attended our live lessons, even when given the choice of synchronous or asynchronous ways to participate. Attendance data indicated that we were effectively engaging our students in emergency remote instruction (Tillet, 2020).

Students’ Ways of Learning Vary With Synchronous and Asynchronous Instruction: Thee Need to Balance Both Approaches

Not surprisingly, from analyzing our data on the *RLI*, we also noticed that some characteristics of our students’ ways of learning were more suited for either synchronous or asynchronous instruction. Some types of lessons were also more suited to different remote teaching platforms. Michael, who had previous experience with online reading, noted,

We didn't jump in with all subjects to be synchronous, ... even though there was that push from the school for us to do synchronous. I was looking at the curriculum and I realized that I could take the fiction unit and turn it into a synchronous novel study, and we made it work that way. ... With math, we could present different models on Canvas, to demonstrate through various models, then support their efforts through Zoom breakout rooms. It was a balancing act. (F.R., Summer 2020)

We realized that some students worked better on asynchronous content on Canvas. However, working independently, on their own, required better executive functioning and self-regulation skills (Harvard Center for the Developing Child, 2020). Our special needs students, those with IEPs and 504 plans, were more likely to need coaching and scaffolding on Zoom, through asynchronous means. Our support teacher was also able to meet with students on Zoom, who needed more structured learning and received teacher coaching. Synchronous instruction was also useful for assessing student understanding. We realized that the balance between synchronous and asynchronous is a variation between guided and independent learning, a perpetual concern for teachers. We were able to move between the two types of remote learning depending upon our students capabilities and needs.

Important Take-Away

In sum, we were able to be effective in the emergency move to remote instruction by first recognizing that the amount of material typically covered in our curriculum during the country's lockdown experience would need to be adjusted for the crisis conditions the pandemic presented. Hence, we worked with our colleagues to adopt a clearer focus for completing our school year, using inquiry processes to make systematic and informed choices as to which state standards would take precedence as we completed the school year in crisis conditions. Further, we acted as instructional designers to develop coherent learning units for the new remote instruction world we entered, using inquiry processes to study the effectiveness of our lessons and adjust instruction accordingly. We noted our students' responses to learning. For example, we recognized student differences in the capacity for self-regulated learning in asynchronous learning and the ways that we could follow-up with synchronous methods for coaching and scaffolding.

This type of reflective teaching could only transpire because we viewed ourselves (and were viewed by our administration) as professionals, rather than technicians. When teachers are seen as technicians, they ask "What should I do?" Whereas a professional might ask, "Why and how else might I do it?" (Sawyer, et al., 2020, p. 532). If we had been positioned as technicians during this time of crisis (as many of our colleagues from other school districts were), we would have responded to the "What should I do?" question by implementing a standardized, online curriculum that covered our state's standards through multiple worksheets and teacher-driven instruction in a mundane and rote way, and in the process, would have lost students. Many of our schools across the country experienced losses in attendance, as noted, in alarm, by professionals working with schools across the country (Annie E. Casey Foundation, 2020; National Academy of Sciences, Engineering, Medicine; 2020). Instead, as professionals permitted to pose and respond to the question, "Why and how else might I do it?", we were empowered to critically examine our pre-pandemic curriculum, modify and adjust it in response to the crisis, and design new ways to deliver that curriculum using the systematic and intentional study of our new practices to monitor the ways our teaching methods were playing out for our students, and adjust and respond accordingly. Clearly, conceptualizing teachers' work as professional, rather than technical, was foundational to our ability to be effective during the pandemic. Sawyer and her colleagues continue:

The unhelpful valuing of teacher as technician is played out in the ways that policies and scripted programs devalue expertise, experience, and the importance of the critical consumption of teaching materials. Furthermore, when policymakers or administrators situate teachers as technicians instead

of professionals, national testing is seen as a way to police teachers, and silver-bullet educational fixes can be sold as panaceas in a complicated educational environment (p. 532).

Perhaps a silver-lining to the pandemic was the ways it illuminated the distinction between teachers as technicians and teachers as professionals and the ramifications of this distinction described in the quote above. As we move into a post-pandemic teaching world, we believe that continuing to illuminate the contrast between teacher as technician and teacher as professional will be of the utmost importance to enable teachers to be effective. Herbst (1989) writes:

Within the confines of a given task, professionals decide for themselves how to proceed. They work without supervision and carry full personal responsibility for the results. They are guided by a code of ethics and are accountable for observing its commands to their professional colleagues. Society, in turn, holds them collectively responsible for faithful performance of the profession's assigned duties (p.6).

As teachers moving out of the pandemic, let us demand to be viewed as professionals and accept collective responsibility for our faithful performance of the duties we are assigned. Certainly, our work during the pandemic, provides evidence that we are capable and deserving of the title “Teacher as Professional.”

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