

Programmatic Mapping as a Problem-Solving Tool for WPAs

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This article articulates programmatic mapping—the act of visualizing programmatic infrastructures, processes, and relationships—as a tool that WPAs can use for solving problems. To support WPAs in understanding mapping and its possibilities, we outline three key concepts that can inform mapping practices: user-centered design, graphical planes, and visual encoding. Drawing on two cases of mapping in different programmatic contexts, we argue for the affordances of mapping as an activity that allows us to better communicate existing programmatic realities and generate new programmatic knowledge.

WPAs NEED TO SOLVE PROBLEMS AMID COMPLEX PROGRAMMATIC REALITIES

At any given moment, a writing program administrator is helping stakeholders solve problems, often by clarifying how programs work for a range of individuals: how many rooms should the scheduler anticipate for classes next term; how do individual courses fit into the larger curricular goals of the program; how do graduate instructors understand their teaching requirements; how does a particular course apply to a student's plan of study? The answers to these questions and others are sometimes difficult to explain—and many times the individuals responsible for communicating the answers (whether administrators, faculty, graduate students, or undergraduates) remain in the dark about the complexities of these answers and their implications. The obfuscation of programs has consequences, some that are minor (e.g., a faculty member doubles up on a skill that has been taught in another class) and others that are dire (e.g., a student misses a graduation requirement).

Take, for example, Kate. Kate is a single mom, returning to school to complete her Bachelor of Science degree. She enrolls in an online upper

level writing course to fulfill her advanced writing requirement, but after completing the course, she learns that this class didn't actually satisfy her outstanding requirement. Unfortunately, while this class counts toward many majors' advanced writing requirements, it doesn't count toward her STEM degree. Now, she'll need to stay an extra semester to take a different writing course, moving her graduation from May to December. While Kate's example is specific, her situation isn't. Stories like this abound. Sometimes, it's easy to shrug off Kate's mistake: "Why didn't she more carefully read the list of accepted classes?" "Why didn't she talk to her advisor ahead of time?" "It's only one class—is this really that big of a deal?" If you talk to Kate, the answer to the last question is: Yes. She is now a semester behind and several thousands of dollars in debt, not just for her tuition but also for the childcare she needs because, as a single mom, she has to pay for an additional sixteen weeks of daycare to cover another semester. Her story reminds us that those who engage with our writing programs navigate them perilously, in good faith, working amidst a range of considerations to make decisions that fit the schemas of their larger lives.

As we consider the stakeholders whose decisions rely on our ability to communicate the complexities of our programs, we are motivated to consider whether our communication practices are working for those who need them. Additionally, we are motivated to consider how an inattention to these practices might contribute to gatekeeping, reifying the structures that prevent students like Kate from matriculating. In this way, we challenge ourselves (and others in the field) to consider the impacts of WPA documents as they contribute to or dismantle barriers for equity and participation in our academic programs. WPAs regularly produce documents aimed to help stakeholders navigate and understand our programs, but as we examine many of our own stakeholder-facing documents, including degree plans that are supposed to help students like Kate (see the appendix), we recognize their limits. Programs are often discussed, documented, and conceptualized in ways that mask the many moving parts comprising writing program infrastructure. This simplification (false though it may be) often reflects a dependence on linguistic modes of communication and documentation in writing programs. Even as we have built programs that embrace multiple modes of composing as part of their content for students (Cope and Kalantzis; Wysocki et al.), we have seen few direct applications of multimodal strategies such as mapping in the development of WPA best practices for problem solving. Indeed, the need for and potential of mapping is heightened by the increasingly complex and at times unstable institutional, political, and economic situations in higher education (Miller-Cochran;

Cox, Galin, and Melzer; Johnson, Simmons, and Sullivan). Therefore, in this article, we ask:

- What might WPAs gain from mapping content that historically has existed in linguistic forms?
- How does shifting to a visual rather than linguistic mode of programmatic communication help various stakeholders understand, use, and interpret our programs?
- Who might benefit from increasing our practice of mapping writing programs?

Our call for re-envisioning maps as a programmatic tool grows out of our long-term interest in seeing programs as complex infrastructures. As new WPAs in our respective institutions, we set out to understand programs through documents, websites, and conversations, only to find that the complexities were sometimes hidden from frame by the tendency to document the program through prose.

Because programs function infrastructurally, mapping them can help WPAs expose what they know, ask questions they didn't know they had, and clarify the relationships among timetables, individuals, and programs. In this article, we discuss two representative cases, showing how WPAs can implement programmatic mapping—the act of visualizing program infrastructures, processes, and relationships—to theorize the ever-shifting nature of programs and better communicate within the “zone(s) of ambiguity” (Porter et al., 625). Ultimately, programmatic mapping not only helps WPAs solve complex problems but also shifts the ways we think about our programs and the objectives of documenting them.

EXISTING APPROACHES TO MAPPING IN WRITING PROGRAM ADMINISTRATION AND BEYOND

Mapping as a concept has been variously used across rhetoric and writing studies as a metaphor for overlaying or organizing differing ideas. A number of scholars use the term mapping to describe an analytical technique for understanding a concept. Jarratt, Mack, Sartor, and Watson, for example, suggest that mapping can provide a conceptual frame to understand shifts across time for students or for the discipline. But in this case, like others (see, for example, Andrews et al.), the practice of mapping—of actually visualizing movement on the page—doesn't accompany the analytical work. In such cases, mapping operates metaphorically—a habit of mind or a way of thinking rather than a practiced visualization strategy with a resulting map.

When mapping and other visualization strategies have been adopted by rhetoric and composition scholars as a practical, applied tool, they have often been linked to reflective activities such as considering one's positionality. Patricia Sullivan and Jame E. Porter's *Opening Spaces: Writing Technologies and Critical Research Practices* demonstrates the generative nature of visualizations in recognizing the researcher's position in relationship to research methodologies. Similarly, mapping has been described as a reflective tool for the program administrator to examine their roles. For instance, Tim Peebles argues for the development of competing postmodern maps that can allow WPAs to "investigate their own positioning in an institution" (154), and Sharon McGhee offers a compelling example of the ways that a WPA position might be mapped in order to expose varying power relationships across an institution. Additionally, Kazan and Gabor note the power of mapping as "a tool for self-reflection and decision-making" (135) and create visually oriented leadership charts that can highlight the multiplicities of roles, locales, and constituencies WPAs are responsible for/to.

Further, mapping has also been highlighted as a tool for making ethical decisions about how to engage participants and their information in our programs and our research. Bob Broad argues, specifically, for dynamic criteria mapping (DCM) as a "method of evaluative inquiry" that can engage student work more appropriately than traditional rubrics and scoring guides that may mask the truth about what instructors and programs really value (3). Supported by qualitative methods and collaborative techniques, DCM makes programmatic values visible, supporting ethical engagement with students and the assessment process. Heidi McKee and James Porter similarly argue for the use of mapping in research, particularly in digital spaces, to guide investigators in the appropriate use of participant information that may be publicly available but must be treated carefully in the research process.

Such attention to mapping as a reflective tool is important, reinforcing the reflective, generative role of mapping for the individual who is doing the activity. However, these approaches do not necessarily demonstrate the power of mapping as a proactive tool for solving problems and outward facing communication. In this article, then, we aim to extend the conversation about mapping to include the ways that programmatic mapping can aid WPAs in solving problems with and for external stakeholders. After outlining three foundational concepts that can support WPAs in their mapping process, we describe two programmatic cases that illustrate the affordances of mapping. Finally, we discuss the possibilities for implementing mapping into WPA practice.

WHAT'S A WPA NEED TO KNOW ABOUT MAPPING?: USER-CENTERED DESIGN, GRAPHICAL PLANES, AND VISUAL ENCODING

While some might assume that WPAs, many of whom are rooted in rhetoric and composition studies, already have sufficient access to the conceptual frameworks and practical techniques that support mapping, we have found that individual preparation for this intellectual activity can vary just as greatly as an individual's preparation for WPA work. Some may intuitively use mapping techniques but not necessarily know how or why something works (or doesn't); while others might struggle to imagine how they could implement mapping, especially if they don't consider themselves visually oriented. To support WPAs across that spectrum and beyond, we outline three key concepts—user-centered design, graphical planes, and visual encoding—which can aid WPAs in creating meaningful programmatic maps.

User-Centered Design

Positioning mapping as a proactive technique relies on a user-centered design (UCD) framework that envisions the process of mapping and the resulting maps as communication and interaction with program users. Although user-centered design is often associated with technology development, it has been widely discussed by technical communication and rhet-comp scholars in relationship to a host of topics, many of which intersect with writing programs—courses (Shivers-McNair et al.), online writing instruction (Miller-Cochran and Rodrigo), writing centers (Brizee, Sousa, and Driscoll), curricula (Eyman), technologies (R. Johnson), transportation infrastructures (Moore; Rose and Walton), and other documents and websites (Gonzales). User-centered design counters technology-driven approaches that often assume that technologists know better than the users of the technologies and that misunderstanding or error is the responsibility, fault, or deficiency of a user. UCD proponents flip this narrative: perhaps, it is the designer or the communicator who has misunderstood the user or who is deficient at explaining the system. This flip is an empowering move, shifting power relations and assumptions about how systems, and in our case writing programs, work. It positions our students and their experiences as valuable, suggests that difficulty understanding programs is necessarily the responsibility of the WPA, and demands that WPAs consider the power structures that limit students' understanding and agency.

When we view our writing programs as systems that need to be understood by users, we can adopt UCD principles: we can ask how to effectively communicate for and with others rather than for ourselves. This means that

WPAs ought to consider how and if users (in all their diversity) can easily access, understand, and use the program (and its documents). The principles of user-centered design remind us to consider access for all users of our programmatic maps including those who may be blind or visually-impaired. Alt text or image descriptions should be developed for resulting maps that aim to communicate more clearly with wide-ranging stakeholders.

Graphical Planes

The programmatic maps that we describe here—and that we anticipate WPAs will find useful—organize information on graphical planes, using the x - and y -axes and the up/down and left/right movements to depict relationships. Graphical planes rely on spatial properties (position and size) to create a visual hierarchy that represents what Isabel Meirelles calls “abstract domains.” Engaging with the graphical plane allows the communicator and viewer to understand, for example, power and organizational relationships (abstract concepts) through visual specificity. For example, in an organizational map “distance in graphical space represents distance in the hierarchical structure” (Meirelles 20). Ultimately, graphical planes use visual metaphor to create meaning and, importantly, to reveal underlying complexities that may not otherwise surface. Although graphical planes interact with other systems, we expect that WPAs will primarily (if not exclusively) find mapping useful for visualizing the abstract domains of their programs. Maps that, in contrast, show where (geographical locations) courses are taught seem less likely to be helpful.

Visual Encoding

Variables such as relationships include size, color, texture, orientation, and shape encode relationships, allowing the reader to visually relate ideas. Most visual encoding relies upon pre-attentive attributes to exploit the visual system. As viewers rapidly process the difference among visual elements, they typically interpret the encoded relationships among elements using a same-different dichotomy (Meirelles 22). For example, elements of the same color (or shape or size) will be interpreted as connected where elements of contrasting colors (or shapes or sizes) will not.

In order to effectively design maps for a range of stakeholders, WPAs must consider the ways that patterns, such as sameness and difference, will be encoded. Gestalt principles are perhaps the most readily used visual communication devices in composition, helping us to articulate the ways visual patterns are detected. Some of the most common Gestalt principles include:

- **Proximity.** Elements near one another on a graphical plane are perceived as a unit or as connected.
- **Similarity.** Elements that are similar to one another are grouped together into a perceptual unit.
- **Enclosure.** Elements that are bounded together are perceived as one.

These and other Gestalt principles can allow WPAs to indicate what belongs with what, to direct the viewer's perception of the programmatic elements, and to ask crucial questions including: Which elements belong on the page? How are they related? How might other stakeholders relate them? And how might a visual depiction of these elements communicate the relationships, values, and priorities of the program?

For example, maps of curricula can be organized thematically, demonstrating through proximity which courses are required for which groups of students. Alternatively, maps of curricula may be organized along a timeline to display time series data, demonstrating when students should take courses—first year, second year, third year. Although the timeline is often nonspecific in that students must adapt the general order (term 1, 2, 3, etc.) onto their specific circumstances (fall 2019, spring 2020, fall 2020), the ordering across a graphical plane provides meaningful information. Similarly, program goals can be grouped thematically or projected across timelines along particular dates, semesters, or years. While it's beyond the scope of this particular article to make claims about the best or most appropriate visualization work for WPAs, our goal is to consider the way visual encoding works, helping WPAs solve problems through communication that “appropriately match[es] types of phenomena . . . with graphic elements and visual variables” (Meirelles 126).

TWO CASES OF MAPPING AND THEIR IMPLICATIONS FOR WRITING PROGRAM ADMINISTRATION

Case #1: Mapping Communicates Complex Interrelationships

When I (Laurie) joined the faculty at Humboldt State University as the writing program coordinator, I had the opportunity to oversee the implementation of a stretch option for first year composition students. This stretch sequence had been developed by the composition faculty in response to the university system's mandate to remove remedial coursework. When people asked me about the composition program, I would have said something like:

In our program, students have two options: a two-semester course sequence, which stretches the composition requirement over an academic year, or a one semester accelerated course,¹ which allows students to complete the requirement in a single term. No matter which option students choose, the credits count toward graduation and fulfill the General Education (GE) requirement.

However, my linguistic response did not answer the more complex questions that students, advisors, and faculty had:

- When is the GE requirement satisfied—is it after the first course in the stretch sequence or after the second?
- What happens if a student doesn't pass the first course in the stretch sequence?
- What happens if a student tries to take the one semester course but finds that they need more time to complete their requirements?

Not only did my response not address those questions, it also overlooked the portfolio requirement, which operated alongside course grades to determine whether or not a student had satisfied their GE requirements. This detail was important because unlike many other institutions where students retake the same composition course if they are unsuccessful in the first attempt, our program offered a portfolio-focused course in which students worked solely on revision of their portfolio. While a student took the portfolio revision course, their grade in the previous course was “paused” much like a student’s grade is paused while they satisfy an incomplete grade. This pause was designated “report in progress” or “RP” on the student’s transcript and was replaced with the portfolio course grade once a passing portfolio was submitted to the portfolio committee, which included instructors across the program. Because I did not address the portfolio in my linguistic response, I omitted this information about what happened when a student completed their day-to-day course requirements (turning in assignments, earning process-focused credit for their drafts and in-class participation, and earning passing grades throughout the course) but still needed more time to develop a passing portfolio of work.

If the fuller description of the program above is challenging to understand for those of us who are readers of this journal, imagine how much more difficult it might have been for students to navigate successfully. As Christina Saidy highlights through the case study of Inez, the transition to college writing is more complex than faculty and WPAs often acknowledge. Our programmatic structure, which was intricately designed to be highly supportive of students, demonstrates that complexity. However, students at

HSU did not necessarily see the complexity because the linguistic completion of “What is the composition program?” masked the intricacies, helping students feel like the choice was simple: “Do I want to take two composition courses or one?” Or perhaps phrased slightly differently, “Do I want to spend two semesters completing my GE Written Communication requirement or only one?” While the simplicity may have helped students choose an initial course with ease, it did not allow students (or other stakeholders) to process all the information at once or make the relationships between courses, portfolios, and other infrastructure more apparent. Recognizing that students and those advising students often could not comprehend those interrelationships, I developed a programmatic map that visualized the ways students might progress through the program (see figure 1).

Through visual encoding, this map animates the relationships among the user, in this case the student, and program elements by demonstrating in each box with corresponding arrows what choices students need to make and what decisions might be made for students based on their prior choices and actions. This also highlights the immediate activities and the long-term implications. For example, within the stretch sequence option, the automatic enrollment of students into the English 103 course that corresponds to their English 102 course demonstrates the cohort model that was in place in the program. Students from an English 102 course were expected to stay with the same classmates and same instructor in English 103; therefore, they were automatically enrolled by the registrar’s office in the next course without any student-initiated enrollment actions.

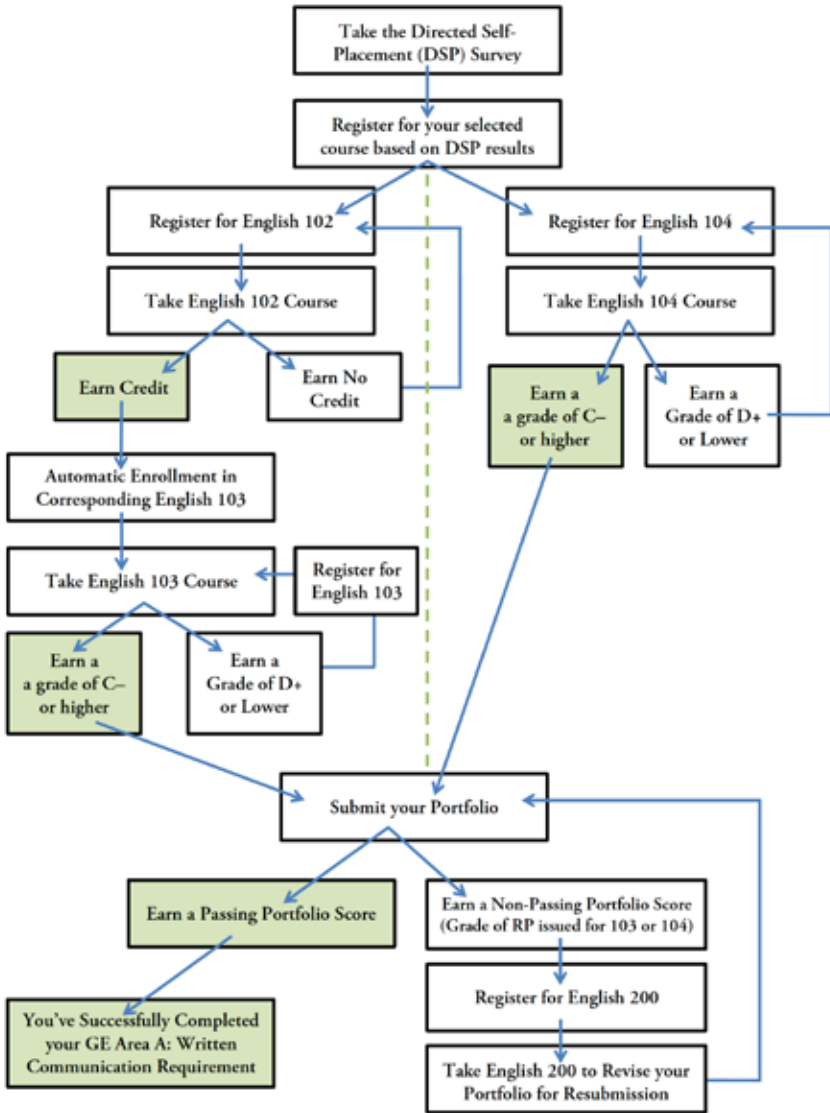


Figure 1: Programmatic Map Created to Visualize HSU's Stretch Composition Sequence

As I visually encoded the course selection and progression processes, the resulting programmatic map offered a much more complex view of the progression than my initial linguistic response did. It also employed common Gestalt principles to help users quickly see connections through similarity and difference. For example, the progression of the stretch sequence

(English 102 and 103) are placed in proximity to each other by using left justification, and the accelerated course (English 104) is justified on the right. Additionally, the successful completion of requirements—courses, portfolios, or GE requirements—employ color similarity. In this programmatic map, which affords much more complexity than my linguistic replies had done, I still had to make choices about which relationships to visualize. Mapping momentarily stabilizes a relationship; therefore, we must often choose between visualizing relationships that currently exist and those that we hope for. For example, it was possible for a student who began their composition experience in the stretch sequence, but did not pass the first English 102 course successfully, to subsequently enroll in the accelerated English 104 course and try to complete the requirement in one semester. Typically, we would not advise this, knowing that if a student could not meet the demands of the English 102 course pacing, they would likely struggle more with an English 104 course that required more independent work outside the classroom to complete the final portfolio requirements. However, on rare occasions, when students were bound by a university-mandated one year rule for completing their GE requirement based on a placement test score, I would work with students to determine whether an accelerated English 104 enrollment would be their best option even after an unsuccessful attempt at the initial course in the stretch sequence.

The resulting programmatic map served to communicate with students, advisors, and even faculty within the program. I was able to use the map in meeting with students before and after they engaged with their directed self-placement survey. The map helped them to see their options with additional clarity. Additionally, I distributed the map in meetings and workshops with centralized campus advisors who sought to better understand and communicate the choices and their resulting implications with students. It also aided in instances where campus stakeholders such as university athletics needed to better understand why a student might have successfully completed one composition course but had not yet been released from the GE requirement, which was tied to student-athletes' eligibility for NCAA participation. The map also documented programmatic options in ways for the faculty who were teaching the courses. In this way, the map, which served to surface complexity, also aided in documenting and addressing that complexity, providing a point of conversation about potential revisions to the program based on students' experiences with the existing options.

Sullivan and Porter remind us that each time we return to a map, we may see interrelationships that were not initially visualized. As I return to this map after a few years since its creation and having moved to a differ-

ent institution, I notice that we missed an opportunity to link the linguistic program description to this visual one by using the terms “stretch” and “accelerated” to indicate the ways that the course progressions on the right and left of the programmatic map might align with the terms that the students were hearing from composition faculty or seeing on the composition program website. Additionally, we might have mapped the chronological timing of the courses along the vertical axis to show the number of semesters involved in various progressions. While the programmatic map is still ripe for revision, it provided an important acknowledgement of the complex relationships that were not always recognized and respected as students attempted to navigate the program and the university, many of them first-generation college students whose institutional knowledge-building skills were still in formation.

Case #2: Collaborative Mapping Generates New Knowledge

When I (Kristen) began my role as director of undergraduate studies at Texas Tech University, I faced a number of institutional challenges: first, I was relatively new to the university and had not had much exposure to the undergraduate programs or its courses; second, the institution was revising its approach to the university-wide communication requirements, so the program needed to develop new ways to satisfy the expectations; and third, the undergraduate program, which had been planned nearly a decade prior, had not been reviewed systematically for alignment between the program’s overall vision and the realities experienced by students on a day-to-day basis. Programmatic mapping helped generate new knowledge, particularly, about the moments of disparity between program expectations and student experience, which could inform my work as a WPA and our program’s response to the new undergraduate communication requirements.

I might have navigated these challenges myself or in conjunction with my assistant director and the program advisor—there were documents that would aid in my understanding of the program, and I had been trained to direct writing programs. Certainly, I could have developed a curriculum for communication literacy and worked to create a programmatic solution to the problems facing students, but my solutions would have been decidedly less effective than a user-centered approach that involved a broader range of stakeholders: graduate student TAs, adjunct faculty, tenured and tenure track faculty, and full time lecturers. To implement a participatory approach to mapping, I gathered users across the program to map the curriculum. Our central purpose was to understand how particular course objectives were being fulfilled, and our collaborative mapping was divided

into two phases. In phase 1, cross-user teams (undergrads, instructors, grad students, and tenured-/tenure-track faculty) worked together to communicate the current course outcomes and their implementation on colored papers. In phase 2, we used the program map to collaboratively visualize the journey of fictional students through the program. While curriculum mapping is a common activity for some educators, often performed by assessment or program review committees, this case highlights the ways that the visual elements of such maps can create shared meaning for stakeholders and highlights the ways that such a strategy can become an activity-driven, inclusive strategy in which layered mapping activities generate new knowledge.

During phase 1, stakeholders from across the program who had both taught and taken courses in the program were divided into small groups (of 3–4 people) to review several syllabi from a course offered in the program. For each course, groups assessed (based upon the syllabus and their experiences) whether or not a particular communication literacy was taught, and if so, whether it was explicitly or implicitly taught. As shown in figure 2, courses were listed in the top row of the programmatic map, and program goals were listed on the left column. Based upon their assessment, groups provided a color-coded piece of the map in the corresponding row/column: yellow (explicitly taught), blue (implicitly taught), white (not taught at all), or red (unsure if taught based upon the syllabi and experience). The yellow, white, blue, and red papers indicated places where the particular programmatic goal was directly addressed, not addressed at all, indirectly addressed, or addressed differently by various faculty (respectively). We also added two additional rows at the bottom to collect programmatic information such as textbooks, marking these with a color that blended into the background paper as these were not program goals but rather programmatic structures that supported the goals. The background provided the graphical plane within which we collectively charted the current state of the program. The visual encoding of similar and different colors made it easy for stakeholders across our program to see which program goals were being addressed most often and where they were lacking.

Drawing on participatory design to involve our users, the assistant director and I were able to involve many stakeholders in the process of mapping the program. In turn, the map not only functioned as an information-gathering document but also prompted discussion, required negotiation, and made uncertainties visible. The collaborative process generated new knowledge as we learned about the levels of shared agreement regarding our courses: we found that some courses and goals were understood as (nearly) unanimously important for students, faculty, and TAs; other courses and

goals were so amorphous as to render them peripheral to the program. This collaborative, user-centered understanding of the program provided a richer context for our response to the institutional communication requirement revision and did more than repeat what was “supposed” to happen based on stated course goals. For example, an undergraduate student discussing our introductory course revealed that while the course attempts to engage cross-cultural communication, their experience was that this outcome was glossed at best. This led instructors to share the problems they had fully integrating cross cultural communication in such a fast-paced course. In this way, mapping helped us reinterpret our program’s realities, lending important explanatory data to our interviews with students in which they told us they often graduated without a strong sense of what they’d learned and what their potential marketability was. With this new knowledge from our mapping activities, we realized the flexible structures the program had adopted when it was first created might have unforeseen consequences regarding students’ exposure to various program goals.



Figure 2: Programmatic Map Created to Visualize Course Goals

In phase 2, once the map (figure 2) was created, we needed a strategy for exploring how particular students engaged with the program’s goals. If Fred, for example, took this set of courses, did he meaningfully complete all program goals? And how might Jennifer’s different set of courses prepare her differently for a career? To do this, small groups were provided with different sample student curricula and were asked to chart the students’ movement through the literacies: What was missing? What was re-iterated? And, importantly, were we comfortable with the exposure each student had to the goals?

By placing the student pathways on large Post-its next to the initial map, the discussion became interactive, graphical, and visual—rather than merely linguistic. Mapping student progressions allowed teachers, administrators, and students to discover the ways that some students were graduating without exposure to some critical literacies or outcomes the program intended for students to develop. For example, some students graduated without exposure to our courses that honed students’ technological literacies while others graduated without taking courses that aimed to increase students’ attention to cultural difference and diversity. In response, the teams suggested changes to the curriculum (should we require another course?) and to individual courses (should we standardize this assignment?), using the visuals as a shared information product for decision making and problem solving.

As we considered different pathways for student completion, we asked: Are these different pathways a problem? Are they equitable? Do they provide different strengths? Do they prepare students for different kinds of jobs? Our answers to these questions, made possible by our mapping activities, highlighted the times when students’ experiences did not align with our programmatic objectives and allowed us to weigh the benefits of some student pathways against others. Ultimately, this informed the purposeful development of stated curricular pathways or tracks through the degree.

Additionally, in working through the student progressions, we discovered that student participants operated on tacit knowledge that we otherwise would not have discovered: they often took classes based upon their work schedules, based upon the reputation of the professor, or the amount of work the class seemed to demand without knowing how or why the classes contributed to their professional development. As such, the mapping activity allowed us to do more than merely see the program in new ways—it also provided access to important user knowledge. The mapping activity, then, revealed a new way to communicate with students about our program: having students map imaginary progressions helped them create new knowledge, which we then translated into handouts students could use to map their own progression as part of their professional development.

Implications of These Cases of Mapping

These cases demonstrate the potential of mapping in two different programmatic contexts—a first-year composition program and an undergraduate technical communication major. Despite their very different contexts, both cases present the ways that programmatic mapping engages WPAs in intellectual activities important to problem solving. By reproducing knowl-

edge that is, at times, implicit and by helping WPAs (and other stakeholders) discover and make new meaning, programmatic mapping enables WPAs to manage and communicate the dynamic infrastructure of any given program, allowing for the rhetorical reinterpretation of the institutional structures.

In each of the cases, mapping served a different purpose: one helped to make the complexity of a composition program comprehensible to students; the other developed a collaborative understanding of an undergraduate degree program. In both cases, however, a shared affordance of mapping as a WPA emerged: our programs were left with documentation that helped users engage, understand, or navigate the various parts of the program. When we begin considering the designed, infrastructural nature of programs, the need to document those programs for various users becomes important. In each of these examples, different users' needs were met through the map-as-documentation.

Mapping can be especially important in exposing the parts of our programs and institutions that are codified and stable in contrast to those that live in liminal spaces. Matthew B. Miles, A. Michael Huberman, and Johnny Saldaña suggest "Having to get the entire framework on a single page obliges you to specify the bins that hold the discrete phenomena, map likely interrelationships, divide variables that are conceptually or functionally distinct, and work with all of the information at once" (25). Such mapping activities provide a way for WPAs to acknowledge and address complexities as they make choices regarding what and how to visualize programs—determining which elements ought to be in proximity with others and how to bound the elements that are best understood together. The mapping activities highlight programmatic complexities, but mapping, when done well, can also make that complexity manageable by pulling together relevant elements on single page, screen, wall, etc.

Mapping scholars in fields such as cultural geography and visual rhetoric note that all maps are ideologically rich and subjective rather than an objective representation of the site, concepts, or institution to which they correspond. Ben F. Barton and Marthalee S. Barton illustrate this through analysis of early world maps, which, although sometimes taken to be one-to-one re-presentations of the world, demonstrate ideological differences. For WPA work, this ideological awareness is important: any articulation of a curriculum or program (visual or not) inheres particular positionalities, subjectivities, and foci. By choosing to see the complexity of the programs through a map, WPAs can more profitably see the ways that various stakeholders interact with the program and, in turn, develop responsive ways to communicate problems and solutions with other users.

POSSIBILITIES FOR MAPPING IN WRITING PROGRAM ADMINISTRATION

Through this discussion of mapping as a problem-solving tool, we hope to spur further conversation about programmatic mapping in the field of writing program administration. Despite our arguments in support of its use, we realize that a WPA may believe that if they cannot create a map that is immediately visually appealing, they shouldn't create one. However, we would argue that even simple (see case #1) or internal programmatic maps (see case #2) can do important work. Tools to encourage mapping—whether physical or digital—can enhance the possibilities for engaging in knowledge-making activities individually or collectively. WPAs might consider the ways that existing programmatic spaces—a whiteboard in the conference room, a bulletin board in the writing center, a shared file on the department server—can be used to make space for the development of maps that respond to programmatic problems. Simple maps can often be formalized, as needed, before sharing with relevant stakeholders.

Additionally, we must remind ourselves that we cannot expect to hone our mapping strategies—or any rhetorical strategies—without practice. Our turn to programmatic mapping as an integral skill for WPAs, therefore, bears pedagogical implications. The increasing centrality of visual rhetoric doesn't necessarily mean that we know how to create effective visuals. This is particularly true when we adopt universal design and prioritize access for all who may be engaging with our maps, including those with visual impairment. Therefore, our training for new and emerging WPAs, whether through graduate seminars, WPA workshops, or other resources should attend to the skills involved in mapping effectively for varied stakeholders and with both purposeful public aims and exploratory internal strategies. Some graduate programs already offer courses in information or document design and accessibility standards, but these courses are often reserved for those specializing in technical and professional communication, rarely showing up as key courses for WPAs working to develop a portfolio of necessary skills in administration. Yet, these are the very courses that focus on some of the more practical skills involved in the kinds of communication WPAs might do on a day-to-day basis. In light of such needs, we are arguing, then, for an expansion of the primary skills that WPAs nurture and value. Drawing attention to strategies such as mapping also allows us to acknowledge the overlapping but often hidden relationships between WPA work with other disciplines within and beyond rhetoric and composition, such as technical and professional communication, data science, and usability/UX.

It seems clear to us that further, empirical research is needed if we want to more deeply understand how WPAs might use mapping to communicate their programs. Studying the impacts of various program maps can help us understand which kinds of maps work best for communicating with our various stakeholders: students, campus colleagues, upper administrators, members of the public, etc. Drawing on methods such as those in user-experience research, such studies might help us unearth the ways that our own mappings obstruct details of our programs or marginalize the perspectives of particular groups: underrepresented students or non-tenure track faculty, for example, and also other already-marginalized groups whose understandings of programs and programmatic politics might differ from our own. When we commit to effectively articulating and communicating through maps and mapping activities, we can better acknowledge and work against the systemic oppression our students face when trying to navigate programs. In this way, we are advocating for mapping, because maps can expose the problems with ideologically neutral conceptions of programs and can support the revision of programs in order to address issues of inequity that get can be exposed through participatory mapping activities. Our vision of mapping as an element of writing program administration includes both a shifting of skills but also an opening up of possibilities for improving our programs and making them more open and equitable.

NOTE

1. “Accelerated” was used in this program and the course title to note that this one semester option was a faster-paced course than the two-semester stretch sequence. It was not used to refer to a curriculum or course linked to the well-known Accelerated Learning Program (ALP).

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APPENDIX: DEGREE PLAN USED FOR TEXAS TECH UNIVERSITY'S ENGLISH PROGRAM

ENGLISH (Literature and Language)

***42 Hours** *Grades Must be C or above

-Freshman English: _____ 1301 _____ 1302

-Sophomore English (Prerequisite ENGL 1301&1302):
 6 hours from: 2321, 2322, 2323, 2324, 2325, 2326
 3 hours from: 2307, 2310, 2371, 2381, 2382, 2383, 2388, 2391

-3000 Level Courses (Prerequisite 6 hrs soph. ENGL): ○
 Take ONE Theory or Linguistics: ENGL 3301, 3328, 3339, 3371, 3372, or 3373 X
 Take ONE Diversity: ENGL 3338, 3339, 3364, 3367, 3369, 3362, 3393, 3394, or 3395 ○
 *A course cannot fulfill both categories

Communication Literacy (CL) Requirement
 9 hours from 3 Clusters:
 -Cluster 1 (Cultural Interaction): 3 hours I
 -Cluster 2 (Critical Communication): 3 hours X
 -Cluster 3 (Intercultural Communication): 3 hours O

Distribution Courses: Take one course from TWO of the following lists. Students must choose from categories not fulfilled at the 2000 level.
 Early Global: _____ (ENGL 3336, 3338, 3338) I ○
 Later Global: _____ (ENGL 3337, 3338, 3341, 3342) I ○
 Early British: _____ (ENGL 3302, 3303, 3304, 3305, 3305) II
 Later British: _____ (ENGL 3307, 3308, 3309, 3311) I
 Early American: _____ (ENGL 3323, 3392, 3393, 3394, 3395) II
 Later American: _____ (ENGL 3324, 3325, 3392, 3393, 3394, 3395) II
 *Note: If students count a distribution course as a diversity course (3338, 3392, 3393, 3394, 3395), they must make up the 3 hours with a 3000-level elective to meet the 18 hours required at the 3000 level.

EXAMPLE (note that many other combinations are possible).

	Early	Later
Global	Possible 3000-level distribution course	Possible 3000-level distribution course
British	ENGL 2323	Possible 3000-level distribution course
American	Possible 3000-level distribution course	ENGL 2326

-Two Additional 3000 Level Courses: _____ & _____

-4000 Level Courses (Prerequisite 6 hrs on the 3000 level):
 9 hours from: _____ 4300 _____ 4301 _____ 4311 _____ 4312 _____ 4313 _____ 4314 _____ 4315 _____ 4321
 X 4342 _____ 4351 _____ 4371 _____ 4373 _____ 4390

ARTS & SCIENCES DEGREE REQUIREMENTS FOR BACHELOR OF ARTS

Written Communication (6 hours): _____ ENGL 1301 & _____ ENGL 1302 (Fulfilled by major)

English Literature (8 hours) from: ENGL 23— and ENGL 23— (Fulfilled by major)

Oral Communication (3 hours): _____ / _____ Multicultural Requirement (3 hours): _____

