DEFINING DISPOSITIONS: MAPPING STUDENT ATTITUDES AND STRATEGIES IN COLLEGE COMPOSITION

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It was an epic fail.

Upon hearing this comment, delivered cheerfully by an unassuming engineering major, students in my Spring 2012 advanced composition class perked up. At the podium, Luke was pointing to a vivid slide of a car crash to explain his recent experience drafting an analysis essay for his art history class. (All student names are pseudonyms.) We were midway through my fifth semester of assigning students to "decode" the rhetorical strategies they had used in a previous writing task via a three-minute presentation, and I'd been proud of how well they had been able to apply our new language of rhetoric—audience and genre, disciplinarity and revision—to their earlier work. Luke was reasonably adept at this rhetorical analysis, but his personal narratives came alive and made his explanation seem more emotionally honest. The art history class, he said, had been a boring general-education requirement, the assignment had seemed confusing and irrelevant, and so as the writer he had had zero motivation, procrastinated too long, and thus wound up with insufficient time to complete the necessary research or to figure out a specific stance to take. An epic fail—not because of his skills, but because of his attitudes. Across the room students were grinning and nodding: these were truths they knew about writing, especially writing in school.

I admit I have come late and dubiously to considering writers' dispositions as discrete, maneuverable factors integral to their classroom learning and success—as situational, strategic, and relevant rather than innate and ineffable. Even today, I remain skeptical about the exhortations of the field's founding statement on dispositional learning, the 2011 *Framework for Success in Postsecondary Writing* (see O'Neill, Adler-Kassner, Fleischer, & Hall, 2012). It seems to me self-evident that a writer's attitude affects how and how well he or she

writes. But within an institutional learning context, what can it mean for writing teachers to give formal instruction towards, much less assess students on improving, these affective, even personal characteristics? And why should these approaches be featured instructionally in a class about writing: a class about paragraphs, arguments, and genres? Yet I have recently discovered that when I bring dispositional concepts into our discussions, students and I benefit from being able to talk more truthfully and completely about what writers do. Moreover, in analyzing four semesters' worth of students' writing about their dispositional approaches, I have concluded that students' ways of feeling and doing as writers—their recognition, emphasis, and integration of dispositional factors as related to their writing-learning—suggest some distinct pathways for improving writing instruction.

DEFINING DISPOSITIONS

Placing "disposition" into a larger conversation about "cognition" in composition studies is challenging. If we use one common distinction, dispositional attributes might be seen as oppositional to cognitive achievements, in the way that "affective" and "intellectual" achievements are often separated. In line with David Conley's (2007) distinction between "academic behaviors" and "key cognitive skills" (pp. 16, 12) the *Framework* separates dispositional "ways of approaching learning"—behaviors such as curiosity, openness, engagement, creativity, persistence, responsibility, flexibility, and metacognition—from more classroom-based, epistemological structures for writing learning such as "rhetorical *knowledge*" and "critical *thinking*" (O'Neill et al., 2012, p. 525, my emphasis). Yet perhaps disposition and cognition have some elements in common. Approaches such as creativity, persistence, and responsibility echo more general strategies posited by Arthur Costa and Bena Kallik's (2000) habits of mind, Albert Bandura's (1986) work on self-efficacy, Barry Zimmerman's (2002) arguments about self-regulated learning, and Carol Dweck's (1996) investigations of learners' mindsets. Because these scholars emphasize the way advanced learners employ their own *awareness* and *control* of attitudes to enhance their learning and performance, we may identify a link between emotional dispositions and the more general concept of metacognition or reflective practice (Downs & Wardle, 2007; Nowacek, 2011; Yancey, 1998). In such a reading, learners' dispositions are revealed through metacognition and thus should be read as complementary rather than opposed to learners' cognition.

Other researchers blur the boundaries further: Shari Tishman, Eileen Jay, and David Perkins (1993) discuss "thinking dispositions," while Carolyn L. Piazza and Carl F. Siebert (2008) argue that "affect may be linked to both social

and cognitive factors" (p. 276). Dana Lynn Driscoll and Jennifer Wells (2012) similarly align disposition as *parallel to* cognition, especially considering conversations (e.g., Flower & Hayes, 1981) that use "cognition" as a shorthand for "individual" or "interior" work that occurs distinct from a social approach to learning. That is, Driscoll and Wells contrast their work with writers' dispositions to the activity theory-oriented work of composition scholars such as David Russell (1995): they note, "In some [social] definitions, the learner is someone to whom or through whom transfer happens rather than being the agent of transfer" (Transfer of Learning section, para. 1). Identifying writers' dispositions as both inherent and malleable, Driscoll and Wells argue that these attributes are crucial for learning and for transfer, and call for further research into these connections.

Measuring the effects of dispositions for writing students is challenging. Looking to the future, Dryer and Russell (this volume) point to promising developments in integrated research approaches such as neurophenomenology, modeled by Antoine Lutz, Lawrence Greischar, Nancy Rawlings, Matthieu Ricard, and Richard Davidson (2004) in their combined examinations of personal narratives and brain scans of meditating Nepalese monks; currently, however, most U.S. scholarship focuses primarily on social and educational factors. Some studies, particularly focused on pre-college writers, have demonstrated that a curriculum that emphasizes dispositional or self-regulatory approaches can have a positive effect on students' attitudes (Kear, Coffman, McKenna, & Ambrosio, 2000; Parajes, 2003). At the college level, Charles MacArthur, Zoi Philippakos, and Melissa Ianetta (2015) demonstrate that a comprehensive self-regulated strategy curriculum—including information to support genre awareness, instruction in self-regulatory strategies such as goal setting and self-evaluation, and instructor modeling of writing strategy application (Harris & Graham, 2009)—results in improved persuasive writing by students. While this study is one of a very few to link some dispositional attributes to improved competency in written assignments, their comprehensive approach makes it difficult to pinpoint the influence of attitudinal changes alone, much less to understand how those changes interacted with the work of student writers.

So for now, the causal links between college students' dispositions and their writing performance remain largely unexplored; even correlations are only tenuously theorized, and scholars raise questions as quickly as they suggest options. For instance, Carol Severino (2012) posits that dispositional success does not necessarily associate with mastery of standard writing conventions; Kristine Hansen (2012) likewise argues that there is no reason to presume that writing education is a primary or even likely way to instill such habits into students' repertoires. We may also face concerns about student exclusion as Kristine Johnson

(2013) notes, because any course that assesses students on a personal trait not supported by their home communities may put them at an unfair disadvantage. Until we know more about how students gain dispositional proficiency and how their dispositions relate to other aspects of their writing learning or achievement, we will continue to have difficulty achieving the larger vision of the *Framework*, in which teachers "develop activities and assignments that foster the kind of thinking that lies behind these habits [of mind]" (O'Neill et al., 2012, p. 527). In this study, then, I take additional steps toward that knowledge, by tracking some of the ways students respond to direct requests to narrate their own writing dispositions, and by analyzing how they perceive their affective challenges and successes as being connected to their rhetorical, structural, and analytical work as writers.

STUDY DESIGN: TRACKING DISPOSITIONS

Data in this article come from students' writing in four sections of English 101: Composition that I taught—fall 2014 (two sections), spring 2015, and fall 2015—and from four assignments that students completed therein. The project was approved by my university's institutional review board, and all of the students whose work is considered here consented to participate in my research. In all, 44 students participated, though not all students completed all assignments. Nearly all were first-year college students; the group includes 25 women and 19 men. Although I did not track language or ethnicity, students were a typical mix for George Mason University, where 20-30% of students speak a language other than English as a home or first language, and just over 40% are non-white (*George Mason Factbook 2013-2014*).

One goal for me in these classes was to help students move away from a sense that people "get writer's block," a mystical affliction without clear remedy. I aimed to move us instead toward identifying a wider range of problems that writers need to solve. Especially following my experiences with students like Luke, I also encouraged students to draw connections among writing problems they didn't usually identify as related to "cranking out an essay," such as comprehension of information and managing their own attitudes. Thus, drawing in part on the work of scholars who advocate deliberately *teaching for transfer* (Beaufort, 2007; Taczak & Robertson, this volume; Wardle, 2007; Yancey, Robertson, & Taczak, 2014) we regularly used the following framework of overlapping categories:

- *Rhetoric problems*: Challenges in identifying one's goal, meeting an audience's needs, adapting to a relevant genre

- *Knowledge problems*: Challenges in comprehending an issue, adapting to the breadth or depth of information needed, providing analysis and/or challenging assumptions
- *Process problems*: Challenges in generating and organizing text, working through the steps of inquiry and source evaluation, and/or revising and editing
- *Disposition problems*: Challenges in generating confidence or motivation, in managing time and resources, and/or in staying persistent, curious, or flexible.

Early in each semester, students read some short passages to help them become familiar with these terms. In addition, several of the assignment prompts cued students to remember or consider these categories (see Figures 15.1 to 15.4). Beyond that, however, we did not spend much formal class time defining these categories precisely or setting specific goals around them; indeed, in the case of the disposition problems, after a brief first-week discussion, we spent almost no class time analyzing the specific nature of the challenges in this category. My previous experience with the Decoder assignment had suggested that these students could generally gain a useful working knowledge of these concepts through repeated opportunities to consider and apply key terms to their own projects.

To gain this working knowledge, students completed a series of guided, graded metacognitive assignments, including the four Decoder-based tasks analyzed here as well as regular reflective writing about their major writing projects for the class. These assignments were evaluated primarily on completion; the projects analyzed for this study combined for just under five percent of students' final course grade. Because assignments were graded, some students may have represented their interest in or progress with particular writing strategies more positively than was actually the case. And since students were usually prompted to consider all four categories of writing problems, they may have discussed some challenges that they did not actually perceive as important during their writing process. However, since students were given their choice of multiple sub-categories, received credit for (and very little commentary from me on) all completed assignments, and were invited to represent successes or difficulties as they preferred, they faced relatively little external pressure on these assignments to provide "right" answers that differed substantially from their own experiences.

DECODER PREPARATION AND DECODER PRESENTATION

In the first half of the semester, students reflected on a writing task that they had

completed elsewhere recently, for a class or outside of school, and used disciplinary terminology to "decode" the challenges they had faced while writing it. They were asked to respond to a series of questions as part of their initial information gathering (Decoder Preparation), and then to give a three-minute presentation to the class, using some sort of visual aid such as a PowerPoint or Prezi (Decoder Presentation), while their peers took notes. Students in these classes described their work on college application essays, awards banquet speeches, personal and professional emails, and high school research papers; among more wide-ranging tasks were those by an ROTC student who described presenting a quarterly report to her commander and an engineering major who described writing a one-act play.

Decoder Comparison Homework and Final Quiz

For a late-semester assignment, students were asked to choose any three of their peers' Decoder Presentations that they had taken notes on and reflect on what those reports told them about how writers work (Comparison). They completed a table comparing the writers' efforts in three categories of their choice (such as "Rhetoric Problems" or "Author's Biggest Challenge"), wrote a paragraph about any trends they might extrapolate from their chart (did writers have common difficulties or strategies?), and explained how they might use any of the three writers' experiences to address their own current or future writing challenges. Finally, for the first section of our last quiz, students were given a choice of three briefly described Decoder situations from the semester's presentations, and asked to explain how a writer who needed to complete one of those tasks might prepare for and address challenges (Quiz).

Collecting and Coding Dispositions

For this analysis, I collected electronic copies of participants' Decoder-cycle assignments. Generally, I set aside responses to introductory or framing questions (such as "What was your task and your audience?"), and instead selected responses to the questions that most directly requested students' thinking about writing strategy problems and dispositional challenges. In order to attend to relationships among writing problems, I looked at units of text in which students were intending to focus on a single writing problem: in some cases, a text unit was several sentences responding to a question (e.g., about disposition challenges); in other cases, a text unit was a single bullet point or sentence from a student's summary of multiple challenges. From the Decoder Preparation exercises I collected students' final conclusion statements as well as any statements they

made in response to a middle section of questions prompting them to consider at least one problem in each of our four categories: rhetoric, knowledge, process, and disposition.

Rhetoric Problems: *Answer at least one.*
Say something about solving
- the **audience** or **genre** problems of your document
- the **evidence** problems in your document
- the **presentation** problems in your document

Knowledge Problems: *Answer at least one.*
Say something about solving
- the **breadth/depth** problems in your document
- the **analysis** problems in your document
- the **assumption** problems in your document

Process Problems: *Answer at least one.*
Say something about solving
- the **inquiry** problems in your document
- the **generation** problems in your document
- the **organization** problems in your document
- the **revision** problems in your document

Disposition Problems: *Answer at least one.*
Say something about solving
- the **confidence** problems in your document
- the **motivation** problems in your document
- the **deliberate time and resource management** problems in your document
- the **persistence** problems in your document

Conclusion Part A: If you had to do this writing task again, how might you do it differently and/or better?

Conclusion Part B: How is this task similar to another kind of writing task (in or out of school) that you or we might do in the future, and how could you (or the rest of us) use similar strategies to solve that writing problem?

Figure 15.1. Selected preparation prompts.

From those question sections I coded each response as a single entry, whether it was a few words or a longer paragraph. From the conclusion sections, each sentence was coded individually, since students used those sections to list multiple strategies and approaches. From the presentations, I collected text statements

from the problem-focused sections of students' visual aids: each non-header bullet-point or slide section was coded individually, regardless of length (see Figure 15.2).

In a 3-4 minute presentation, you will use key terms that advanced writers use to talk about writing, plus an assessment of your specific challenges and resources, to show how a writer might start to solve a writing problem.

Instead of predicting how to solve an unknown problem, you'll use 20-20 hindsight to explain how you solved the problems in an earlier writing task.

You may discuss a writing task from another (current or previous) class or a writing task from your workplace, community, or personal sphere. You should choose a task that's at least a little different from what others have presented on.

Choose the most interesting information from your Prep Form to include in your presentation to the class. Your presentation must include some of your concluding information, especially "how is this task similar to another kind of writing task (in or out of school) that you or we might do in the future?"

Figure 15.2. Selected presentation prompts.

These presentations replicate selected material from students' Decoder Preparation assignments, but here students chose their own emphases, since they were under no requirement to include any particular element(s) except a transfer-focused concluding statement.

Student responses to the Comparison exercise came in two parts (see Figure 15.3).

From the tables comparing three presentations using three categories of the student's choice, each cell was coded as an individual unit, regardless of length, while each sentence in the reflective overviews of strategies was coded individually. Finally, students wrote three problem-solving quiz answers as short paragraphs (see Figure 15.4) and each of their answers for the third question, "explain a disposition problem," was coded separately.

Overall, these data from the Decoder sequence represent increasing latitude for student choice about what to focus on in their responses, and they show students moving from their own past experience toward more generalizable and future-oriented writing strategies.

Put some categories into your 4x4 table. You can choose what categories to list, based on your notes; you can combine ideas into one category. For instance,

1. Writer's rhetoric problems

2. Writer's knowledge problems

3. Writer's process problems

4. Writer's disposition problems

5. Special challenges the writer faced

6. What the writer learned/recommended

7. Other category: you choose

What can you say about whether these writers experienced common and/or different rhetoric, process, knowledge, and/or disposition problems? What are strong influences on or challenges for these writers? What seems easy for them?

What are two or three lessons you can take and apply to your own current projects and/or future writing?

Figure 15.3. Selected comparison prompts.

Choose ONE of the three writing tasks listed below. (You cannot choose a task you presented on to the class.)

In your answers, feel free to be blunt: "One rhetoric problem could be because , so I / the writer should and work on ." You should use our class' specific problem solving language….

For the task you've chosen, explain a disposition problem you/the writer could face and how you/the writer could adapt to it.

Figure 15.4. Selected quiz prompts.

Once all data were collected, individual responses were coded to identify the type(s) of writing problem to which students refer. Mentions of *strategic* writing problems were coded as rhetoric, knowledge, or process problems according to students' description of relevant challenges; these codes were applied based on how the entry matched the problem definitions as articulated above rather than only on whether the student named the challenge directly. In a few cases in which students mentioned more than one strategy, I coded for the first-mentioned one only. So, for example, the following three responses (quotations in

this chapter retain student wording and syntax although I have corrected spelling errors) were all coded as "**rhetoric problems**" (audience, goal, genre):

> I had to **make sure that the audience was engaged** in what I was talking about. (Sandy)

> **I wanted to build myself up** but at the same time not sound too full of myself. (Evan)

> **I chose this genre because** when it comes to a lab report its main purpose is to inform someone of whatever your experiment was based on. (Helen)

I also coded separately for mentions of *dispositional approaches*, using codes for confidence, motivation, time management, and persistence, as well as an "other" category that included generalized mentions of "disposition problems" as well as other dispositions (flexibility and curiosity, for instance, were less frequently prompted and almost never written on). Again, codes were applied using the formal definitions rather than only by direct mention; in a few responses where multiple dispositions were mentioned together, I coded for the first mention. In the following three entries, the first is coded as <u>time management</u>, while the second is cross-coded as *confidence* and **rhetoric**:

> I also <u>had trouble finding the time to write the essay</u> when I was busy with other extra curricular activities and schoolwork. (Rachel)

> My *confidence at first was a little off* because of the thoughts that came to mind about the admissions office. **If I did not write this essay in a way that they would like it**, then I could possibly not be admitted to the school. (Akeem)

Finally, before the statistical analyses analyzing independence of variables were completed, responses that did not receive any disposition-related code were filtered out; since many questions asked about different strategies separately (see Figures 15.1 to 15.4), students didn't usually have a need to write about dispositional approaches. Thus from the initial set of over 2,000 responses, these analyses focus on about 20% of those responses (N=461) in which students identified at least one dispositional issue.

The Influence of Dispositions in Students' Writing Worlds

Part of my own initial skepticism about including disposition-education in a transfer-focused writing course arises from questions of relevance and timing:

in a course that already has too much to cover in 14 or 15 weeks, why should instructors take time to focus on generalized affective learning? Time turned out to be less of a factor than I had anticipated: students in this study required little prompting or support to begin addressing dispositional issues in ways that revealed direct connections to their own understanding of writing and of learning writing. For instance, in two years of teaching with this approach, I have never had a student protest against sharing stories about his or her writing dispositions: in fact, 42 of 43 of the public presentations in this study included a disposition mention, despite that element not being required. And while just over half of students had presentation slides that neutrally or positively identified a dispositional (Saeed: "Motivation was simple for me because I enjoyed the topic"), over third of the presenters used their formal slides to overtly identify a dispositional challenge as a personal failure. Evan does this in discussing an application essay: "I *had trouble* managing my time, it was really important to me but I kept putting it on the back burner for school [projects]" (emphasis added). Although I don't have recordings of the full presentations, my sense is that many of the students with neutral slides were also speaking in a self-critique mode, and that like Luke, they found these admissions were received well by their peers. While it may be true that "writing instruction inherently teaches students ways of being in the world" (Johnson, 2013, p. 536), my students already seemed immersed in these "ways of being" independent of my classroom instruction.

Students' dispositional comments also covered a lot of territory. In these four assignments, students mentioned disposition more often than any writing problem category except rhetoric (see Figure 15.5).
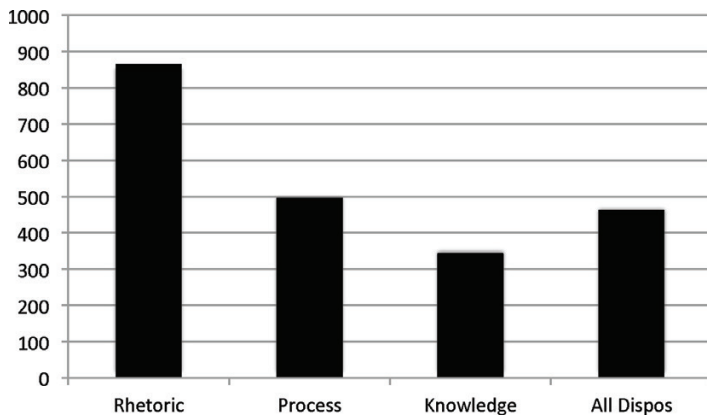

Figure 15.5. Number of responses.

Men and women wrote almost exactly as often about disposition factors and

chose similar factors to mention; women were not, for instance, more likely to discuss confidence challenges than men. Although women students in these classes tended to produce more words overall, students in all assignments wrote at equal length about disposition approaches compared with their writing about disciplinary strategies such as rhetoric or process problems. Lastly, in the few instances in which students chose to identify a "most important challenge/lesson" or "hardest problem" outright (not just "this was difficult"), disposition challenges were identified about as often as all the other writing-strategy problems put together:

> Motivation for any assignment is the toughest part for me.
> Just getting started, but once I start it fairly easy. (Manuel)

In several ways, then, we see students moving easily to include dispositional factors in their reflective writing, despite having been provided very little relevant instruction.

Students didn't address all of the cued dispositions equally. Among the major disposition factors presented to them in class, students were most likely overall to choose or mention time management factors and least likely to choose or mention persistence factors (see Figure 15.6).
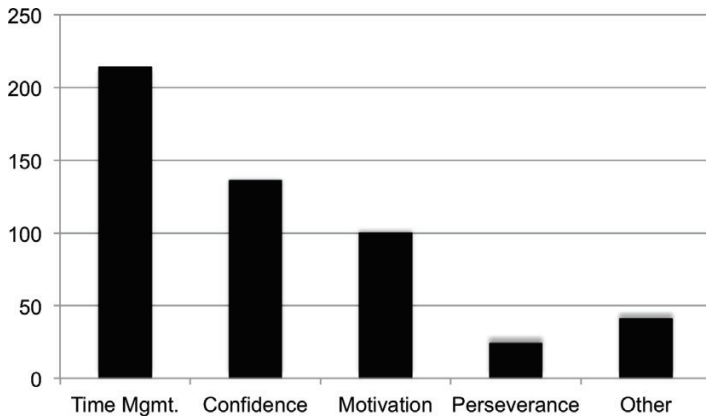

Figure 15.6. Number of disposition responses.

Confidence and motivation were chosen with similar frequency, and occasionally students described another disposition problem or just mentioned "disposition problems" generally. Without further data, I have only speculations about this distribution of responses. For these first-year college students, concerns about time management may be more familiar across a wide range of school or professional settings in which deadlines are common. Yet as I dis-

cuss below, students' explanations frequently complicate and connect writing problems, so a simple explanation—students are just overwhelmed in their first weeks of college, and thinking of nothing but time management—is unlikely to provide a complete answer. That said, it's likely that familiarity brings additional responses: fewer of the assignment prompts cued students to investigate issues of curiosity and flexibility as formal, changeable orientations toward their writing tasks, while the growing prevalence of time management descriptions in class presentations and informal discussions may have itself encouraged even further attention to that issue.

One exception to the time-management prevalence pattern comes in student responses on the Final Quiz, for which students were expected to anticipate the challenges that they or another writer might face in addressing a future writing task. Even though students' presentations on these topics were more likely to mention time management problems—and the quiz examples were drawn from those presentations—students' quiz descriptions were almost twice as likely to mention confidence as either time management or persistence. Some of that effect might be due to the inclusion in all four quizzes of a writing task that involved a spoken presentation, and thus we see more of students' anxieties about public speaking than about a writing project:

> A disposition problem the writer could face would be a lack of confidence. Giving a speech is already something that makes people nervous. (Nate)

And yet students were equally ready to identify confidence as a challenge for applications, analysis essays, and letters, and to predict other reasons why confidence might be a challenge:

> I may have issues dealing with confidence level. Again, this [topic] is something that I don't know much about so I might get discouraged if I don't find the information that I'm looking for. (Beth)

It's possible that this change in response proportions reflects students' sense that for a formal, exam-type setting, their general time management approaches don't seem as relevant within a college or professional writing scene. However, given that "I would manage/would have managed my time better" is such a common refrain in students' *looking-back* writings about how they could improve as writers, perhaps that reflective temporal distance is important. Perhaps we see here an echo of what self-regulation studies suggest: that students are generally aware of the concept that time (and other resources) can be managed, but they lack models for or consistent practice in *planning for time management* as they begin

work on a writing project (MacArthur et al., 2015; Zimmerman, 2002).

In addition, while familiarity and cuing likely influenced student responses, discussion of dispositions sometimes emerged without specific prompting. For instance, in the Comparison homework, students could choose any categories to analyze; no specific disposition is listed in the prompt. In the lists of categories chosen, dispositions still make a showing (11 times), though they are eclipsed by choices of rhetoric (31) and process (19), among others. Rhetoric might have been perceived as a more "serious" or accessible category, and it also appeared at the top of the list of choices cued by the prompt. Yet as students discussed writing difficulties in more detail, disposition mentions increased. Overall, in the Comparison assignment, disposition discussions surface over 200 times, second only to mentions of rhetorical problems. Again we see that when left to their own choices, students frequently tell themselves and their peers' stories about their attitudes and approaches. The more we investigate how and when students identify dispositional factors in their own stories of writing, the more we may understand about general concerns of "writing anxiety" or "self-regulation" as they apply to our students' writing lives, and the better we will do at linking new strategies to students' prior knowledge.

COMPLEX INTERSECTIONS: TIME MANAGEMENT AND CONFIDENCE

Evidence that students are comfortable with discussions of dispositional challenges might alleviate our concerns about whether these conversations would divert time from other strategy discussions; Peter Khost (this volume) and Marcus Meade (this volume) have likewise reported high student engagement with metacognitive concepts such as imagination, curiosity, and openness even with relatively minimal intervention. However, this familiarity doesn't yet auger for addressing dispositions as a particularly necessary element of composition curriculum design (Johnson, 2013). One could argue that self-regulation and similar dispositional strategies would be better taught in "Introduction to Study Skills" courses, though some research suggests that to solidify long-term gains students need practice applying such strategies in the context of disciplinary classes (Karp et al., 2012). To believe that students' writing learning is enhanced by their awareness and/or application of dispositional strategies, we need better evidence that these particular cognitive approaches are associated with threshold concepts in writing studies. Students' responses in this study don't give us a causal relationship; however, they do reveal some crucial relationship patterns that can guide faculty in integrating dispositional awareness into our teaching. Participants were already primed to discuss their core writing strategies as in-

tertwined with their sense of time management, confidence, and motivation. Michael, for instance, sees research, drafting, and revision as fundamentally interwoven with time management, confidence, and motivation:

> Although I thoroughly enjoy learning and writing about the Revolutionary War, I had little motivation to write this because I was more interested on the tactical battlefield then the propaganda side. Due to the lack of motivation in writing this I had low confidence in how I would do with it and I procrastinated a lot. Though by the fourth revision I had more motivation and confidence in myself because I had improved my first three drafts and I started to get fascinated by how writings conveyed their messages.

Over a third of responses coded as time management—and over half of responses coded for confidence—are also coded for rhetoric, process, and/or knowledge problems (see Figure 15.7).
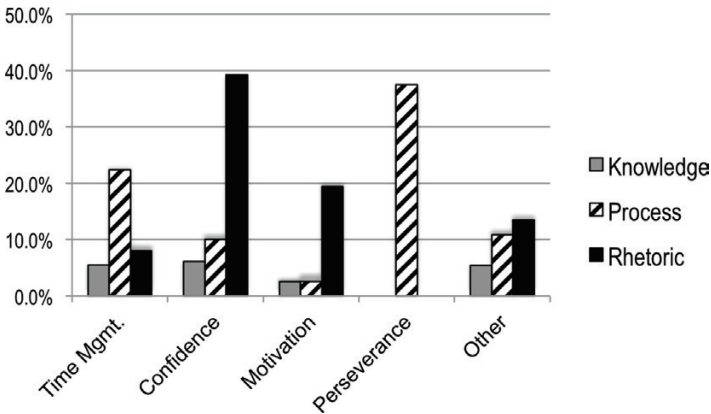

Figure 15.7. Percentage of responses in each disposition category cross-coded for a strategy.

Chi-square testing shows that among cross-coded responses, disposition choices overall are significantly related to strategy choices ($N=461$, $\chi^2(15)=79.07$, $p. < 0.0001$, Cramer's $V=0.717$). Within those cross-codes, two patterns stand out as worth further analysis: a link between time management and process problems, and a link between confidence and rhetoric problems. Neither of these cross-code patterns should cause surprise, but each suggests a plausible route toward curriculum revision. (Although other trends shown in Figure 15.7 look interesting, motivation is statistically notable only for a lower-than-expect-

ed number of cross-codes overall, and there were too few perseverance responses to reach statistical significance.)

In the current study, 22.3% of comments coded as "time management problems" were cross-coded as "process problems," a significantly higher than expected rate (N=201, χ^2(3) =19.99, p < 0.001, φ=0.32). In hindsight, and from an instructor point of view, this link seems obvious, since we often teach writing processes *by way of time management.* That is, in order to foster students' awareness of threshold concepts such as *writing creates knowledge*, *revision is a central* and iterative process, and *writing is a social activity* (e.g., see Adler-Kassner & Wardle, 2015), we design and enforce deadlines to externally manage student writers' time. This is not always the same thing as teaching students to understand the underlying process-related threshold concepts about writing. So when students in this study—a population with strong high school preparation—show they have internalized a connection between writing process challenges and time-management challenges, that may be as much cause for concern as for satisfaction.

Granted, these students are using graded assignments to construct a vision of themselves as writers to share with classmates and their instructor, and so their perspective is likely to be more idealized and may reflect what they expect a writing instructor wants them to say. Some writers like Saeed begin an explanation with what sounds like a familiar litany:

> Managing my time was very difficult to do. I had wrestling practice and also I had a job so I was constantly busy.

They then shift to writing-process language in order to show how they are already employing additional coping strategies such as revision, as Saeed does here:

> I would be up late night working on this paper and trying to make even the smallest improvements.

Students also associate time management with other kinds of process moves, including generating and organizing material, focusing and conducting research, revising and editing:

> Time allowed for continuous ideas to flow. (Sabine)

> If I would have set aside time each day to interview at least three families then I would have been able to collect data faster so I could have time to write the essay. (Deeanna)

> I would give myself ample time again, but this time I would allow myself to make drafts, work on my process system and allow for mistakes. (Binah)

Reaching beyond students' ready idealism about how they'll do better next time, however, one conclusion here might be that their understanding of writing as iterative and multifaceted is limited by the time available: if they had time, they'd "allow themselves" to use multiple drafts or complete sufficient research, but when they don't, they don't. As writing teachers, we may be reinforcing this concept if we assign discrete process steps without appropriately involving students in the crucial decisions about how to choose ways to invest their time as writers.

Moreover, when we only discuss time management in crisis settings or punitive contexts (via late-work penalties, e.g.), we may increase writers' sense that they are stuck with a generalized and/or very personal bad habit. We would likely prefer that students understand that they are faced with a situational problem, one in which writers always need to be choosing the best possible responses from within constrained resources. After all, improving as writer isn't about suddenly having "enough time" or ceasing to procrastinate. Research shows that expert writers succeed in more accurately predicting the kinds of work that will take more or less time and choosing appropriate priorities for investing time and resources (Bereiter & Scardamalia, 1993). Thus as writing teachers we may have not just an opportunity but a reason to be more direct in discussing how writers self-regulate to manage time and resources. If students' prior understanding leads them to think of iteration, collaboration, review and/or revision as luxury options rather than inherent features of engaged writing, then they will need guidance to learn not just to "manage their time" (choosing how much time to allot) but to "manage their writing goals" within whatever time they can make available.

Similarly, the prevalence of "confidence" statements cross-coded as "rhetoric" seems obvious in retrospect but may present new avenues for instruction. Students in this study referred to rhetorical challenges in 39.2% of their statements about confidence, significantly more often than they referred to process or knowledge problems (N=130, χ^2(3)=36.90, p. < 0.0001, φ=0.53). Typically, these statements took the form of linking confidence to the expectations of the known or anticipated audience:

> Confidence: . . . I was still nervous and unsure when applying into the program and writing this essay, for it is so highly competitive I wasn't sure what to expect. (Sherry)
>
> It was difficult for me to be confident writing about this topic to someone who was well versed in this field of knowledge. (Liesl)

As I noted above, the confidence-audience relationship patterns might be enhanced due to the number of spoken presentation assignments discussed in the

Decoder sequence: several students like Patricia were "not confident in speaking in front of so many people." But that particular concern does not dominate the conversation about audience expectations, and students also linked their confidence levels to concerns about their own goals and/or to considerations of genre or style:

> Problems: Confidence—never wrote a philosophy style type paper of this length. (Cristian)
>
> My confidence was low coming into this project just because I wasn't where I should have been in the reading and I wasn't sure what I wanted to focus on yet. (Mark)
>
> I know how to clearly get my point across and I am very confident writing in this type of genre. (Anila)

In contrast to studies of writing anxiety or apprehension that have focused on how a student's inherent personality or skill levels affect overall individual self-efficacy (Cheng, 2004; Daly & Wilson, 1983), these responses suggest that—at least for these generally high-performing students—confidence is also rhetorical and social. The connection becomes even more interesting, from a curricular standpoint, when flipped. As writing instructors we invest intensely in having students come to understand that their writing should be purposeful and intended for a particular audience, without always addressing the ways that such intentionality may affect a writer's confidence. Even expert writers with high self-efficacy may encounter goals, readers, or genres that stress or distress them, and so writing problems don't always become more easily solvable when writers clearly identify their rhetorical situation. Unless we directly acknowledge how and why students who set aside an arhetorical task like a five-paragraph timed essay or an "all-about" research paper may struggle—because of a dispositional shift as well as because of any skill-level challenge—we risk losing students' faith in our proclamations. In both of these cases, our teaching of rhetoric and our teaching of process, we are telling students only part of the story if we fail to discuss dispositional challenges; if we consistently leave out parts of the story that they find most immediate, compelling, and/or reassuring, we may limit their abilities to fully integrate and transfer new knowledge.

MOVING FORWARD: DISPOSITION INSTRUCTION VS. DISPOSITION INTEGRATION

Assignments and instruction in the classes for this study were designed to enable students to gain awareness of and tell stories about how their dispositional approaches interacted with their school writing endeavors. Over the course of

the semester, then, students engaged in the "meaningful practice" (Gorzelsky, Hayes, Paszek, Jones, & Driscoll, this volume) of identifying and monitoring component elements of complex writing problems. Students gained reasonable understandings of these components, including dispositional factors, with minimal prompting, and their responses suggest some ways we can and should heed the *Framework*'s call to adapt assignments so as to take advantage of this richer view of writing learning. However, these classes were not designed to formally follow up on students' dispositional learning. While students were frequently instructed in specific strategies for solving more conventional rhetoric, process, or knowledge problems—and their final projects were evaluated for competence in rhetorical adaptation, organization, and analytical power—students received very little instruction and no external assessment on any efforts they might be making to solve disposition problems, or any related improvements they might have made in their attitudes or texts. Scholars like Johnson (2013) argue that "Teaching habits of mind asks who writers should become and why they should become that way" and thus increases writers' agency and civic awareness (p. 527), and a growing body of work suggests that participating in integrated metacognitive exercises generally increases student success (Taczak & Robertson this volume; Winslow & Shaw, this volume; Yancey et al., 2014). But we do not have data to demonstrate that kind of causality for disposition-focused instruction. The question of whether writing students can and should be directly assessed on their dispositions—either their predilections for or their improvements in (writing-related) attitudes—remains open.

Assessment of such "ephemeral and personal habits of mind" may prove challenging, especially as we try to distinguish between students *acquiring* and students only *performing* these dispositions (Johnson, 2013). Conley (2007) proposes that we can assess general dispositional progress through "relatively straightforward" processes such as surveys that document students' self-reported integration of behaviors with academic assignments (p. 21). Although such instruments exist (see Piazza & Siebert's [2008] Writing Dispositions Scale), Conley argues that challenges remain in connecting such measures with other assessments of academic reasoning and content knowledge. As MacArthur et al. (2015) demonstrate, tying student improvement to a new disposition-aware curriculum is challenging, while identifying student writing success as linked to discrete elements of that curriculum such as persistence or motivation is very complicated. We don't have evidence yet that a particular level of proficiency in dispositions such as time management, confidence, motivation, or persistence is necessary for success in writing, and so we need additional research into how these attitudinal processes affect writers' progress.

In the meantime, though, results from this study indicate that as we teach

strategies that we have long argued are crucial for proficient, flexible writers—including threshold concepts such as the rhetorical nature of written communication and the need for a recursive, knowledge-generating writing process—we would do well to integrate deliberate discussions of related attitudes, and to do so with an integrated "enculturation" approach that returns agency to students rather than requiring particular performances (Tishman et al., 1993). If, as my students' responses demonstrate, college writers already believe or are quite ready to believe that dispositions are connected to their own work as writers, then we need to engage that prior knowledge as we strive to help them improve and to transfer new knowledge to other writing situations. Since we can present this more complete vision of writing without having to take much time away from our current assignments or lessons, we face little risk in adapting our instruction to integrate disposition concepts into our curricula. As we do so, we may find students to be more willing or even more able to adopt new, successful strategies as they solve ever-more-complex writing problems.

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