

CHAPTER 7

DYNAMIC TRANSFER IN FIRST-YEAR WRITING AND “WRITING IN THE DISCIPLINES” SETTINGS

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Nearly two decades ago, Russell (1995) prompted composition scholars to consider the ways in which changes across writing contexts might undermine the mandate of first-year composition (FYC). It was not the first nor the last time scholars called into question the function and goals of FYC. The scrutiny is warranted. FYC had already been a fixture at US universities for more than half a century when Braddock, Lloyd-Jones, and Schoer (1963) reviewed the field and found that most who had been studying writing pedagogy went about the work “lacking any broad theoretical notion of writing abilities” (Faigley, 1986, p. 527). Since that review, composition theorists have engaged in a number of debates regarding the theoretical underpinnings of writing studies (Faigley, 1986) and the appropriate methods of assessing writing ability (Yancey, 1999). These debates have often been spurred forward by a new idea presented as a reaction to—or even a rejection of—previous ideas. Such theoretical concerns are compounded by the oft-heard practical complaint that Beaufort sums up as, “Why [is it] graduates of freshman writing cannot produce acceptable written documents in other contexts?” (2007, p. 6). So, it should be clear why the critical examination of FYC has and will continue to take place.

In terms of learning transfer and college-level writing, it is worth taking note of the impact Russell (1995) made when he introduced activity theory to the disciplinary conversation about FYC and writing ability. The introduction took place shortly after genre theory had become influential in the composition community (Bawarshi & Reiff, 2010). Like genre theory, activity theory focuses on systems where people share goals, interact, and are bound by context. Because goals can only be attained in these systems via social means, Russell argued that “all learning is situated within some activity system” and that “adolescents and adults do not ‘learn to write,’ period” (1995, p. 59). Russell asserted that skills learned in a writing context like FYC do not effectively transfer into other contexts. The result was a reframing of questions about learning transfer that resonates to this day. Composition scholars have since been attempting to strike a

balance between a social theory of learning-to-write, like the one Russell (1995) described, and the widely acknowledged understanding that “writing transfer both occurs and is necessary for successful writing” (*Elon Statement on Writing Transfer*, 2015, p. 4; Appendix A). One key factor in finding that balance has been education research that suggests learning transfer is possible but is more difficult and occurs less frequently than previously assumed (Perkins & Salomon, 1988). The ongoing effort to understand the challenge of writing transfer has provided a new avenue for exploring theories of writing ability.

For this study, we build on that theoretical discourse by introducing a transfer mechanism from education research called *dynamic transfer* (Martin & Schwartz, 2013). Dynamic transfer occurs over time as a learner coordinates prior knowledge along with other resources available in the environment to produce new understandings (Martin & Schwartz, 2013). When such coordination is productive, those new understandings improve performance. Our interest in this transfer mechanism is influenced by Bizzell’s (2003) call to investigate the tension between the theoretical lines of inner- and outer-directed composition research. According to Bizzell, inner-directed theorists are interested in the cognitive processes of the writer, and outer-directed theorists are interested in the social factors that shape language-learning processes. Bizzell argues that composition researchers seeking to understand writing ability “need to explain the cognitive and the social factors in writing development, and even more important, the relationship between them” (2003, p. 392). The mechanism of dynamic transfer describes an important interaction in that relationship.

In order to observe dynamic transfer, data for this study are collected through our examination of the ways students interact with the writing contexts at the University of California, Davis (UCD). The research design was influenced by two strands of research: (1) education research that has focused primarily on learning contexts and (2) composition research that has focused primarily on learner knowledge, identity, and attitude. The investigation suggests that a writing program with consistent, explicit, and intentional transfer-oriented learning objectives in both FYC and advanced composition courses provides a curricular setting that facilitates the transfer of writing skills across contexts. Such a setting fosters the development of discipline-based rhetorical awareness.

CONTEXT-ORIENTED AND LEARNER-ORIENTED RESEARCH

In education research literature, the term *transfer* refers to a wide range of phenomena where knowledge gained in a learning context affects performance in a target context (Royer, Mestre & Dufresne, 2005). Several researchers have categorized transfer phenomena using spectra (Barnett & Ceci, 2002; Perkins

Table 7.1. Taxonomy for far transfer. Contexts: When and where transferred from and to (Barnett & Ceci, 2002, p. 621)

	Near				Far
Knowledge Domain	Mouse vs. rat	Biology vs. botany	Biology vs. economics	Science vs. history	Science vs. art
Physical Context	Same room at school	Different room at school	School vs. research lab	School vs. home	School vs. beach
Temporal Context	Same session	Next day	Weeks later	Months later	Years later
Functional Context	Both clearly academic	Both academic but one nonevaluative	Academic vs. filling in tax forms	Academic vs. informal questionnaire	Academic vs. at play
Social Context	Both individual	Individual vs. pair	Individual vs. small group	Individual vs. large group	Individual vs. society
Modality	Both written, same format	Both written, multiple choice vs. essay	Book learning vs. oral exam	Lecture vs. wine tasting	Lecture vs. wood carving

& Salomon, 1988). Two of those spectra are near/far transfer and high-road/low-road transfer. While examining key concepts that inform these ways of categorizing transfer phenomena, we will pay particular attention to how such categorization sheds light on two distinct research approaches used to investigate transfer. To clarify how those approaches affect research in composition studies, we will draw up a simple thought experiment: participants writing across three different contexts. Context L (the learning context) is a writing-for-literature course that teaches Modern Language Association (MLA) citation conventions and requires a term paper. Context T (a target context) is a subsequent literature course that requires a term paper. Context 2T (a second target context) is a psychology course that requires a research proposal.

In a study working to describe near/far transfer, the researcher's focus would be the writing contexts. Events on the near-transfer end of the spectrum occur when the learning contexts and the target contexts are similar, while events on the far-transfer end of the spectrum occur when contexts differ to a greater extent. Barnett and Ceci (2002) developed the taxonomy of far transfer as an effective way to describe the distances between two tasks (see Table 7.1). The taxonomy demonstrates how two transfer events can be placed on the near/far transfer spectrum.

To demonstrate, we refer to two transfer events from our thought experiment. First, the students are required to learn MLA citation conventions and write papers using those conventions in Context L. In Context T, they are asked to

write a paper similar to those written in Context L using MLA citation conventions. The taxonomy of far transfer shows that transferring knowledge of MLA citation conventions between these two performances involves near transfer in every context other than perhaps the temporal context. To demonstrate greater distance between contexts, we have Context 2T, the psychology course and its research proposal that requires American Psychological Association (APA) citation conventions. With the taxonomy, we can discern there is greater distance between Context L and Context 2T along three additional dimensions: knowledge domain, social context, and modality. The taxonomy's focus on task-related contexts is especially useful in composition studies; without such focus, researchers may get bogged down in every potential difference between contexts, of which there are many. Composition research that is interested in near/far transfer must focus on definable differences between contexts that are likely to affect knowledge transfer processes. One example of such a focus in composition studies is Wardle's (2009) account of the assignments from an FYC course. In that study, Wardle (2009) examined the prompts, presentation, and execution of course assignments in a large university's FYC program. That data was used to describe the resulting genres of FYC and to consider the utility of those genres.

To date, however, most research in composition studies has focused on learner knowledge. This kind of learner-oriented focus uses Perkins and Solomon's (1988) low-road/high-road model of describing and categorizing transfer. The low-road/high-road transfer spectrum describes how much writers must consciously interact with their own knowledge in order to use that knowledge in a new setting. A researcher running our thought experiment with a learner-oriented design would focus on a student's knowledge of MLA citation conventions as that knowledge moves from Context L to Context T and on to Context 2T. Low-road transfer occurs when a writer has to do almost nothing to transfer prior knowledge—the transfer of knowledge happens without reflection or conscious thought (Perkins & Salomon, 1988). If a learner grasped the MLA citation conventions thoroughly enough in the writing-for-literature course, that knowledge could be used while composing a term paper for the later literature course without a great deal of conscious reflection on the act of inserting a citation, making the phenomenon an example of relatively low-road transfer.

High-road transfer, on the other hand, describes instances when the use of prior knowledge requires a learner to explicitly abstract the knowledge and repurpose it to suit the demands of a new context. A researcher seeking out an example of this in the thought experiment must focus on the abstracting and repurposing of knowledge. A learner drafting the psychology research proposal for Context 2T might abstract prior knowledge of MLA citation conventions into a broader concept, such as citation conventions in academic writing, then

use that abstract knowledge to understand APA citation conventions. According to Perkins and Salomon (2012), if such transfer is to occur, the learner must first recognize the utility of knowledge related to MLA citation conventions, then decide that the knowledge is appropriate for the task at hand, and finally make the connections necessary to apply repurposed knowledge of the conventions in the new setting. Perkins and Salomon's "detect-elect-connect" model demonstrates how the learner must actively engage prior knowledge to make it useful in the target context (2012, p. 248).

Studies that use the near/far transfer framework are seen more often in education research. The most influential study is Gick and Holyoak's (1980) investigation into analogical thinking. The clinical study asked participants to read a story that provided a problem-solving strategy relevant to a medical case. The researchers then altered several experimental conditions in a target context where participants proposed solutions to the medical case. The results demonstrated factors in the target context that influence the way learners use prior knowledge to solve a problem. The results also showed researchers that transfer is more difficult than previously assumed. Chen and Klahr (1999) focused on how changes in learning contexts affect performance. For their study, grade school children were given three different types of instruction on how to design a successful science experiment. Later, the effect of each instruction method was assessed across a variety of target contexts. The researchers were seeking to find which learning context promoted the acquisition of the most transferable strategies. The results showed that direct instruction of generalizable strategies improved performance in target contexts the most.

More recently in education research, Engle, Lam, Meyer, and Nix (2012) drew on a set of studies to propose that learning contexts foster transfer when they are framed expansively, a finding that supports much of the programmatic developments that prompted this study. Specifically, transfer is fostered when new knowledge and skills are presented as "resources for productive action in potential future transfer contexts" (Engle et al., 2012, p. 218). That is what it means to frame a context expansively. "Framing is the metacommunicative act of characterizing what is happening in a given context and how people are participating in it" (Engle et al., 2012, p. 217). The researchers present a meta-analysis that demonstrates how social interactions in the learning context have an effect on framing and influence transfer. While the above three studies from education research all acknowledge the role of individual learners in the transfer of knowledge, the focus of the research is on characteristics in the contexts where learning and/or performance take place.

The low-road/high-road approach to transfer shifts the research focus squarely onto learners and their knowledge. Perkins and Salomon (1988) were

focused on learner knowledge when they developed the low-road/high-road spectrum of transfer phenomena. This learner-oriented approach is used in the majority of composition studies' research on transfer. For example, Driscoll (2011) used surveys and interviews to investigate the beliefs and perceptions students have about the transferability of their writing knowledge. Brent (2012) interviewed student-interns in a study that suggests learners draw on a wide range of experiences—not only writing instruction—to negotiate new writing contexts. Robertson, Taczak, and Yancey (2012) used student accounts of the writing process to demonstrate the ways students use prior knowledge when taking on new writing tasks. These studies do not ignore the writing contexts, but the data used to draw conclusions are drawn from participants' self-reported reflections on their own knowledge and perceptions. Understanding the distinctions between near/far transfer and low-road/high-road transfer is crucial for aligning theory with research design and analysis.

RESEARCH CONCERNS ARISING OUT OF FRUSTRATED TRANSFER

In our thought experiment, each hypothetical transfer phenomenon improved performance in the target context. Both disciplinary consensus (*Elon Statement*, 2015; Appendix A) and research in composition studies (e.g., Beaufort, 2007; Nowacek, 2011) have shown, however, that the kind of transfer required to write effectively across contexts does not come so easily. Literature in education research says much the same thing (Lobato, 2012; Perkins & Salomon, 2012). In particular, our thought experiment's example of high-road transfer is at odds with previous findings on transfer. When writing for a psychology course, it is more likely that learners' knowledge of MLA citation conventions would either not transfer or the MLA citation conventions would transfer wholly into an upper-division course in psychology where MLA-style citations would be inappropriate. According to Perkins and Salomon (2012), education research finds these kinds of results far more often than the clear-cut successful instances of transfer our thought experiment envisioned. Researchers are quick to apply a label of failed, frustrated, problematic, or negative transfer to instances when learners do not appropriately repurpose prior knowledge (Lobato, 2012). This is, however, where we perceive a limitation in learner-oriented research derived from the low-road/high-road theoretical framework.

In the framework of low-road/high-road transfer, the label of *frustrated transfer* focuses on failings of learners and/or their prior knowledge. This limitation is built into any theoretical framework that focuses primarily on how learners interact with their prior knowledge: the learner did not recall the prior knowledge,

the learner did not repurpose the knowledge, or the knowledge was not learned in an easy-to-abstract format. If we accept social theories of learning-to-write, however, then researchers must examine target contexts as factors that influence transfer as well, whether it be frustrated transfer, successful transfer, or even the absence of transfer. These contexts are where students encounter and develop the discourses that contribute to literacy (Gee, 1989). Therefore, research design must take the target context into account. In her seminal study of a student's experience writing across the curriculum, McCarthy asserted that a student writing as a novice must use prior experience to assess "the rules of the game" (1987, p. 234). That is clearly a description of prior knowledge affecting performance. However, even when the student has the appropriate prior experience, assessing a community's rules takes more than time and practice. In addition to all the qualities a novice must possess, the new community must make the social function of a writing task clear to newcomers (McCarthy, 1987). So, when learning to write in a new setting, McCarthy simultaneously acknowledged both a student's prior writing-related knowledge and the function of situated, socially constructed resources.

It is true that the characteristics of two writing contexts are often different (or distant) enough that researchers have observed skill transfer alongside a flawed performance in the target context. Documented instances of such performances have been used to demonstrate the ways prior writing instruction is ineffectual (e.g., Smit, 2004). Unless the features of the target context have been taken into account, however, it is a leap to assume that frustrated transfer demonstrates a shortcoming in the learner or the learning context. If writing abilities are socially constructed, as composition scholars have argued (Bizzell, 2003; Gee, 1989; Kent, 1999; Petreglia, 1999; Russell, 1995), the way newcomers encounter resources in the target context must be taken into account when assessing transfer. Gee (1989) argues that a student seeking to develop a new discourse must have access to the community associated with that discourse and the ability to practice within it. Researchers often describe an instance as failed or frustrated transfer when a learner does not reach a benchmark set by the community in the target context (Lobato, 2012). How these benchmarks are presented to novices is bound to affect transfer. For example, a benchmark such as genre awareness can be difficult for a novice to discern because, as Bazerman (1997) demonstrated, genres are often tacitly constructed abstractions intended to mitigate challenges presented by highly complex social situations.

To demonstrate how this can present a design problem, we will return briefly to our thought experiment. Our hypothetical example of high-road transfer described a learner's effective abstraction of MLA citation conventions to gain an

understanding of APA citation conventions for a psychology research proposal. Even for a talented student, that is a very high bar to set. The bar might be set impossibly high, however, if the only citation-related instruction given for the psychology research proposal is “Be sure to cite all sources.” Without enough instruction on APA citation style, that instruction is likely to cue the use of an unchanged MLA citation style, because the student knows how to cite sources. There is nothing in the instruction to cue the abstraction of that prior knowledge. Such an instance could be described as low-road transfer, or it could be described as an instance of what Schwartz, Chace, and Bransford describe as overzealous transfer—when “people transfer solutions that appear to be positive because they are working well enough,” but those solutions block additional learning (2012, p. 206). No matter the case, in this thought experiment, high-road transfer would require more than the cueing of prior knowledge; it would require a cueing of the abstraction of prior knowledge. The target context must tell learners that the knowledge they arrived with, while potentially useful, is likely not enough. Only then will the learners know to seek the resources required to create new understandings.

USING DYNAMIC TRANSFER TO EXAMINE INTERACTIONS BETWEEN LEARNERS AND CONTEXTS

Our thought experiment on writing transfer is presented here to demonstrate the perspective that motivates this study. The dynamic transfer of prior knowledge can contribute significantly to a learner’s successful transition into a new writing context. Dynamic transfer occurs when a learner’s prior knowledge interacts with the target context through the act of coordination. Through this coordination, the learner creates new knowledge and understandings (Martin & Schwartz, 2013). What this mechanism introduces to the discourse is less than radical: It explicitly incorporates the resources in target contexts as a factor in learning transfer. We believe many theorists and researchers have already assumed this factor influences transfer. In fact, Brent (2012) reports a number of specific resources his participants drew on in the target contexts in order to become better writers in their internship settings. We believe it is important, however, to explicitly incorporate this factor into our theoretical framework and research design in order to improve our understanding of transfer.

This study is a test of our theory of dynamic transfer, inspired, in part, by a reaction to the article that prompted Russell (1995) to introduce activity theory to the composition studies discourse. Russell quoted several points Kitzhaber (1960) made in a critique of FYC, most of which are well-reasoned and supported by research. There is one point, however, that rings false today,

that sounds like an oversimplification we have heard too often and now reject. Kitzhaber described the aim of FYC as follows:

. . . to eradicate, in three hours a week for 30 or 35 weeks, habits of thought and expression that have been forming for at least 15 years and to which the student is as closely wedded as he is to his skin; and to fix indelibly a different set of habits from which the student will never afterwards deviate. (1960, p. 367)

It is important to recognize Kitzhaber (1960) was calling for change. It does not seem reasonable, however, for Russell (1995) to level this same critique 35 years later. By 1995, composition studies had been affected by the contributions of expressivism and cognitive process theory—theories that emphasize traits a learner brings to each writing task (Faigley, 1986). We reject the assertion that students finish high school with a set of writing skills that must be eradicated by the instructors of FYC. Through work with the National Writing Project, we have come to understand that the context for learning to write in secondary school is different, but the knowledge gained there is valuable in FYC and beyond. For example, the often-derided five-paragraph essay is an important genre for students seeking to attend US colleges and universities because it is repeatedly assessed on standardized admissions tests. In a constructive FYC setting, students' familiarity with the five-paragraph essay should be treated as useful prior knowledge of genre, writing assessment, and audience awareness. Students should not unlearn the five-paragraph essay; they should use their knowledge of it to better understand their own writing abilities (see Adler-Kassner, Clark, Robertson, Taczak & Yancey, this volume). All of that knowledge is ready for transfer if the writing contexts in FYC have the resources available to help students coordinate prior knowledge and produce new understandings.

The development of transfer-related learning objectives and pedagogies has done a great deal to put such resources in place. Smit reconceptualized a composition curriculum, seeking to teach appropriate dispositions by offering varied writing experiences such as “writing-to-learn, writing-to-think, and thinking-to-write” (2004, p. 185). Beaufort (2007) introduced a teaching for transfer pedagogy that prompts students to explicitly abstract and reapply concepts such as discourse community, genre, rhetorical situation, and process knowledge. Downs and Wardle (2007) have developed a “writing about writing” curriculum that provides students with the concepts they will need to metacognitively reflect on each writing situation they encounter and then abstract principles of good writing from that reflection. Driscoll's (2011) study of student perceptions of transfer argues for forward/backward-reaching transfer pedagogy supported by metacognition. This work has had an effect on many college writing programs.

The program at UCD is among those that have taken these ideas into account while developing learning objectives, program assessments, curricula, and assessment methods. This study seeks to identify the resources those developments have put in place and then to examine how students coordinate those resources along with their existing writing-related knowledge.

METHODS

We collected data in two stages for our study. First, we conducted surveys and collected data about the composition program at UCD. That data was then used to determine the features we would examine in the second stage of data collection, during which we collected writing samples and text-based interviews.

CONTEXT

All of our research participants were students at UCD, a large public research university with competitive admissions that enrolls about 25,000 undergraduates. UCD bachelor degree programs require both general education credits and a major specialization. The university requires all undergraduates to complete or test out of a two-course general education writing requirement. The first course for the writing requirement is a lower-division class recommended for first-year students. The second course is an upper-division class that students can enroll in after attaining third-year status. UCD has a standalone writing program that was the focal site for this study.

The standalone writing program offers a course that meets the lower-division writing requirement. Three other departments offer a course that meets this requirement as well, but the writing program's course is the most highly enrolled. Graduate students teach the lower-division writing courses for the writing program. The instructor pool is composed primarily of Ph.D. students from the English department. Instructor support is robust. Graduate student instructors are all required to take a for-credit writing pedagogy course before they begin teaching. During their first term teaching, they are enrolled in a for-credit practicum. Instructors all work from a standard teaching-for-transfer syllabus during their first term as teachers. After the first term, instructors can develop their own syllabi under the supervision of a lower-division writing program administrator. Online instructor resources include a standard syllabus, lesson plans, assignment prompts, and lecture notes. Experienced instructors have formed a voluntary mentoring system that has high rates of participation. Annual formative assessments of the instructors are based on a program administrator's classroom visit, review of syllabi, review of assignment prompts, evaluation of instructor

feedback on student drafts, instructor self-evaluations, and student evaluations. All lower-division writing courses in the program, even those with instructor-generated syllabi, require students to complete a portfolio. Students select two artifacts and compose a reflective letter for the portfolio.

The upper-division courses are all administered by the university's stand-alone writing program. The upper-division courses are taught by lecturers and tenure-line faculty in the writing program. Though course and program rubrics exist, they are not uniformly used by faculty due to the distinctions in course content across the curriculum. There are three types of courses that fulfill the upper-division writing requirement. The first is an advanced composition course. It focuses on general principles of composition both within and beyond the university setting. The second type of upper-division course has a "writing in the disciplines" (WID) focus. There are 12 such courses, and each emphasizes the various kinds of academic and scholarly writing done in specific disciplines. Classes in the third and final type of upper-division writing course are concerned with writing in the professions. Six such courses were being offered at the time of this study, with programmatic plans to expand the offerings in the future. Students in these courses approach writing problems with professional discourse communities in mind.

The writing program has developed five learning objectives that are incorporated into the course objectives for both lower- and upper-division courses: (1) incorporating evidence appropriate for the task, (2) demonstrating awareness of audience, (3) producing purpose-driven texts, (4) using language effectively, and (5) collaborating with others during the writing process. In this study, these learning objectives are considered part of the programmatic context. They are factors working across lower- and upper-division contexts. As such, they informed the development of the interview protocols and the approach to data analysis.

RECRUITMENT

SURVEYS

Recruitment for the surveys (N = 728) was facilitated by instructors in the upper-division writing courses who provided their students with a link to an online survey. Students were told that the survey was voluntary, anonymous, and that the results were primarily for research and program evaluation purposes.

SAMPLE TEXTS AND INTERVIEWS

Sample texts (N = 37) and interviews (N = 14) were collected from volunteers who were recruited through the lower- and upper-division writing courses. Near

the end of the term, instructors informed their students that researchers were looking for interview subjects for a research project that would focus on writing. Students were given an opportunity to provide their contact information if they were interested in volunteering for interviews. Students were informed that the interviews would take place after grades for the writing course were finalized and that participation was voluntary. Students were also informed that interviewees would receive a \$10 gift card valid at a national retail chain. Thirty students provided contact information. These students were contacted via email shortly after the new term commenced. The email informed each volunteer that the interview questions would focus on the writing produced for their writing course, that the researcher would request and read writing samples prior to the interview, and that the interview would take between 30 and 45 minutes. The email message prompted volunteers to set up an appointment. Volunteers who signed up for an appointment were sent a request for writing samples and informed that they all had the right to cancel or end the interview at any time.

PARTICIPANTS

SURVEYS

Surveys (N = 728) of students enrolled in writing program courses at UCD yielded the following descriptive results. Over 80% of the student respondents were born in the US, nearly all obtained most or all of their education in the US, and nearly all graduated from US secondary schools. However, about 60% of the students were raised in homes where the primary language used was not English or where it was English and another language. About 35% of students were required to take one or more remedial entry-level writing courses before they were allowed to enroll in a lower-division writing course.

Among the upper-division students surveyed, 37.5% had never taken a prior writing course at UCD. In most instances, that meant that they had tested out of the lower-division writing requirement through an advanced placement examination taken in high school, but some students had transferred from other two- or four-year colleges and had completed an equivalent lower-division course there. Of the upper-division students who had taken a previous writing course at the university, the previous writing course experiences were typically not recent.

INTERVIEWEES

For the text-based interviews, we worked with 14 students, eight of whom had recently completed the writing program's lower-division course and six of whom

Table 7.2. Summary of interviewees

Student #	Major	Course Taken	Lower- or Upper-Division	Text Samples Provided
1	Science and Technology Studies	Expository Writing	Lower-division	Portfolio letter, ad analysis, personal narrative
2	Spanish	Expository Writing	Lower-division	Portfolio letter, essay on computers, essay on cyber-bullying
3	Economics	Expository Writing	Lower-division	In-class academic essay, social narrative, ad analysis
4	Computer Science	Expository Writing	Lower-division	Portfolio letter, personal narrative, social narrative
5	Economics	Expository Writing	Lower-division	Portfolio letter, literacy narrative, argumentative essay
6	Biological Science	Expository Writing	Lower-division	Portfolio letter, research essay, argument
7	Undeclared	Expository Writing	Lower-division	Rhetorical analysis, literacy narrative, problem paper
8	Undeclared	Expository Writing	Lower-division	Literacy narrative, rhetorical analysis
9	Philosophy and Sociology	Advanced Composition	Upper-division	Critical response 1, critical response 2
10	Food Science	Business Writing	Upper-division	Memo
11	Human Development	Writing for Health Sciences	Upper-division	Rhetorical analysis, profile, collage
12	Microbiology	Writing for Health Sciences	Upper-division	Profile, case study, ad analysis
13	Economics	Advanced Composition	Upper-division	Mid-term, critical response
14	Mechanical Engineering	Writing for Engineering	Upper-division	Engineering management report, memo, revision plan

had recently completed one of the upper-division options. We selected participants from the volunteer pool to obtain a cross-section of majors, writing courses taken, and assignment/text types. A summary of information about our student participants is shown in Table 7.2.

DATA SOURCES

SURVEYS

A survey was administered in the upper-division courses to gain a better understanding of its student population. The descriptive results of that survey have been incorporated into this study. The 21-item survey was administered online. Students self-reported on three areas: (1) history of writing instruction, (2) linguistic background, and (3) perceptions of academic writing. All survey items were either multiple choice or Likert scale questions. The questions on perceptions of academic writing included an option to leave additional comments, an option that many participants took advantage of using.

STUDENT TEXTS

Student volunteers provided us with samples of work they had produced for a recent upper- or lower-division writing course. The texts were delivered electronically in a Microsoft Word®-compatible format. The lower-division students who participated in this study each converted their web-based portfolios into Word documents. Upper-division students each selected two to three assignments, all of which were submitted as Word documents.

STUDENT INTERVIEWS

Each of the students who shared sample texts met individually with researchers. Interviews were conducted in university office spaces where a computer was available. Interviews focused on the sample texts provided by interviewees. One of the main functions of any interview is to help researchers gather data on what we cannot see, such as feelings or the way people interpret the world (Merriam, 2009). This study employed a variation of the discourse-based interview developed by Odell, Goswami, and Herrington because, as researchers, we could not “determine what assumptions writers made or what background knowledge they had concerning the audience, the topic, and the strategies that might be appropriate for achieving their assigned purpose with a given audience” (1983, p. 222). This is what made the text-based interview such a suitable method for investigating how student writing processes involved “un-seeable” factors such as prior knowledge. We prepared for a semi-structured interview because we were interested in the unique ways each participant defined their surroundings and how participants described their prior knowledge (Merriam, 2009).

Questions were written up in a non-specific way that would allow the interviewer to interpret and re-interpret the interviewer/interviewee rapport.

Miscommunication in interviews often occurs because interviewers fail to appropriately consider the linguistic norms and conventions of research participants (Briggs, 1986). Without demographic data on each specific interviewee, researchers planned to remain flexible enough to respond to the three variables Dexter (as cited in Merriam, 2009) ascribes to every interview situation: (1) interviewer personality, (2) interviewee attitude and orientation, and (3) the way both participants define the situation.

The interviews ranged from 30–45 minutes long. They began with several introductory questions, and the rest of the interview was spent asking the student to select and reflect on portions of their own texts that illustrated program-based transfer goals. These goals had been adapted from the writing program learning objectives: (1) incorporating evidence appropriate for the task, (2) demonstrating awareness of audience, (3) producing purpose-driven texts, (4) using language effectively, and (5) collaborating with others during the writing process. The student being interviewed used the highlighting tool on the computer to mark text portions that exemplified these principles, and the interviewer then prompted the student to explain or talk more about why the highlighted text portion illustrated the chosen construct. Student-coded texts were saved as a new document. Camtasia® software was used to record the interviews; this allowed for the simultaneous capture of audio and video of interactions with the text on the computer screen.

DATA ANALYSIS

CODING OF UNMARKED TEXTS

To obtain a sense of what was taking place in the texts across the entire sample, the research team coded all of the student texts we had collected. There were 37 focal student texts analyzed in this study. These ranged from traditional academic research papers and argumentative essays to less traditional assignments such as professional profiles, memos, patient case studies, and collage essays for which students composed fragments in several genres and assembled them into a larger creative work.

The coding of texts began with the five transfer goals we had explored in the interviews, but over a series of team coding sessions, the five categories were both expanded and refined through a process of constant comparative analysis (Glaser & Strauss, 1967). Once the team had identified and operationalized a set of codes for a sample of the texts, the remaining texts were divided among the researchers to complete the coding. Examples of codes used during the analysis are presented along with an explanation and text excerpt in Table 7.3. We used Dedoose® qualitative research software to complete the coding.

Table 7.3. Descriptions and examples of researcher codes

Code	Description	Sample Text Excerpt
Audience	The writer directly addresses the audience or provides text that explicitly guides the reader.	The S&M research team believes this report will satisfy your company’s needs for the upcoming Light Force car design presentation in July. (Student #14)
Purpose	The writer explicitly or implicitly signals the overall purpose of the text (similar but not identical to “thesis”).	What’s really happening is the media persistently displaying unrealistic standards [of] beauty which fuel our obsession with looks. (Student #12)
Claim	The writer makes a claim, whether from his or her own opinion or from a source.	White culture is strong, white culture is individualism. (Student #9)
Evidence	The writer uses information from sources and/or real-world examples to support claims.	For the online news article, the writing is divided up into small paragraphs, some as short as two sentences. (Student #7)
Reflection	The writer describes a lesson learned or an insight about an experience and/or his or her own writing.	It has changed the way I perceived school work and life, and has helped me find my passion for the sciences. (Student #6)

INTERVIEW MEMOS

A separate stage of analysis involved the independent review of the interview recordings. Each interview was listened to by a member of the research team who had neither done the interview nor coded the student’s text sample. The reviewer composed a memo while listening to the recording. The memo included notes and observations, often tied to specific time stamps in the recording. The observations and notes were primarily focused on the codes generated during the analysis of student texts.

Once these analyses were complete, the research team held a series of meetings to discuss the observations from the coded set of text samples and from the 14 interview memos. Themes were identified and potential paths for the follow-up stages of analyses were proposed.

PROGRAM RESOURCES

The data used to describe the resources available to learners through the UCD writing program come from the student surveys, program and course descriptions, student texts, and interviews. Following the initial rounds of coding, these sources were reviewed for data describing resources that learners could use to ad-

Table 7.4. Descriptions and examples of writing context resource codes

Code	Description	Example of a Data Source
Constructive feedback via instructor conferences	Meetings with instructors during which specific writing projects are discussed and the instructor provides constructive feedback	Student Interview: Student #9 finds a weakness in the draft that was later improved. Student #9 states that the weakness was identified during a meeting with the instructor and a solution was developed during that meeting.
Model texts	Texts that model specific styles or techniques	Student Text: Student #6 explains in a reflective portfolio letter how specific course readings provided ideas on how to compose a non-traditional narrative essay.
Revision opportunities	Timeframes and/or planning for writing tasks allow or require multiple revisions	Course Requirement: The lower-division course requires students to submit work for peer-review and instructor review before submitting a final portfolio.
Explicit metacognitive reflection	Course activities that require students to reflect on their own writing process	Student Text: Student #2 composed a portfolio cover letter that described the writing process.
Peer collaboration	Opportunity or requirement to share drafts with peers	Course Requirement: The standard syllabus of the lower-division course required a peer-review workshop for all major writing tasks.

vance their understandings of various writing contexts. Examples of these codes are presented in Table 7.4.

ANALYZING FOR DYNAMIC TRANSFER

After the first and second rounds of coding were complete, another pass of the data was done to identify instances that showed connections between student writing processes and writing program context. In order to identify such instances, critical events were identified in the data. Critical events are “judged to be illustrative of some salient aspect of” the phenomenon being examined (Wragg, 1994, p. 67). Events were designated as potential examples of dynamic transfer when there was a demonstrable link between a reference to prior knowl-

edge and a reference to the resources in the writing environment—a link that influenced the creation of new knowledge or understanding. Identifying these events involved seeking relationships between the previously generated codes, or axial coding (Strauss, 1987). This resulted in a set of high-inference codes, codes for which researcher interpretation is used to make connections across different points in the data. Therefore, each critical event requires explicit explanation that takes the code's larger context into account. In order to report results that rely on this kind of high-inference analysis, much of the results will be reported through detailed description of four critical events.

FINDINGS

LOWER-DIVISION WRITING CONTEXT

Examination of the data from the lower-division setting reflects a course that introduced college composition as an expansively framed context (Engle et al., 2012). The standard syllabus used concepts from Beaufort's (2007) teaching for transfer pedagogy and Downs and Wardle's (2007) writing about writing pedagogy. This syllabus was designed to introduce instructors to the course learning objectives. All instructors taught from the syllabus at least once. It was the syllabus used by the vast majority of instructors teaching the course. Students composed literacy narratives and performed rhetorical analyses of both scholarly and popular texts. The vocabulary of composition and rhetoric was introduced in readings and lectures. Assignments and course objectives were explicitly presented as ways to apply rhetorical concepts while working on texts with specific purposes and intended for a defined audience. All reflective letters included backward-reaching reflection; students described the skills and attitudes they had upon entering the course. All reflective letters required metacognitive reflection on how the act of composing texts for the course influenced the development of writing skills.

The texts collected for this study further support the interpretations that UCD presents college composition as an expansively framed context (Engle et al., 2012). The students in lower-division courses composed texts for a broad range of audiences and purposes. Students composed academic writing tasks, reflective memos, narratives, scholarly research, texts intended for social media outlets, and problem papers calling on specific student-selected audiences to act. All of the student portfolios included at least two artifacts that each had distinct purposes and audiences. In portfolio letters, students all explicitly reflected on how circumstances, audiences, and purposes affected their writing processes.

UPPER-DIVISION WRITING CONTEXT

There was far more variation of resources and expectations in the upper-division courses. This variation is a product of differing course objectives, as well as the varied professional backgrounds of the continuing lecturers and tenure-line faculty who taught the courses. The WID courses, for example, focused on how to compose scholarly texts within a discipline. Students in Writing in the Professions courses, on the other hand, would compose some texts that described the profession itself and other texts that approximated established genres in the profession. The advanced composition courses presented even more variation. Some versions of the course focused on various ways writers approach a specific topic. For example, two participants from different sections of the same advanced composition course wrote a variety of texts on the issue of race and racism. Other advanced composition courses required students to produce texts related to their individual majors. These courses asked students to learn about the writing conventions they encountered while studying for their major and then share their insights with students from other majors.

Two consistencies were notable across the upper-division writing courses. First, all of the courses worked toward the five writing program learning objectives. Second, the upper-division writing courses made an assumption about the students: The courses expected students to rely on the knowledge they had gained during their first two years of college experience. Assignment prompts, readings, and research requirements assumed that students understood concepts such as academic discipline, scholarly writing, academic audiences, discipline-appropriate evidence, and scholarly exigence. Students were not expected to know these concepts by name, but a familiarity was assumed. Many of the assigned readings and writing tasks would be beyond the abilities of a student who had not experienced two years of college-level general education or introductory courses in a specific discipline.

UPPER-DIVISION STUDENT DISPOSITIONS ON WRITING SKILLS AND TRANSFER

The results related to student dispositions come from the final portion of the survey of upper-division students. The section was concerned with student perceptions of college-level writing skills and the role writing instruction played in the development of those skills. The two items in that portion of the survey asked students to self-report their comfort level with 15 academic writing sub-skills that ranged from “writing for a specific audience” to “conducting research on a topic” to “avoiding plagiarism.” See Table 7.5 for full results. The majority

of students reported being comfortable with all the items listed except for “Preparing for and taking a timed writing exam.”

Of the upper-division students who had taken a lower-division writing course (N = 698), 84.6% reported that they felt their lower-division class had helped them to solidify the subskills they had just ranked. That previous writing courses “helped a lot” was stated by 31.7%, and 52.9% reported that the courses “helped somewhat.” Students were also invited to add comments to explain their choices, and many did so. There was quite a range of responses. Some students felt that they had acquired most of their academic writing skills from experiences of reading/writing in their own major courses. Some said they had learned everything they knew about writing in high school. Some highly praised their lower-division college writing courses, while others strongly criticized them.

The majority of upper-division students reported being comfortable with their own abilities across a broad range of writing subskills, most of which are emphasized by the writing program’s learning objectives. When prompted to reflect on prior college-level writing instruction, most stated the instruction helped develop those skills. These results suggest that the majority of students believe there is a link between their prior writing instruction and their comfort with certain writing skills. These results cannot be generalized, as they are bound to the UCD writing program. They do, however, provide a contrast to the survey results Wardle (2009) reported from a different research site, where most students did not see any connections between early writing coursework and later writing. This contrast is particularly arresting because Wardle’s description of that study’s site is the opposite of what Engle et al. (2012) consider to be an expansively framed context. Wardle explains that the students “have been learning discrete skills not connected to any specific academic genres, and they did not appear to make even near connections of those skills . . . to very different contexts” (2009, p. 775). This is what Engle et al. would term a *bound context*, a context that does not foster transfer. In the UCD writing program, the upper-division students’ sense of a connection between the two writing courses may have been affected by the way the lower-division course is framed.

ANALYSIS OF CRITICAL EVENTS

Here, we will present findings from four critical events that demonstrate how UCD’s writing program takes into account the concept Engle et al. (2012) describe as expansively framed contexts, contexts that foster the dynamic transfer of writing skills. The writing program includes three key stages: (1) the introduction of rhetorical knowledge in lower-division courses, (2) two or more years of experience in a college setting before enrolling in an upper-division writing

Table 7.5 Comfort level with writing subskills

Prompt: Now we'd like to ask about specific writing goals and skills you have developed at college. Please complete the table below. For each skill listed, please check how comfortable/confident you are with your writing ability in that area.

	Very Comfortable	Comfortable	Uncomfortable	Not sure/No opinion	Count
Writing for a specific audience	123	452	81	41	697
Planning and organizing an assigned paper	176	407	106	9	698
Reading challenging academic texts	130	343	201	20	694
Preparing for and taking a timed writing exam	84	274	318	20	696
Choosing a specific research topic	135	404	133	24	696
Conducting research on your topic	189	370	120	16	695
Citing your sources appropriately	188	363	125	18	694
Integrating evidence	205	394	86	10	695
Avoiding plagiarism	316	331	43	7	697
Working collaboratively on writing tasks	101	356	196	41	694
Using technology to improve writing	204	382	58	52	696
Giving feedback to others on their writing	139	366	169	23	697
Using feedback from others to revise your writing	198	425	52	17	692
Editing your writing to correct errors and improve language use	217	381	87	12	697
Reflecting on your own writing progress	146	411	94	41	692
Additional Comments (optional)					6

requirement, and (3) the explicit goal of developing more specialized writing skills. These stages assume institutional factors such as the university's two-course writing requirement and the consistency of programmatic goals. Students and instructors accept these as fixed factors that are supported across the university. The consistency of such factors allows students and instructors to frame writing tasks as part of the social reality of learning to be a student, learning to communicate in a discipline, learning to communicate as a professional, and/or learning to be a scholar. The first two critical events presented here are drawn from lower-division coursework, and the latter two are drawn from upper-division coursework.

STRUGGLING WITH CYBORGS

Student #1 was asked to find and highlight places in her portfolio where she used evidence to support a claim. She highlighted a section from a rhetorical analysis of an advertisement in which she was attempting to incorporate ideas from Haraway's (1991) chapter "A Cyborg Manifesto: Science, Technology, and Socialist-Feminism in the Late Twentieth Century." Student #1 highlighted the following text from her own essay:

Sony wants to make people aware of the way we have raised an entire generation on machines, creating cyborgs to alert people to the way technology is changing society, not just the impact of Sony products.

Student #1 described the above text as a claim and said that "two paragraphs" served as supporting evidence. When asked to highlight evidence that supported the claim, she moved to the previous paragraph and told the interviewer, "Well, some of it kind of starts here, talking about the lifestyle that goes along with the [Sony PlayStation®] PS, like the culture, along with the PS3™ gamers and stuff." After a long pause, Student #1 scrolled down to a paragraph that contained the highlighted claim and said that "it continues through . . ."—there was another long pause as she scrolled to the next paragraph and then said—"I'm going to say that it kind of continues on until I get to my next point about the nature of the company."

Student #1 was suggesting that the three-and-a-half paragraphs should all be highlighted as evidence. The interviewer pressed Student #1 to choose between (a) highlighting a series of selected sentences from within the paragraphs or (b) highlighting the entire 596 word block of text as evidence. Student #1 confirmed with confidence that she would mark the 596 word block of text as evidence.

When the researchers discussed this section of text, we were struck by the number of claims that were not clearly linked to any evidence. The result is a

passage that suffers from issues of incoherence and a number of un/under-supported claims. A writing assessment that only took the ad analysis into account would likely attribute Student #1's unwieldy use of claim-evidence structures to a weak understanding of the relationship between claims and evidence. That assessment would be contradicted, however, by the personal narrative in the same portfolio, a well-wrought complex argument that depends on skillful use of claim-evidence structures. There is clearly an instance of frustrated transfer. What is striking is that Student #1 worked so hard during the interview to understand evidence use in her own ad analysis.

An examination of the resources Student #1 named sheds light on the nature of the challenge she faced. In the interview, while discussing the highlighted section of the essay, Student #1 referred to the writing prompt, the advertisement, the Haraway (1991) text, the instructor's written feedback, and an email exchange with the instructor. The first resource available to Student #1 went unnamed; it is her prior knowledge of claim-evidence structures that she demonstrated in her personal narrative. The rhetorical analysis, however, is a departure from such narratives, a point emphasized by the instructor feedback Student #1 described: suggestions to cut down on expressive or overly descriptive language. Another resource is Haraway's text, a scholarly, multidisciplinary treatise on technology and feminist thought. While the text does model scholarly writing conventions, it is not a model of the kind of rhetorical analysis the ad analysis calls for. Also, Haraway assumes in-depth content knowledge that would be unfamiliar to most lower-division undergraduates. The instructor feedback, the scholarly text, and the assignment prompt all made Student #1 aware of the newness of the writing task. However, in the time allowed to compose a lower-division portfolio, Student #1 could not coordinate these resources.

Despite the shortcomings of her text, when Student #1 was asked to find and highlight an effective use of evidence in her portfolio, she struggled for nearly 15 minutes with the poorly constructed claim-evidence structures in her rhetorical analysis. No other participant in the study spent this much time on one question. She was not instructed to answer the claim-evidence question using that specific essay. She could have drawn more effective examples from her personal narrative, but she decided to focus on the rhetorical analysis because, according to Student #1, the writing process for the rhetorical analysis was more demanding. She was almost dismissive of the effort required for the personal narrative, which "came together in less than a week" because it was a familiar task. The rhetorical analysis involved more time, effort, and reflection. Student #1 chose to examine the more challenging text because, according to her, it better demonstrated the kind of writing she was working to learn in the lower-division class. This data from the interview and sample texts suggest that after submitting final

drafts of her work, Student #1 is continuing her struggle to coordinate the resources in a new writing context.

SEARCHING FOR EXIGENCE

When Student #7 was asked to highlight a sentence that she struggled to write, she resisted. She did not want to highlight a single sentence. Instead, she highlighted the final two paragraphs from an informative essay. This data was coded as a critical event because the student text and the interview demonstrate a struggle to change prior knowledge, specifically knowledge of how to write a conclusion for an unfamiliar writing task. In her interview, Student #7 described how she had previously approached the writing of conclusions: “Before this class, I guess, I would . . . look at each paragraph, and then—topic sentence, rephrase it, and then just kind of copy and paste it into the conclusion.” While revising the essay, she decided such a conclusion would be unsuitable. She highlighted her two-paragraph conclusion, describing it as something she struggled to write because she was unsure about how to compose a conclusion for a new task.

After indicating that she struggled to compose the passage, Student #7 went on to describe the functions of the conclusion she eventually wrote. She stated that her conclusion for this task “[is a] two-part” conclusion with the “first one summarizing [and] the second part . . . going back to [explain] how to apply what the reader learns from this paper.” Student #7 then paused, trying to decide how to clarify further what her second paragraph was doing. After eight seconds of examining her own text, she said, “So, here I guess . . . it addresses the exigence of this paper, and that is something I struggle with, the conclusion usually, just because I don’t really know how to end something, to wrap it up.” Here are the two paragraphs that prompted Student #7 to make those statements:

With the comparison of the two articles we can analyze where different genres contrast by convention: audience, purpose, exigence, tone, diction, format, design, and constraints. Each rhetorical situation gives rise to a different genre, aiming to affect the reader in some way. A writing [sic] in one genre may want to inform their audience while the goal of another may want to plant a new notion in the reader’s mind. The paper is then shaped and tailored to address the audience’s needs using tools like tone and diction.

After breaking down the two articles into their rhetorical components, these sample analyses can be used as precedents for analyzing writing of any genre in a student’s undergradu-

ate career. With the help of rhetorical analysis, it will be easier to zone in on the author's message and thesis along with why the authors wrote the way they did.

It is important to note here that increased understanding of rhetorical concepts was one of the learning objectives in the lower-division writing course, so the use of rhetorical terms by a student, while heartening, does not on its own indicate a critical event. The data represent a critical event because Student #7 used the term *exigence* when reflecting on how she composed a new kind of conclusion for an unfamiliar writing task. The data suggest that Student #7 made changes to her prior knowledge using newly acquired rhetorical knowledge as a resource to facilitate the change. Both the text sample and the interview suggest that Student #7 is still developing her ability to apply these concepts in new settings. She does not wield the rhetorical concepts with complete confidence. Nevertheless, this is a demonstration of a student coordinating rhetorical concepts with her previous understandings of the writing process in order to create understandings that better suit a new writing context.

“WHO WOULD WANT TO READ THIS?”

Student #11 brought in three text samples from her Writing in the Professions course. She discussed an in-class reading response and a professional profile with rhetorical fluency, clearly identifying the way her writing addressed the purpose and audience for those tasks. The critical event we will focus on here is concerned primarily with the third text sample, a non-traditional narrative collage. The student claimed she had trouble “wrap[ping her] head around” this task and described it as “definitely different” and “a little bit broken up.”

For the task, Student #11 wrote and assembled a series of news updates, diary entries, online forum posts, and a web-based reference article. The interviewer asked Student #11 to find a place where she addressed the audience or made a writing choice because of her audience. She responded as follows:

Yeah, so the audience in this case, I was thinking is just my professor, because I personally didn't like reading the example collage papers that we read. So I was thinking, who would want to read this [stified laugh]? Because I think it's not a very interesting way to read a paper. It's definitely different.

On its own, the answer suggested that an upper-division writing task designed to get students thinking about non-academic audiences was having the opposite effect. This perception of the project as purely academic was reemphasized when Student #11 went on to say the project would “get done” simply for

the sake of getting it done. Here the student effectively described the collage as a mutt genre (Wardle, 2009), then said, “I had fun writing this, but I didn’t think about the audience very much.” This suggested an apparent reluctance or inability to engage with the rhetorical concepts the task assumed, which was surprising because the collage that Student #11 composed demonstrated strong audience awareness.

The interviewer accepted Student #11’s assertion about writing for the professor and asked her to indicate a place where she made a writing choice for the professor. That is what prompted Student #11 to roll the cursor over a portion of her text and give this response:

I will say that this is a fictional news update, and it was kind of fun thinking, “Okay, so the person who would be reading this would be, um, somebody looking up on CNN.com or something.” So I looked up examples, and they format it this way. So I was thinking, “Okay, this looks like a news article right now,” or [highlighting another portion of the text] this looks like what I looked up when I saw at WebMD, and this looks like [highlighting a third part of her text], if somebody wanted to read just the thread here, that’s the diary entries, they would be reading . . . a very interesting narrative by this person that I made up. So, I was actually thinking, in the individual threads, about how to make it stylistically interesting for different audiences.

Student #11 said this less than 45 seconds after saying that she “didn’t think about audience very much.” Not only does she note how the various perceived expectations of readers affected her format and writing style, but also she names resources she sought out to help her formulate those styles. The task and her prior experience told her that she needed to seek out model texts in order to find an appropriate format and style.

Given the opportunity to interact with her own text, Student #11 decided that her negative reaction to the assignment was separate from her act of writing. This is made most clear by her reproduction of the internal dialogue she had when writing; she gives a second voice to the decisions she made while writing. The result is two seemingly contradictory answers of “I didn’t think about audience” and “I was actually thinking [. . .] about [. . .] different audiences.” This suggests that while she was writing, Student #11 made the decision to consider audience expectations without fully consciously reflecting on that decision. For her, the act of thinking about audience was a relatively low-road transfer event that triggered a search for resources she could use to write in a new format and style.

“SOMETHING THAT I EXPECTED PEOPLE TO ENJOY”

The final critical event we will examine demonstrates how a firm grasp of rhetorical concepts can be coordinated with prior college experience to help a student navigate discipline-based writing situations. Without being prompted to do so, Student #12 brought in writing samples from two courses. She brought in two texts from her upper-division Writing in the Professions course, and she brought in one text from the writing program’s lower-division course. This prompted the interviewer to ask directly about the utility of the skills she developed in the lower-division writing course. Student #12 said that the texts she wrote for the lower-division course did not inform her upper-division work. She cited a section from the patient case study she wrote for the Writing in the Professions course as an example, stating that the case study’s style and organization were informed more by the writing she did for lab reports in her microbiology courses. Those lab reports, like the patient case study, were more about the direct reporting of data. The texts she wrote in the lower-division writing course, on the other hand, involved more analysis and interpretation. The text sample from her lower-division writing course, a rhetorical analysis, demonstrated this difference effectively.

If this study’s design relied exclusively on student-reported data on transfer, this exchange would not support our findings that an appropriately situated two-course writing program facilitates the transfer of writing skills and the development of discipline-based awareness. However, after this interview underwent three analytical passes, it is clear that Student #12’s writing is informed by both experience in her major and a firm grasp on rhetorical concepts. That combination is what helps her compose an unfamiliar text. For the Writing in the Professions course, she wrote a patient case study. She explained that she had never written such a text prior to that course. When asked about audience, Student #12 said the following:

The case study is meant—usually nurses write these up so that doctors will have them and be able to read it quickly and catch up with what is going on with this new patient they have. . . . I guess the more important part would be the symptoms, because doctors are constantly hearing symptoms. They get used to hearing certain symptoms associated with certain diseases, and that gives them an idea of where to start. . . . I suppose the difference is if I were writing this for something that I expected people to enjoy reading, they’d want other details about the person, their name, their physical description, something like that. But this has a different purpose.

Student #12 links audience and purpose in a fluid and effective way, and she is able to reflect on those choices with clarity. She is correct to observe that her patient case study does not draw directly from the skills required to write a rhetorical analysis. Her in-interview reflection, however, suggests that she uses the rhetorical concepts that are the explicit learning objectives of the lower-division course. The ability to wield those concepts with the confidence exhibited in the interview give Student #12 the tools needed to interrogate a reader's motivation. She does not expect her reader "to enjoy reading" her case study. The link between audience and purpose may even have cued the prior knowledge of lab report writing conventions. Student #12 understands that lab reports are not written to be enjoyed because she has interacted with them as a writer and as a reader. She states explicitly in the interview that she has never written a patient case study before. Nevertheless, she is able to compose a successful case study through the coordination of the assignment prompt, her prior knowledge of audience and purpose, and her prior knowledge of writing for transactional purposes in a clinical setting.

DISCUSSION

Critical events from lower-division courses suggest two important factors influencing the dynamic transfer of writing skills. First, the lower-division writing course is understood not only as a learning context but also as a target context. It is a place where students are introduced to the work it requires to use, analyze, and develop their prior knowledge to gain new understandings of the writing process. Students reflected on their prior knowledge of writing and how it influenced the new tasks they were working on. Students also focused on how the newness of the tasks in the lower-division course affected their writing processes. The course presented students with the resources required to assess their own knowledge, transform it, and then apply that knowledge to new tasks, a set of resources that should facilitate transfer (*Elon Statement*, 2015; Appendix A).

The second factor relates to students understanding that the lower-division course was not an end point. In interviews that took place after the course was complete, students described their writing skills and challenges in the present tense, acknowledging that the process of development was ongoing. It is crucial that students continue to develop their understandings of the university as a social context after they finish the lower-division writing course. This continued development is facilitated by the following programmatic cue: Students must not only reflect on prior knowledge, but also they must project into their future academic careers and consider how their knowledge of writing will be changed by new tasks,

new audiences, and new conventions. There are several ways such projection can be cued, but one important way we observed is the upper-division writing requirement. An upper-division writing course is listed among the major requirements at UCD, informing students that the effort to move from lower-division status to upper-division status will require new knowledge of writing.

Another important way the UCD writing program cues projection is the programmatic effort to frame the learning contexts in the writing classroom expansively. The lower-division course presents writing strategies as “resources for productive action in potential future transfer contexts” (Engle et al., 2012, p. 218). This framing acknowledges the way abstract writing concepts are continuously developing and gaining relevance through context. In doing so, such framing demonstrates the expectation that students should use their experiences in other UCD courses to reflect on how abstract writing concepts are relevant in different settings. This is an essential part of the multi-year writing requirement because it emphasizes how the learning, relationship building, and growth that take place throughout the college experience all contribute to a student’s writing development.

The work done by lower-division students demonstrates some of skills that require time within the institution to develop. Students in the lower division writing courses displayed an ability to reflect on abstract writing concepts, but this kind of reflective work was a challenge. Nearly all of the students struggled to give answers, taking long periods of time to explain or consider how their writing demonstrated the concepts being examined. This was best demonstrated by the effort students put into answering interview questions about audience, purpose, the effective use of evidence, and writing conventions. That this was challenging is not a failing of the writing course; the lower-division students were just beginning their active engagement with the university as a writing environment. They had very limited experience with the practical application of the abstract writing concepts taught in the lower-division writing course.

As Day and Goldstone argue, while the teaching of abstract concepts may efficiently provide learners with easy-to-transfer knowledge, “it seems to do so at the expense of comprehensibility” (2012, p. 157). This suggests comprehension of the abstract writing concepts will continue to grow as students engage in the variety of writing situations across the university. This time in the university environment gives students opportunities to reflect on how abstract writing concepts inform practical writing tasks. These opportunities represent the access and practice within a community that Gee (1989) named as a requirement for developing literacy. Conceptual understanding varied across participants, but data that describe interactions between student knowledge and environmental resources suggest that students in lower-division courses are in the early stages

of coming to understand the university as a social context with complex writing expectations.

Upper-division students, on the other hand, demonstrate a familiarity with the expectations and resources available to student writers at UCD. Critical events with upper-division students not only involve less hesitation but also include more examples of constructive metacognitive reflection and rhetorical awareness. This is certainly a result of their familiarity with university expectations, much of which would have been gained in courses and experiences outside of the writing program. That experience was gained in an environment that explicitly expects continued writing skill development. This study suggests that such student experience can be coordinated with the resources made available across the university and highlighted by the consistent, explicit, and intentional transfer-oriented learning objectives set forth by the multi-year writing requirements.

These findings shed a new light on the research approaches our thought experiment examined. When a student moves from a learning context to a target context in which the writing expectations have changed, the learner's prior knowledge must interact with resources in the new writing environment if it is to be useful. For example, a student new to the discipline of psychology who knows how to cite sources using MLA citation conventions may be able to learn a new set of citation conventions faster than a student with no knowledge of citation conventions. For that to happen, however, the student will need to be able to use resources in the new setting to transform the knowledge of MLA citation conventions. That is more likely to occur if the environment has consistent, explicit, and intentional transfer-oriented learning objectives. Many studies in composition research collect data from the students and focus on the high-road/low-road transfer spectrum. That is, the studies focus on self-reported data describing what students do to transform their prior knowledge. That is valuable data, but dynamic transfer demonstrates how that transformation of prior knowledge relies on resources in the target context, as well as a student's ability to recognize those resources. This acknowledges an important learning-to-write component in the transfer process, thus helping to resolve the conflict Russell (1995) highlighted when he introduced activity theory to the discussion of FYC and composition studies. Dynamic transfer shows that appropriate prior knowledge can affect later performances, but only when learners have the time and capacity to use resources in a new environment and make appropriate changes to the prior knowledge.

While the writing program at UCD demonstrated an environment that facilitates such knowledge transfer, the generalizability of this study is limited. The qualitative nature of the study keeps these results bound to the UCD context.

However, the results do suggest that the way resources in target contexts are presented must be considered when we investigate the development and transfer of writing skills. Dynamic transfer, as a learning mechanism, provides a way to interrogate the relationships between a writer's knowledge and the environment in which the writer is working. One major implication is the need to understand writing contexts outside of the writing classroom, to treat the resources in those settings as tools students will use to repurpose the knowledge they already have. As composition and education researchers continue to consider this issue, investigators ought to turn to settings where there is no direct writing instruction and novice writers are expected to look to the writing environment for cues and resources. As we learn more about the characteristics of such settings, it may be possible to consider whether or not a writing course can teach students how to seek out and use resources in situations beyond the classroom where little or no formal writing instruction is available. No course on writing will ever teach every writing skill required in such settings, but the discipline's evolving concept of how writing skills develop may speed the transition of novices into new communities of writers.

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