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From Launch Pad to Stratosphere: Following the Trajectory of Student Learning

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FROM LAUNCH PAD TO STRATOSPHERE: FOLLOWING THE TRAJECTORY OF STUDENT LEARNING

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OVERVIEW

In this article, we review findings from a cohort study that studies the degree to which a selected group of students at Stetson University (Florida) acquire, develop, and retain information literacy and writing skills over the course of four years in a writing-intensive general education core curriculum. The project “Points of Significance” began in 2015, the result of assessment projects in general education that showed patterns of learning gains in students taking their required First Year Seminar (FSEM) and their required Junior Year Seminar (JSEM). Curious as to where and how students were encountering opportunities to hone and refine their skills, the Writing Program Director and the Learning and Information Literacy Librarian formed a research team that has met with the student cohort every semester for interviews. This article focuses on the patterns we see developing from the first year and the second year. Specifically, we review data indicating that students found their FSEM experiences very important to their first-year acculturation to the university culture of values and learning, with explicit learning gains in matters of composition, revision, and information handling; the second year, in contrast, demonstrates a surprising student focus on strategies of ways of reading.

INSTITUTIONAL AND PROJECT BACKGROUND

Stetson University in Florida is a small, private liberal arts university with two strong pre-professional schools in Business Administration and Music. Stetson belongs to the American Association of Colleges and Universities (AAC&U) and adopted the principles of the Liberal Education and America’s Promise (LEAP) undergraduate core in 2009, creating a writing and research intensive general education program. The LEAP emphasis on high impact practices makes student learning in writing-rich core courses a promising area for study.

Our goal in the long-term cohort study “Points of Significance” is to understand the degree to which a selected group of students at Stetson University acquire, develop, and retain information literacy and writing skills over the course of four years. Because writing and information fluency are foundation skills, because they are complex skills to identify and measure, and because Stetson’s General Education curriculum and assessment map locates instruction in these learning outcomes in the same courses, we hope to use what we learn to target and enhance sites of instruction so as to maximize teaching and learning strengths.

METHODS

We began the project in the fall of 2015. Thirty five students were initially recruited from among the FSEM courses required of all incoming freshmen. Twelve of these students have returned every year. These students represent a number of disciplines and programs on campus and in many ways present an accidental microcosm of the Stetson student population:

Gender: 9 women, 3 men.

Ethnicity: African-American (3); Asian (International) (1); Caucasian (8)

Majors: Business (1), STEM (4), Social Sciences (5), Theater (1), Elementary Education (1)

Students meet individually with the project directors once during fall semester and once in spring semester, with spring interviews often taking place in small groups to elicit shared experiences. Students respond to questions about their current writing and research projects and how their “new” learning maps onto what they brought to these projects. Each student brings a self-selected copy of a writing/research project they see as significant in their learning. Each student receives a \$25 gift card for their participation. These interviews are transcribed and reviewed by the project directors for key words, concepts, and trends. As of this writing, project directors have recorded interviews from Fall 2015, Spring 2016, Fall 2016, Spring 2017, and Spring 2018. (Fall 2017 interviews were cancelled following the impact of Hurricane Irma.)

YEAR ONE DATA: REVIEW

Students taking their FSEM course responded to questions regarding learning in research and writing skills. Common themes included

- Encountering and adapting to more stringent requirements for revision of student writing than students had been accustomed to in high school
- Developing an ability to reach out to professors for assistance and revision suggestions on assignments
- Developing an ability to self-edit or rely on sharing their writing with peers
- Learning and applying new strategies for gathering information
- Learning and applying distinctions between different kinds of information sources

Non- or extra-curricular learning spontaneously reported by students included a constant narrative about time management. In the context of a small liberal arts college with a wide range of social opportunities, students typically join as many organizations as they can. Students in the Points of Significance Project followed the trend toward over-engagement but also found ways to manage their time more efficiently by use of technology (for example, multiple apps on their phones and tablets used as reminders, planners, and note-taking software). This theme of time management becomes important for reasons that will become clear later in this article.

YEAR TWO DATA

At the start of Year Two, we focused on asking questions about retention of information and skills from the previous year’s FSEM and what “new” writing and research skills they were developing in their sophomore-level coursework. We expected the students to tell us about learning introductory skills and concepts in their disciplines; instead, we heard that the students majoring in STEM disciplines were experiencing what one called “a gap year” in learning new information or concepts. In contrast, the students majoring in the social sciences perceived much of their learning as discipline-related, although they did not use that terminology; instead, their comments described learning that specific professors had specific expectations or their realization that “that’s just how they do it,” meaning professionals in the discipline. It is possible that students are experiencing a sequenced learning curve: they initially assume that different expectations are simply the preferences of individual instructors, only gradually coming to understand that these “different expectations” are actually disciplinary differences.

Student comments in their second year centered on a number of themes:

- Narrowing down their initial topic ideas to viable projects
- Sticking to strategies, processes, and resources that worked in the past
- Encountering new genres and forms
- Refining processes of searching for information and revising written work
- Being pushed out of their comfort zones and developing a sense of creativity
- Developing reading strategies for managing information and reading to gain a sense of disciplinary convention.

Although there was not, overall, a set of writing or research skills that they learned as a cohort of second year students, we found that each of the students in the study was talking about reading. Each student devised ways to ingest as much information in as organized a fashion as they could. It is here that we see a connection to the emphasis on technologically-oriented time management strategies from Year One: students have developed more reading-centered methods of absorbing material with limited time.

Many different types of reading came up during Year Two, but two types stand out for both their frequency and impact: first, learning how to understand and manage what they are reading, and second, learning to read in their disciplines. These two ways of reading emerged as common experiences that seem to define the second-year learning experience.

Several students discussed strategies for managing and understanding what they were reading. For example, C, an international student studying Physics, shared their strategy for improving comprehension through notetaking: “I develop another time where I take notes in class. And then she gave us this homework sheet. I would cut it down and stick it on. From that part, and there’s the issues like read for example 3.1 and 3.2 and I’ll put note 3.1 and I’ll read through the material and then I’ll do my own

notes... that basically means I read all of the material for the class, so I absorb more in the class than I was able to.” L, majoring in Public Health, discussed learning the value of rereading: “I sat down and probably wrote about a quarter to half of [the paper] but... I came up [short] and I was stumped. So, I sat down and I actually read the article and having re-read the article, I came across a lot of different points that I didn’t really get in my first reading... that I was able to incorporate after the second reading.”

Reading as a disciplinary activity was also prominent in our second-year interviews. Through reading, students were introduced to disciplinary conventions. The following quotes illustrate how four students learned to read as novices in their discipline:

- D, a Biology major: “For my Science major I look at what have people done before and what the critique on it is, so I can learn from their mistakes or errors... or if there’s no critique, this is perfect. I have to look at the audience which they’re giving it to as well.”
- C, a Physics major: “What I learned is: whatever my professor gives me for formatting for a scientific journal [article], I would go online and open like three extra scientific journals. Short ones though, not 20 page ones. Maybe read through the formatting and what they put in each part. For example, because the description here they give is like, ‘Describe the equipment and explain the key point and how did the data was completed.’ That’s one line, and then they put “do not do this, do not do this, do not do this.” And then you would read other peoples’ paragraph and ‘oh, like, actually it’s not important about how which program I put in [or] which [place] I put it, just say the general procedure.’ ...So what I learn is to like compare and [contrast] and learn it both ways instead of just like reading instructions.”
- I, a Sociology major: “In one of my classes we’re reading a book a week and like we had this one book by Bordeaux and it was like 500 pages long or something crazy like that and we had to read it in like a week. So I talked to [my professor] and she was telling me, in grad school you’ll end up having a lot of books like that and what you do is, you just read the introduction and the conclusion and read a couple chapters that seem important to what your class is actually talking about. And then reading reviews on the book on top of that instead of just reading the entire book... Reading the lit reviews really told me what chapters were really important... which was so helpful.”
- T, a Business major: “The websites I go on [for investment scores] have a lot of numbers and those numbers have meaning. I wouldn’t say it’s 500 pages worth of words but you still have to know exactly what you’re looking for. You have to say, ‘okay, this stock price is going up, I need to figure out why...what numbers reflect this?’ So that I can use that information in my analysis. So it’s finding ...key information, like sifting through all of the numbers to find what numbers you really need for your analysis. What reflects the information that you’re trying to portray? I guess so it is in essence a little bit like [reading], it’s just not words.”

FRAMEWORK DOCUMENTS

Here, we turn to two documents that help us to interpret the data: The *WPA Framework for Success in Post-Secondary Education* (CWPA, 2011) and the revised *Framework for Information Literacy in Higher Education* issued by the Association of College and Research Libraries (ACRL, 2015). Recent scholarship focusing on the rich connections possible—the extrapolations, threshold concepts, and pedagogies—has offered approaches to understanding and capitalizing on the relationships between writing and information literacy. Specifically, reading for information management as indicated in the quotations above develops abilities in critical thinking and metacognition, skill sets that appear in both sets of Frameworks.

Generally speaking, we find these correlations between the Frameworks:

WPA Framework → ACRL Framework

Writing Processes → Research as Inquiry

Rhetorical Knowledge → Authority is Constructed & Contextual, Scholarship as Conversation, Info Creation as Process

Knowledge of Conventions → Scholarship as Conversation, Info Creation as Process

Critical Thinking → Authority is Constructed & Contextual

In Year One, we identified student learning in areas of Writing Processes, Rhetorical Knowledge, and Critical Thinking; they began to understand concepts of *research as inquiry* and *scholarship as conversation*. Our data from Year Two, which indicates that students had fewer opportunities than in Year One to further develop these understandings, suggests that students grappling with learning go through a process that is incremental and non-linear.

Reading skills, although not addressed specifically in either Framework document, present as *a priori* skills required in order to begin that process of maturing as a reader, writer, and critical thinker. Current research confirms this perception and contextualizes it further. For example, in their chapter “Infusing the Inquiry Cycle with Continuous Curiosity,” Bush and Mason (2016) describe reading skills as “preceding the analytical and metacognition skills necessary for engaging inquiry and coming to voice” (p. 35). Reading critically and effectively is essential for each of the critical abilities.

Reading is an act of both consumption and production; reading provides models of what is possible in writing; reading forces exercise of critical thinking function; and reading is itself an iterative process, in that we read, and reread multiple times, because we have different ways and models for reading. Reading therefore partakes in consuming information, assessing information credibility, contextualizing information for specific audiences and purposes, and synthesizing information for production to a variety of audiences, key critical skills for both writing and information literacy development. (See Adler-Kassner & Wardle, Maid & D'Angelo, and Horning & Kraemer, among others.)

In Year Three, students in the cohort study will complete their general education core requirements (the Junior Seminar aka JSEM) while simultaneously deepening their immersion in disciplinary expectations. We expect to see continued development of rhetorical knowledge and knowledge of conventions, with an equivalent growth in student understanding of the IL concepts *scholarship as conversation* and *authority is constructed and contextual*. However, because student learning is, as we have already learned in this project, non-linear and incremental, we are interested to hear their stories of learning writing and information literacy skills.

REFERENCES

- Adler-Kassner, L., & Wardle, E. (Eds). (2014). *Naming what we know: Threshold concepts of writing studies*. Logan, UT: Utah State University Press.
- Association of College and Research Libraries. (2015). *Framework for information literacy for higher education*. Retrieved from <http://www.ala.org/acrl/standards/ilframe>.
- Bush, L., and Mason, J. (2016). "Infusing the inquiry cycle with continuous curiosity." In R. McClure and J. P. Purdy (Eds.), *The future scholar: Research and teaching the frameworks for writing and information literacy* (pp. 35). Association for Information Science and Technology.
- Council of Writing Program Administrators, National Council of Teachers of English and National Writing Project. (2011). WPA Framework for success in post-secondary writing. Retrieved from <http://wpacouncil.org/framework>
- Horning, A., and Kraemer, E. W. (Eds). (2013). *Reconnecting reading and writing*. Fort Collins, Colorado: The WAC Clearinghouse and Parlor Press.
- Maid, B., and D'Angelo, B. (2016). Threshold concepts: Integrating and applying information literacy and writing instruction. In B. D'Angelo, S. Jamison, et al (Eds). *Information literacy: Research and collaboration across disciplines* (pp. 37-50). Fort Collins, Colorado: The WAC Clearinghouse and University Press of Colorado.