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Guiding Student Research with Mind Maps, Topic Pages and Multimedia



For today's digital learners, writing a research paper can be a daunting expedition through online databases, subject guides and the Internet at large. To resolve this pervasive issue, Columbia University librarians collaborated with Literati by Credo, employing Mind Maps, Topic Pages and multimedia to change the way undergraduate students do research.

Columbia University's Undergraduate Writing Program (UWP) is a first-year-seminar style course that challenges new students to read, write and think as critically as established academics. Rather than term papers that emphasize only the finished product, this course assigns progressions and essays designed to illuminate the steps of the research process. Graduate students teach the course, and embedded librarians fortify the research skills presented in the classroom.

Despite this level of instructional support, UWP students still struggle with starting the research process. A recent study confirmed this phenomenon and indicated that information overload factored heavily on undergraduate students (Head & Eisenberg, 2010). For nearly half a decade, Columbia University librarians have been using Credo Reference to assuage such student anxieties about beginning the research process.

From the start, librarians are embedded in the course, using Literati by Credo as a hallmark of their library instruction. Literati's content and tools are aligned with course outcomes to ensure that each librarian-led session meets instructor expectations. The initial session begins with Literati's Mind Map. This visual search tool provides students with context for their papers in an otherwise overwhelming universe of ideas. The librarians also teach students how to use Literati as a resource during the discovery stage, a time when background information is needed as a foundation for research. Topic Pages and other multimedia materials are introduced as around-the-clock resources. Columbia librarians have also stated that Literati serves as a portal to all of the institution's resources, making it a powerful tool for UWP students further along in their research. One librarian said, "We showed it to them in every stage because Literati now links to all of our databases".

Given the importance of Literati to the Undergraduate Writing Program, Columbia librarians partnered with the Literati Customer Solutions Team to design comprehensive surveys that captured student and instructor attitudes towards Literati as a research tool. Sixteen courses were selected to participate in the study, eight of which functioned as a control group.

“Because it is such a rich resource, the students gravitate toward it... Moreover, the librarians can get a lot of mileage out of this one resource.”

Working with the leaders of the UWP courses, the Literati Customer Solutions team implemented the surveys and studied the results to measure the impact of Literati on student learning. In-depth discussions were conducted with instructional librarians as another comparison point for the study. After conducting a statistical analysis of the data, one key theme emerged. Students who reported using Literati for the research and writing components of their essay felt that the quality of their work was significantly improved by Literati.

Using the Mind Map as a Brainstorming Tool

When asked about Literati, 65% of students indicated that the Mind Map was one of the reasons that they found Literati to be a useful tool. This is supported by the librarians, one of whom stated, “I think the Mind Mapping and brainstorming is a really great tool...I'm crazy about the [Mind Map]”. A UWP student's first introduction to Literati is through the Mind Map, an interactive feature that illustrates visual connections between research topics in real-time. Mind Map has been a staple of brainstorming, one of the first steps of the UWP progression. Exploring concepts with this

tool not only helps to narrow topics, but it also introduces students to authoritative, e-content represented by interconnected nodes. Each semester, class time is dedicated to use of this innovative tool with routinely positive feedback. One recent UWP instructor stated, “Many times, particularly when writing research papers, students have ideas that are too big or unfocused. The Mind Map offers related topics, more focused topics, and even sub-topics for students who have large, but nebulous, ideas.”

Building a Foundation with Topic Pages

Topic Pages are another Literati feature that have helped UWP students jumpstart their research. In a follow-up question about Literati Topic Pages and additional features, 50% of instructors believed that there was no substitute for the resource in the program. With thousands of Topic Pages, this tool is unique in providing an effective, convenient place for students to amass background information for their assignments and connect to the libraries' databases for more specific resources. When asked about essays written in the UWP course, one student stated, “I think Credo helps round out an essay's argument with a wider range of pov [point of views] and counter arguments, which are sometimes not easy to initially think of.”

Information Literacy Videos and Tutorials

The customized components of Literati appealed to the unique learning environment at Columbia University. The Literati Customer Solutions Team collaborated with the librarians to create multimedia materials based specifically on UWP course learning outcomes and the institutional resources available to students. These instructional multimedia materials are accessible in the Literati platform as well as through persistent URL

Students who believed Literati improved the quality of their work.

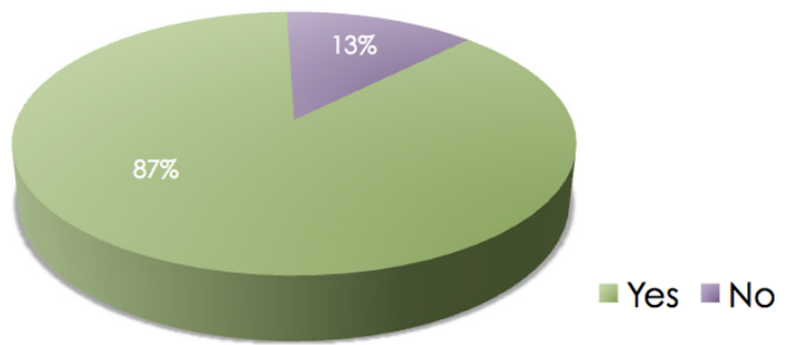


Chart 1: We asked Columbia University students about their use of Literati. Of the students that used Literati for the research portion of their paper, 87% believed that the strength of their paper increased significantly as a result.



the quality of their work was improved as a result. 87% of students who used Literati for their research and 75% of students who used Literati as a tool for writing their paper also believed that the strength of their work increased significantly as a result (chart 1).

“The tutorials are a great reference tool: they provide refresher for things the students learned as well as information about things that were not discussed at length.”

Instructors also keyed into the appeal of Literati for their students. All of the instructors surveyed agreed that Literati enhanced library instruction in the UWP courses. One instructor stated, “because it is such a rich resource, the students gravitate toward it. It is intuitive and helps them with preliminary work on their projects. Moreover, the librarians can get a lot of mileage out of this one resource.”

Conclusion

Columbia librarians have embraced Literati as an “appealing” product “that was incredibly valuable for both the Undergraduate Writing Program and other students as well.” The librarians’ continued commitment to the partnership with the Literati Customer Solutions Team resulted in an institution-wide training of the product with faculty and librarians from Columbia University’s 22 libraries. Plans have been made to highlight the multimedia materials in subject guides, the library’s blog and Columbia University’s blog. The positive response to these videos and tutorials laid the groundwork for additional instructional materials on research topics. These crucial steps to further promote the library and its resources will help to ensure that research skills remain a priority at Columbia University.

addresses disseminated by the Columbia University librarians. They cover topics, such as plagiarism, peer review, the selection of a database - Columbia University Libraries have over 1,900 databases available to students - and the evaluation of a resource. Of the instructors surveyed, 100% responded that they believed students in the UWP could benefit from viewing these videos and tutorials. One instructor stated that “the tutorials are a great reference tool: they provide refresher for things the students learned as well as information about things that were not discussed at length.”

Key Findings

The multimedia materials, Topic Pages and Mind Map come together to provide students with an online space connecting students to resources appropriate for all levels of the research process. Literati’s positive impact in the course is echoed by 90% of students who stated that they would be likely to use Literati in the future. This is not surprising given the strong statistical relationship between those who used Literati and those who believed that the quality of their work improved. All of the students using Literati to connect to Columbia’s resources believed that

Literati by Credo is an Information Literacy platform that integrates faculty and student outreach, multimedia instruction and assessment tools and resource discovery led by reference content.

Helping librarians do more.

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