

How Do Humanities and Social Science Majors Conduct Course-Related Research?

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Summary

From January through May 2007, a research team at Saint Mary's College of California (SMC) conducted a study about information literacy.¹ In particular, we studied how undergraduates majoring in Humanities and Social Sciences at SMC conceptualize and operationalize research tasks for course-related assignments.

The study was carried out in three phases: (1) discussion groups with undergraduates with Humanities and Social Science majors about conducting course-related research, especially their experiences, behaviors, and opinions, (2) a content analysis of research assignment handouts professors distributed in their Humanities and Social Science classes, and (3) a student survey, administered to Humanities and Social Sciences majors for collecting data about their research processes (see Appendix A for the research project plan and timeline).²

Information Literacy and the Student Research Process

Information literacy can be a complex and ambiguous term. Most scholarly definitions describe information literacy in terms of the competencies and skills students need to have in order to locate, retrieve, evaluate, select, and use information. These competencies are developed over time and are essential for lifelong learning.³

To date, scholarly research has focused on the standards and measures of information literacy among college students. Determining standards, which meet the needs of a cadre of college administrators, faculty, and librarians, has comprised a majority of the research about information literacy (Arp, Woodard, Lindstrom, and Shonrock, 2006; Harrison and Rourke, 2006). Other research has reported test results of information literacy skill sets among a given population, such as undergraduates enrolled in the California State University system (Dunn, 2002).

This study had a different focus. We have explored information literacy from the “inside out” or from the perspective of how students think about carrying out requisite research and how they put their information literacy skills into practice—regardless of how well they may (or may not) measure up to the competency standards set in place by college authorities. Above all else, our research questions were *student-centric, instead of administration-centric*.

¹ The research team for this study at Saint Mary's College of California (SMC) included Alison J. Head, Ph.D., Principal Investigator, Roy and Patricia Disney Visiting Professor of New Media, SMC Communication Department; Neeley Silberman, MA, Research Associate, SMC Communication Department; and Sarah Vital, MLIS, Research Associate, SMC's California's Academic Library. Micheline Sabatte, former SMC Web Coordinator, and Margaret Dick, Ph.D., SMC Communication Department, were ad hoc researchers, lending assistance in editing the report and administering the student survey to the classroom samples. This study was generously sponsored with funds from two sponsors, Tom Carter, SMC Academic Dean of Academic Resources and Ellen Rigsby, SMC Communication Chairperson. SMC is a Catholic, Lasallian Christian Brothers Liberal Arts institution in Moraga, California with an enrollment of 2,489 undergraduates and 1,473 graduate students. All communication about this study may be directed to Alison J. Head, Ph.D., Principal Investigator, ajhead1@gmail.com.

² The size of each sample were as follows: Student discussion groups, n = 13; content analysis of research assignment handouts used by professors in the last two years at SMC, n = 30; and student survey, n = 178. For more information about the individual sample segmentation for each phase, see the Appendices at the end of this report.

³ The definition of information literacy cited in this paper is a compilation, derived from definitions by different college libraries, <http://tinyurl.com/yvhpvj>, [retrieved: April 24, 2007 and a “tiny url” was adopted for the otherwise, lengthy Universal Resource Locator (URL) from the original site]. For a much more detailed definition and discussion of what information literacy means, see the American Library Association's “Information Literacy Competency Standards for Higher Education,” <http://tinyurl.com/yw6j9>, [retrieved: April 20, 2007 and a “tiny url” adopted for the otherwise, lengthy URL from the original site].

We studied three primary areas of the student research process, as they are related to information literacy:

- (1) How do students define and conceptualize the research process?
- (2) How do students conduct research tasks (i.e., where do they look for materials, how much time do they spend, and how do they determine quality during the evaluation of resources)?
- (3) What barriers and obstacles do students encounter while conducting course-related research?

Our motivation for conducting this study was to provide an insider's view of the student's research world, which many faculty and librarians may have, unknowingly or inaccurately, assumed is similar to their own (Leckie, 1996). Overall, the goals of this research project were threefold: (1) to provide deeper insights into the study of information literacy through the lens of understanding the students' research process, (2) to understand what gaps may exist between how professors and students consider what the research process entails, and (3) to explore how student information literacy competencies may be improved.

...an insider's view of the student's research world, which many faculty and librarians may have, unknowingly or inaccurately, assumed is similar to their own.

Ideally, the findings contained in this report will have value to a number of different constituents on the SMC campus. These colleagues include professors, librarians, and administrators, who are imparting information literacy training and competencies through their curriculum development. These findings, too, may provide a deeper understanding about the student research processes and how it relates to a growing population of students who are heavily influenced by the convenience of Google and the ubiquity of research resources on the Web. Lastly, we anticipate potential value for these findings in the academic community, at large, well beyond the SMC campus, especially those who are involved in liberal arts education at other institutions.

Major Findings

Inside the World of Humanities and Social Sciences Majors

According to data from our survey, Humanities and Social Sciences majors live in a world filled with completing four- to six-page argument papers (30 percent), literature reviews (17 percent), and theory papers (16 percent). The so-called argument paper, the signature assignment for majors, requires students to conduct scholarly research about a topic and present clearly sound evidence that advances a proposition or proposal.

Professors frequently ask students to work alone on assignments and allow them a certain amount of freedom in choosing a topic they would like to explore. As a result, there is a diverse swath of "real world" topics students select for their argument papers. Our discussion group participants recalled writing about working mothers and feminism, Hurricane Katrina's impact on New Orleans, college athletes and self esteem, iPods and their impact on human isolation, teen suicide, divorce, Satanism, and the gay rights movement, among other topics.

For most students, the research process starts with accessing resources that are nearby and convenient. The majority of students in our survey (40 percent) reported that the first step they took during the research process was turning to a course textbook or other readings from the class. The most frequent next step was varied. Some students turned to the campus library's Web site and accessed online resources (24 percent). Others reported turning to the Web and

with used a search engine, such as Google or Yahoo! (13 percent) or the Wikipedia site to narrow down their topic (3 percent).⁴

What Works for Students Conducting Research

Throughout the study, we found that students felt they had the best chance of succeeding on research assignments when given a certain set of circumstances. One key factor for success was when a research assignment included some “high touch” features (i.e., dealing with a person), instead of only “high tech” ones (i.e., dealing with a computer screen). In order to meet their “high touch” needs, students turned to professors and librarians. In particular, students in our survey agreed with the statement that one-on-one sessions were helpful, especially when professors offered individual coaching on an assignment (72 percent).⁵ Students also saw the option of writing and rewriting drafts as a factor leading to their success. Over half of the surveyed students (82 percent) agreed with the statement that writing drafts of certain sections was helpful to them, especially when professors reviewed and made comments on drafts, so that students could then revise and resubmit their papers.

One key factor for success was when a research assignment included some “high touch” features, instead of only “high tech” ones.

A key resource for students needing assistance with assignments was the campus library—both the reference librarians and the online vendor databases from the library Web site. Over two thirds of the student survey sample (68 percent) agreed with the statement that the campus reference librarians were helpful when they needed to write a four- to six-page research paper. We also heard discussion group participants sing the praises of the campus library. In those qualitative discussions, more than two thirds of the participants (69 percent) told us they turned to reference librarians when they needed help narrowing down a topic and more than two thirds (69 percent) also said they relied on the online databases posted on the library’s Web site (e.g., Link+, PsycInfo, and Expanded Academic Index). Likewise, over three fourths of the surveyed students agreed that the online databases available through the campus Web site were helpful to them (88 percent). But only about half of the surveyed students (53 percent) found bibliographic instruction or in-class “library talks” as much help to them.

Challenges and Obstacles: Student Limitations

In our discussion groups and student survey, most students had a grade point average (GPA) of a B or B+. Despite their ability to garner measurable success in terms of grades, students were frequently frustrated and eluded by the research process for a variety of reasons. From the survey and discussion group data, a profile of a fairly hypothetical student can be drawn. The majority of students we talked to in discussion groups were concerned about the ethical use of information, especially how to avoid plagiarizing materials and how to determine the credibility of sources, including those gleaned from Web sites. From the survey data, we also found the typical student struggles with research assignments because of: (1) his or her own tendencies to procrastinate (73 percent), (2) his or her feelings of being overwhelmed by all the information that is “out there” (60 percent), and (3) his or her inability to narrow down a topic and make it manageable (59 percent). When combined together, these data support a finding that a majority of students, in general, are challenged by tasks requiring specific information literacy competencies, especially retrieving, evaluating, selecting, and using information.

⁴ Frequencies about the first step students take in the research process and their use of Google, Yahoo!, and Wikipedia were readjusted on October 10, 2007 by the authors, who discovered a minor error in the statistics originally reported.

⁵ The data reported in this section were taken from responses to student survey questions 10, 11, and 12, which used five-point Likert scales (i.e., a statement that asks the respondent to rank their level of agreement to disagreement with the statement). The percentages we report here combine the percentages and collapse two response categories, those who “strongly agreed” and “somewhat agreed” with statements about their what worked for them when they conducted research and what challenges they faced.

For many students, the research process is a barely “tolerable task,” usually delayed until a few days before a drop-dead due date. From the discussion group data, all but one of the participants agreed that they were indeed self-described procrastinators. As with any procrastinator, time is always of the essence and for students who procrastinate on research assignments the situation is no different. Students we surveyed only spent one to five hours of time (77 percent) conducting research and collecting resources. After the research is completed, most students also spent one to five hours of time (72 percent) writing and editing a typical four- to six-page research paper. What concerns students the most when they are working on assignments is the grade they will receive from the professor (44 percent) and less so, getting the assignment finished (20 percent) and being creative (10 percent).

Challenges and Obstacles: Research Assignment Handouts

Students in the survey reported that one of their most significant obstacles is interpreting the requirements of the research papers that professors have assigned. Students agreed with the statement that a lack of information from the assigning professor thwarted them the most, sometimes keeping them from beginning an assignment all together (48 percent). We heard the same sentiment from participants in both discussion groups—trying to figure out what exactly constituted a professor’s expectations, from one class to the next, caused nearly all, or 12 out of 13 of the participants, the most frustration when trying to work on research assignments.

...there is indeed a lack of detail and guidance offered in many research assignment handouts.

Our content analysis of the handouts professors distributed for research assignments lends more insight into understanding students’ inability to decipher what professors expect from them on research assignments. From our systematic content analysis, we found there is indeed a lack of detail and guidance offered in many research assignment handouts.⁶ As a whole, the handouts offered little direction about the research process in three primary stages necessary to completing a typical assignment: (1) plotting the course for research, (2) crafting a quality paper, and (3) preparing a paper that adheres to a known grading criteria.

In the majority of the handouts we analyzed there was no mention where to look for research resources. In particular, most handouts had no information about whether or not to use resources such as the Web (87 percent), a SMC librarian (83 percent), online resources from the school’s library site (73 percent), or library resources, pulled right off the shelf (70 percent). Secondly, guidelines for crafting a quality research paper, if provided, were often terse and formulaic. Only about a third of the handouts (30 percent) included some reference to plagiarism and the ethical use of information. Among those that did, most handouts only referenced the College’s Honor Code and advised students to consult the code on their own for more information. Lastly, grading criteria—many students’ major concern when working on a research assignment — was sorely underrepresented. Only four out of 30 (16 percent) of the handouts included either a grading rubric or a point breakdown for an assignment.

Concluding Thoughts

Results from this study shed light on what students experience when they are asked to conduct research for a Humanities or Social Sciences assignment at a small Liberal Arts college, such as SMC. The following snapshot of the student research experience emerged from our findings, based on students’ own accounts, experiences, and opinions:

1. Most students are flummoxed by what college-level research entails. Students face a variety of obstacles working against them, including their own procrastination with getting started on assignments.

⁶ Note that our content analysis was of research handouts professors have distributed in SMC classes over the last two years. We did not collect or analyze data about the information and explanations professors may verbally provide to students in class or in office hours about research assignments and how to conduct research.

2. Other challenges are related to accessing resource materials, especially what students describe as their own inability to narrow down topics and make them manageable and their tendency to become overwhelmed by the plethora of eligible resources, including many from the Web, which are available to them.
3. The most significant obstacle for students, however, is figuring out what each research assignment entails, especially what a professor's expectations are for an assignment from one class to the next.

This study is a departure from most of the research literature that addresses information literacy. By collecting data from students' own accounts instead of testing students' competencies against certain information literacy standards, we have found that retrieving, selecting, and evaluating information presents a variety of problems for students. Overall a majority of students are often unprepared to take on the research tasks, which college courses, in turn, most always require. To overcome their challenges with carrying out course-related research, many students rely on convenient and "tried and true" resources, such as the course textbook, other class readings, or online resources from the campus library's Web site. Students also heavily rely on "high touch" coaching from professors and librarians in order to satisfy their own top concerns with completing a research assignment—getting a good grade and finishing the paper.

Results and Findings

- Phase One: Student Discussion Groups
- Phase Two: Content Analysis
- Phase Three: Student Survey

Student Discussion Groups

To begin our research study, we conducted two one-and-half-hour discussion sessions with SMC juniors and seniors, majoring in Humanities or Social Sciences. One session was held on Tuesday, February 27 (11 a.m. – 12:30 p.m.) and the other one on Thursday, March 1, 2007 (4 p.m. to 5:30 p.m.).

The goal of the sessions was to collect qualitative data about how students conduct research for papers assigned in Humanities and Social Science courses (see Appendix B for the discussion group protocol). In particular, there was much discussion with participants about their research habits, behaviors, experiences, and the obstacles they encounter when undertaking the research process. Our plan was to use the data from the discussion groups as a source for informing our student survey instrument, which was administered in March. The student survey collected quantitative data from a larger sample about their experiences with conducting course-related research on the Saint Mary's College campus.

Major Findings at a Glance

1. Argument papers about social issues dominate the assignment landscape.
2. Conducting research is a two-step process with diverse approaches.
3. Satisfying the professor, getting a good grade—weigh heavily on students.
4. Procrastination plagues progress and productivity.

Discussion Group Sample

The total sample of the discussion group was 13 participants (see Appendix C for the sample segmentation). We had five participants in the Tuesday group and eight in the Thursday group. Participants were recruited through email and based on faculty recommendations in the Humanities and Social Sciences. Faculty members were advised not to only recommend their “A” students, so that way a representative sample of the SMC student body could be best established.

Each participant was pre-screened with a seven-item questionnaire before the session date to assure a good fit for the sample (i.e., GPA, major, ethnicity, gender). The mean GPA for the group was 3.10, just above a B average. There was representation from majors that included Communication, Politics, Economics, Liberal Arts, Health, and Psychology. Of the total, six were male and eight were female.

Admittedly, the sample was limited in both the range of participants represented and in the nature of the participants, who came forward and volunteered their time. In exchange for their time, participants were entered in a drawing for a \$50 gift card at the campus bookstore. Participants signed an informed consent form before each session began.

Student Discussion Groups: Detailed Findings

1. Argument Papers About Social Issues Dominate the Assignment Landscape.

Our discussion with students discovered that there is, indeed, a “typical research paper” assigned in Humanities and Social Sciences courses at Saint Mary’s College. All of the participants agreed that they were most often asked to critically analyze a pressing social issue, conduct scholarly research about the issue, and write a paper that presented a clearly expressed argument. One participant aptly summed up the nature of the SMC assignment in social sciences courses, “Sure, we always write about social issues, that’s what our majors are about, and that’s really what we deal with.”

How Students Approach and Conceptualize Assignments

Participants clearly understood that writing research papers required critical analyses, and not exploring and articulating their personal feelings. One student called these other kinds of more introspective assignments, the “I feel paper.” In many cases, participants told us they were free to choose and write on any topic in their courses, as long as their papers met professor’s expectations and the course objectives.

According to the participants, most, if not all, paper topics they have written are about current social issues occurring in the “real world.” The more memorable assignments for participants, included exploring such topics as working mothers and feminism, Hurricane Katrina’s impact on New Orleans, college athletes and their self esteem, iPods and their impact on human isolation, teen suicide, divorce, Satanism, and gay rights.

Pressures to be original and creative with assignment were the first concerns the majority of the participants discussed at length in both sessions. One participant found it difficult to be creative on an ongoing basis from class to class and “to say something new.” More than a third of the other participants admitted having difficulty with narrowing down a topic and making it manageable and interesting. Both narrowing a research topic into a realistic scope and dealing with the inevitable information overload new forms of digital media present were two of the major obstacles participants experienced and discussed in great detail in both sessions. To offset these problems, some participants turned to the Wikipedia community encyclopedia Web site for “backgrounding” a topic. Yet, at the same time, there was group consensus about the particular Web site’s lack of reliability, especially since anyone can contribute an entry to the site. While students would use the Wikipedia with admitted trepidation, none of the participants found other community sites, such as blogs (i.e., online diaries), a useful research resource. Most doubted that blogs would be acceptable sources for college-level research work and would not even think about using them.

2. Conducting Research Is a Two-Step Process with Diverse Approaches.

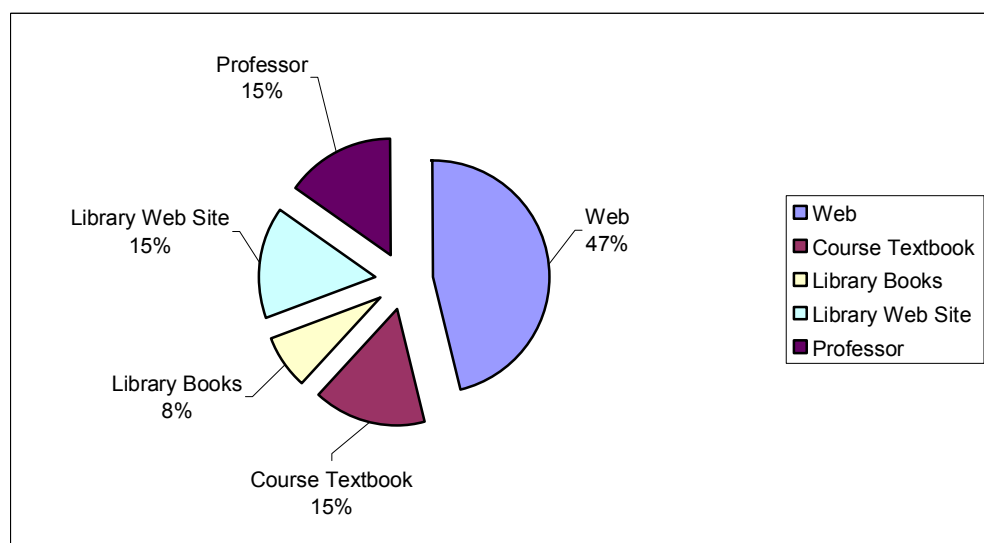
Nearly every participant—12 out of 13 of the participants—had developed and honed a highly personalized research strategy in their three years at SMC, which had no more than two steps to the entire process. Surprisingly, though, there was little agreement, in either session, about what steps students took first or second in each of their strategies: The resources participants consulted and the steps the took greatly varied from one another.

Even though there was no consensus about which order of steps delivered the best results, the ubiquitous Web, predictably, played largely into the first step that over half the participants took. Students told us they used to the Web to start off broad and then try to narrow down a proposed topic using, in many cases, a Google search, and in others, Yahoo! or Wikipedia.

The Campus Library as a Valued Research Resource

For others, the SMC library was the first step they took in the research process. Participants clearly used the library in a variety of ways, too. Most frequently used resources were online directories available through the library's Web site to find resources. At some point during their research process, whether it was a first or a second step, over two thirds said they used the library online Web site often, mentioning InfoTrac (i.e., Expanded Academic Index), PsycInfo, and Link+.

What Is Your First Step in the Research Process?



Source: Data from both discussion groups, n=13

During the discussion, participants said that reference librarians were particularly helpful in helping them narrow down a research topic after they had no luck with the Web. But most of the participants were undecided about the helpfulness and value of bibliographic instruction (i.e., training talks by librarian to students groups, also known by the group as “library talks”). Most of the participants had attended at least one talk in their years on campus. One participant criticized the library talks as a “waste of time, especially when there is a 15-minute introduction about what the library has—it’s boring after you’ve heard it the first time, and I’ve heard it at least five different times in classes.”

Which Library Resources Are Helpful?

	Number of Participants	Percentage
1. Reference librarians for narrowing a topic.	9/13	69%
2. Online vendor databases from library Web site.	9/13	69%
3. Bibliographic instruction (i.e., “library talks”).	3/13	23%

Source: Data from both discussion groups, n=13

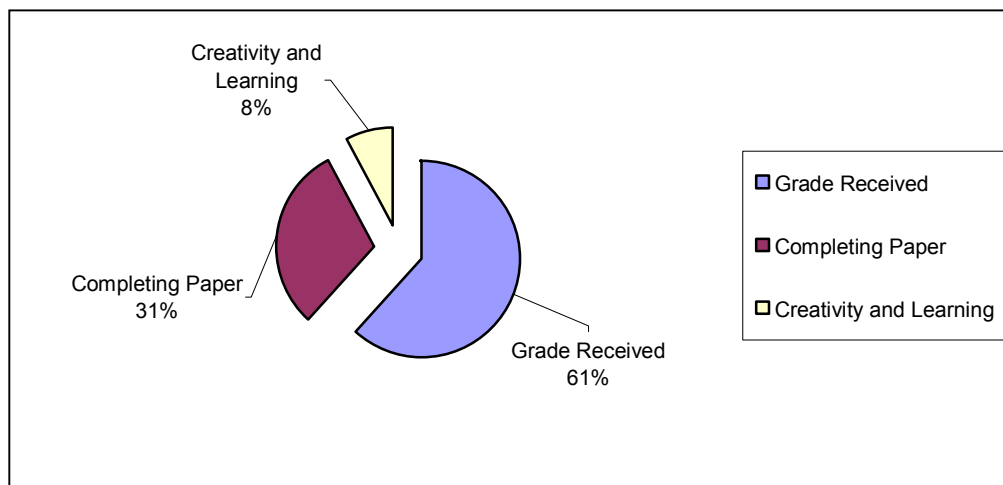
3. Satisfying the Professor, Getting a Good Grade—Weigh Heavily on Students.

All of the participants agreed that trying to satisfy professors' expectations caused them the most frustration during the entire research process. It's not a surprising admission, when coupled with the fact that over a half of the participants also told us that the grade they received was the most important outcome, mattering the most to them in working on research assignments.

The gap between professors' assumptions and expectations for quality research and students' realities was also evident when it came to the topic of plagiarism. Participants in both groups talked about what one participant called "the thin, ambiguous line" between consulting a resource, citing a resource, and stealing from a resource. One participant admitted "having a problem with citing information, it's all new to me, do I cite every line because I read it and it influenced me?" Another participant admitted the only way he knew about the standards of plagiarism was when "you see some kid get kicked out of a class because he didn't cite something, I learn by that kind of example."

Determining what constituted a credible source, especially in the "Age of the Internet," was particularly difficult for participants in the first group. One participant confided that "doing research makes you feel vulnerable, especially when you are left to decide if a resource is credible, or not." Another participant, also feeling frustration with determining credibility of Web resource materials, longed for stamps of approval, where none existed, and desired "some sort of symbol that all sites could use to show that their content is professor-approved and that the source is credible."

What Matters to You Most During the Research Assignment Process?



Source: Data from both discussion groups, n=13

How Professors Help Students Succeed

Participants wanting to succeed on research assignments found time spent in professors' office hours helped them succeed on assignments. Over two thirds of the participants said they conferred with professors outside of class on a regular basis. All of the participants met with professors face-to face, and none mentioned using email to communicate about assignments. Participants also mentioned that assignments with separate due dates for each portion of the paper (instead of one due date for the entire assignment) also helped them do well on course assignments. Some participants mentioned that professors who edited drafts and wrote comments in the margins for improving a paper and then allowed student rewrites with new due dates were also very helpful to them.

4. Procrastination Plagues Progress and Productivity.

It became evident that students, themselves, frequently create one of their most pressing obstacles to the entire research process and that is their own lack of motivation. Getting started—both at research and writing—was the second major obstacle to completing research assignments for participants. Nearly every student—12 out of 13 participants—agreed that they were, indeed, self-described procrastinators.

Participants in the first discussion group, a younger cohort (a mean age of 20.2 years old vs. a mean age of 21.5 years old in the second group) reported experiencing a lot of anxiety and fear with the research process. One participant in the first group admitted that research is “scary, because it is a big task.” Another participant agreed with the sentiments, admitting “hiding from research assignments and feeling totally unmotivated” with reading the necessary research materials to make the process occur in the first place. One participant said he was forced to set his own “false deadline,” in order to “trick” himself into getting started on assignments.

Even if they received an assignment well in advance, participants said it did little to counter their own tendency to wait until the last minute to start assignments. Most participants admitted to starting a typical research assignment (i.e., a four to six page paper on a social issue) only two days before the paper was due. The majority of the participants spent about two to six hours conducting research (i.e., finding resources, reading through and organizing them) and two to four hours writing up their findings into a final paper. There was the consensus that they wanted finding research materials to be over as quickly as possible. One participant admitted that she “wanted it fast, so that I can find what I can and grab and go.” Another participant mentioned that research had to occur “in one sitting because I won’t come back to it again, I know.”

What Obstacles Do You Encounter during the Research Process?

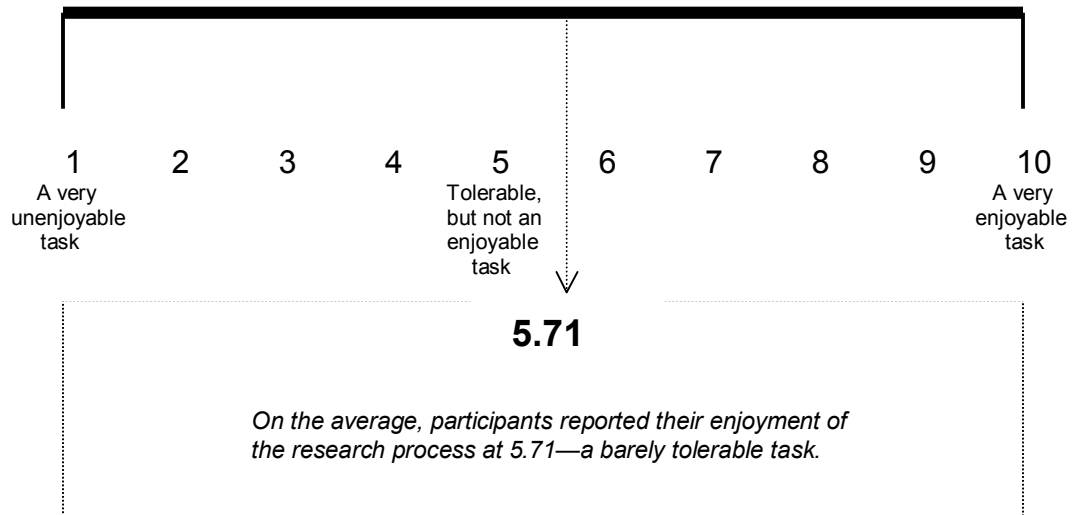
	Number of Participants	Percentage
1. Satisfying the expectations of what professors’ want in papers.	13	100%
2. Overcoming my own tendency to procrastinate and get started.	12	92%
3. Overcoming information overload and filtering through what inevitably becomes too much information to use.	9	69%
4. Avoiding plagiarizing resources I use in my paper.	9	69%
5. Narrowing down a broad topic, so that it is manageable.	5	38%
6. Conforming my individual perspective about a topic to match the professor’s perspective.	4	31%

Source: Data from both discussion groups, n=13

The Research Process – Barely a Tolerable Task

Neither group considered research a particularly enjoyable task in their college education process. In both sessions, both moderators used an impromptu “fun-o-meter” to informally gauge just how enjoyable the research process was for the participants. Moderators devised a scale where a “10” meant that research was a “very enjoyable task” and a “1” meant that research was a “very unenjoyable task” and polled participants in both groups. The overall mean score for both groups was “5.71,” making research a tolerable, but certainly not an enjoyable task.

How Much Do You Enjoy the Research Process?



Source: Data from both discussion groups, n=13

Content Analysis

In order to provide a balanced study of the student research process, we conducted a quantitative content analysis of research assignment handouts used by professors. Specifically, we analyzed handouts that required students to conduct research in a Humanities or Social Sciences course at SMC. We analyzed 30 handouts between January 29, 2007 and February 17, 2007.

The goal of our content analysis was twofold: (1) to find out what types of assignments professors assign and whether a typology could be developed, and (2) to find out what amount of guidance professors offer students about how to carry out the research process, how to evaluate and cite resources, and how to assemble and prepare the final paper (see Appendix D for the coding form for the content analysis).

Major Findings at a Glance

1. Handouts offer little direction to students for plotting a research plan.
2. Guidelines for crafting the quality research paper are formulaic and brief.
3. Grading criteria—most students' major concern—is rarely addressed.

Content Analysis Sample and Coding Method

We collected 30 research handouts voluntarily from professors, who had distributed to students enrolled in their Humanities Social Science classes in the last two years. Professors' participation was encouraged through email and individual office visits. Professors were assured of confidentiality of their identity, their department of origin, and their course topic in exchange for their participation. Our sample was derived from courses in a variety of departments on campus, including Anthropology/Sociology, Art, Communication, Economics, English, History, Kinesiology, Politics, Psychology, Religion, and Women's Studies.

During the analysis phase, two coders systematically identified the "manifest" properties of wording and phrasing that appeared in 30 randomly assigned research assignments. Manifest describes what an author or speaker (or in this case, a professor) has definitely written right into the text. Manifest coding is a different method than "latent" coding, since latent coding involves the qualitative and critical interpretation of inferred meanings in a text. We only used latent coding on two occasions to determine whether handouts included guidelines for evaluating the "currency" and "authority" of resources, both library and information science terms for characterizing resources. Before the official coding process began, the codebook was pilot tested with a sample of three handouts, and accordingly rewritten.

Intercoder Reliability Standard

Each coder read through 20 handouts and assigned a designated numerical code for the occurrence of a certain property (e.g., "use of a reference librarian is recommended as a resource to consult"). Coders evaluated 10 handouts on their own, and another 10 of the same handouts each, in order to measure "intercoder reliability," or the consistency between each coder's individual coding decisions.

A current version of the SPSS statistical package (Version 14) and the statistic known as Krippendorff's alpha were used to test our intercoder reliability and to measure the degree of variation between the two coder's coding decisions. Krippendorff's alpha (Krippendorff's α) is

considered the most rigorous method for testing intercoder reliability and takes into account chance agreement between content analysis coders, as well as adjusting for nominal, ordinal, interval, and ratio variables.

From Krippendorff (1980, p. 134), the formula for finding reliability translates to:

$$\alpha = 1 - \frac{\text{observed disagreement}}{\text{expected disagreement}}$$

The more complete mathematical equation, taken from Neuendorf, (2002, p. 151), is as follows:

Krippendorff's Alpha Formula

$$\alpha = 1 - \frac{nm - 1}{m - 1} \left(\frac{\sum pfu}{\sum pmt} \right)$$

Where:

- *pfu* = product of any frequencies for a given unit that are different (i.e. shows disagreements)
- *pmt* = each product of total marginals
- *n* = number of units coded in common by coders
- *m* = number of coders

Intercoder Reliability Rate is “Highly Acceptable”

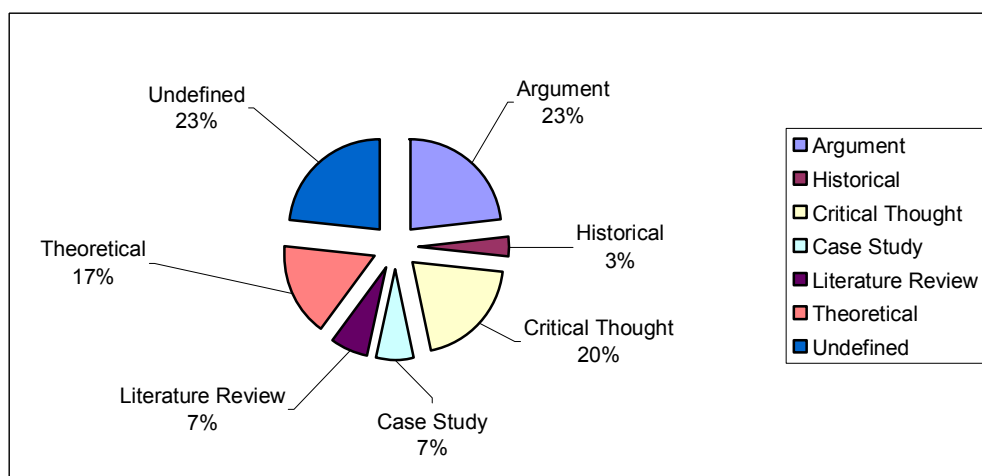
While there is no “acceptable” standard for intercoder reliability, communication research scholars have argued that a coefficient of .90 or higher is “highly acceptable,” and even .80 is acceptable in most situations (Neuendorf, 2002). Overall, the intercoder reliability for all 17 properties we coded was .928176. This means that there was nearly a 93 percent degree of reliability in our coding between the coder’s individual decisions—a highly acceptable rate.

Content Analysis: Detailed Findings

1. Handouts Offer Little Direction to Students for Plotting a Research Plan.

We found there were a small variety of research assignments that required students to conduct research as part of their course-related work on the SMC campus. The most frequent types of assignments were five- to eight-page argument papers about an issue or a subject, critical “thought” papers, and theoretical papers. We also found that students were given free reign to define a paper’s topic over three-fourths of the time and were also nearly always required to work individually on assignments, instead of in a group.

What Types of Research Papers Are Assigned?



Source: Data from handouts, n=30

How Professors Guide Students Through the Research Process

Despite finding a consistency among research assignment types, our analysis revealed that professors offered students little guidance about which resources they should consult when carrying out the research process. Overall, a large majority of the handouts made little mention, if at all, about consulting with a reference librarian, and using online library resources or print materials available on the library shelves, or even, using the Web.

In particular, there were, surprisingly, few recommendations about whether the Web, the ubiquitous and widely consulted information resource, *should*, or *should not* be used as sources for student’s assignments. In fact, nearly three-fourths—26 out of the 30 handouts—made no mention about the use of the Web. Only one in ten of the handouts we analyzed discouraged using the Web for research, all together, while only one handout explicitly prohibited its use.

When handouts did include guidance about which scholarly sources to consult, the direction was minimal—usually just a terse recommendation. The most frequently recommended resource was the library Web site and their online resources (e.g., Expanded Academic Index and PsycInfo). Nearly a third of the handouts—eight out of the 30 handouts—either required or recommended students log-on to the library site while conducting research needed to fulfill their assignments.

Furthermore, the majority of handouts made no mention or suggestion about how to assess the information quality of resources once they were found. Only six out of 30 of the handouts brought

up evaluating the authority (i.e., reliable authorship information that is clearly accessible) of material as a hint for choosing quality resources. And even fewer, yet—five out of 30 handouts—mentioned how to evaluate the currency of materials—another quality control guideline.

What Resources Should Students Consult?

	Requires	Recommends	Discourages	Prohibits	No Mention
SMC reference librarian.	-- 0	17% 5	-- 0	-- 0	83% 25
Online resources from library site.	17% 5	10% 3	-- 0	-- 0	73% 22
In-library resources (off the shelves and on-site).	13% 4	13% 4	3% 1	-- 0	70% 21
Resources found on the Web.	3% 1	3% 1	3% 1	3% 1	87% 26

Source: Data from handouts, n=30

2. Guidelines for Crafting Quality Research Papers Are Formulaic and Brief.

More often than not, professors provided some suggestions, though certainly not in great depth, concerning the mechanical aspects involved in assembling and writing a quality research paper. A majority of the handouts gave formulaic instructions for how to organize and structure a research paper (i.e., introduction, body, and conclusion). For instance, students were given clear directives of what order sections of the paper should be presented and where to place references. Nearly half—13 out of 30 handouts—also included information about how to appropriately cite sources. Professors tended to require a specific format, referring to such standard styles as the American Psychological Association (APA) or Modern Language Association (MLA) for citing what averaged out, overall, to be about a required six sources per paper.

The handouts, however, did not address the topic of plagiarism in any great depth, if at all. In our earlier discussion groups, students expressed major concerns about understanding what plagiarism means. Even more pressing for these students, was how to avoid misusing resources and suffering the consequences, if caught plagiarizing. Yet, only about one third—nine out of the 30 handouts—included some reference to plagiarism and the ethical use of information. Most handouts only referenced the College's Honor Code, suggesting students consult the code on their own to find out more, in general, about plagiarism standards.

How Should a Quality Paper Be Crafted?

	Yes	No
Includes information on plagiarism and ethical use of information (i.e., defines plagiarism, cites SMC Honor Code).	30% 9	70% 21
Includes information on proper citation style.	43% 13	57% 17
Includes information on reviewing authority of materials.	20% 6	80% 24
Includes information on reviewing currency of materials.	17% 5	83% 25
Includes information about using spell-check.	7% 2	93% 28

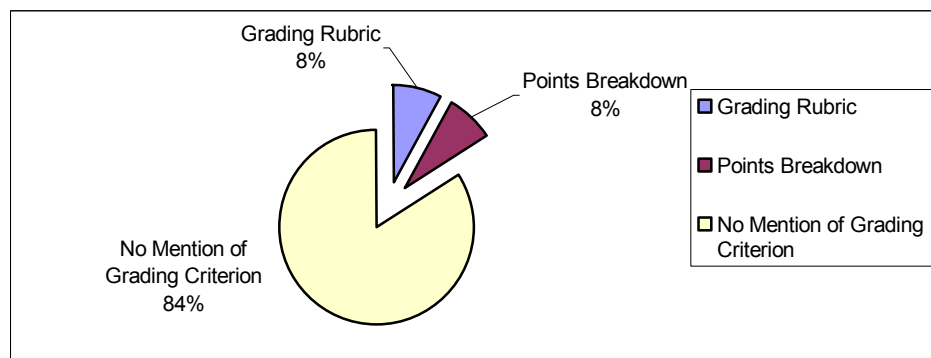
Source: Data from handouts, n=30

3. Grading Criteria—Most Students' Major Concern—Is Rarely Addressed.

In the earlier discussion groups, students told us that getting a good grade on a research assignment was a foremost concern. Yet, what perplexed these students the most was figuring out what a “good grade” meant from one class to the next, and from one professor to the next. The grading criterion for research assignments was clearly a nebulous issue for students.

Indeed, findings from our content analysis lent credence to why this student concern may arise. Even though half of the research handouts made an effort to place the assignments in the context of the course, few handouts—only four out of 30—provided a definite grading criterion for the evaluation of students' work. Half of this handful of handouts included either a formal grading rubric (details of what ingredients comprise an “A” vs. a “B” paper vs. “C” paper, and so on) and the other half provided basic point breakdowns for each section of an assignment.

What Is the Grading Criteria?



Source: Data from handouts, n=30

Student Survey

Our information literacy study concluded by collecting quantitative data about students' research processes. We administered a survey in 20 different classes to SMC juniors and seniors who were majoring in Humanities or Social Sciences. The survey sample was 178 students. The survey was administered between March 6 and March 23, 2007.

The 15-question survey was designed to collect quantitative data about how upper division Humanities and Social Sciences majors conceptualize and carry out course-related research tasks for assignments. The survey questions were informed by qualitative themes we gathered from the two discussion groups held with majors earlier in February 2007.

In particular, the survey asked respondents to answer questions about: (1) the steps they took during the research process, (2) the perceived helpfulness of the campus library, (3) the perceived helpfulness of coaching techniques employed by professors with students on research assignments, (4) the problems experienced during the research process, (5) the time spent on both researching and writing and editing research papers, and (6) the major concerns with working on research projects.

Major Findings at a Glance

1. Argument papers about societal issues are assigned more than any other type of research papers (30 percent).
2. More often than not, the first step students take in the research process is to look at a textbook or other readings from a class (40 percent).
3. Students take different approaches as they continue with research, including using the campus library's online resources (24 percent), using a search engine to find materials (20 percent) using a course reading for sources (19 percent), or talking to a professor about the assignment (13 percent).⁷
4. The campus library is helpful for students conducting research, especially the library's online resources (88 percent) and reference librarians (68 percent).⁸
5. The opportunity to submit a draft for a professor's recommendations for rewriting is perceived by students as a key to their success on a research assignment (82 percent).
6. More than anything else, the lack of information from professors about assignments keeps a majority of students from starting on an assignment (85 percent). Students' own tendency to procrastinate is another significant obstacle (73 percent).
7. On the average, most students spend about the same amount of time (between one and five hours) conducting research and finding materials (77 percent) as they do writing a typical four to six page research paper (72 percent).
8. The grade they receive on research assignments matters the most to students (44 percent).

⁷ Finding #3 was edited on August 27, 2007 by the authors, who discovered an error in the statistics originally reported. Now, the data in this finding is consistent with statistics reported in the survey results for Question #8 on page 25.

⁸ The data reported in this section were taken from responses to student survey questions 10, 11, and 12, which used five-point Likert scales (i.e., a statement that asks the respondent to rank their level of agreement to disagreement with the statement). The percentages we report here combine the percentages and collapse two response categories, those who "strongly agreed" and "somewhat agreed" with statements about what worked for them when they conducted research and what challenges they faced.

Student Survey Sample

We collected surveys from 178 student respondents, who volunteered to participate in the research study (see Appendix E for a sample segmentation of student survey data). Representatives from the research study administered the questionnaire to students during a classroom visit. The professor teaching the class approved our visit in advance. Participants signed an informed consent form and volunteered their participation. In exchange for their time, participants were entered in a drawing for a \$50 gift card at the campus bookstore.

Admittedly, the sample is limited, based on both the range of participants and professors, who volunteered to participate in the study. Our sample, however, was fairly representative of gender of the overall student population on campus. Current statistics from the SMC Fact Book show the SMC population is 65 percent female and 35 percent male (Fall 2006). Our sample was made up of 72 percent females and 28 percent males. Respondents were either juniors (59 percent) or seniors (41 percent). One in four of our respondents were Communication majors. Over a third of the respondents reported having a B average (37 percent), while another one in four reported having a B+ average (24 percent) and another one in five had an A- average (20 percent).

What is Your Major?

Major	Percentage and Count	Major	Percentage and Count
Anthropology/Sociology	6% 10	Liberal and Civic Studies	5% 9
Classical Languages	1% 1	Performing Arts	1 1%
Communication	26% 46	Politics	12% 21
Economics	4% 2	Psychology	9% 16
English and Drama	9% 16	Religious Studies	1 1%
History	6% 11	Other (double majors)	10% 17
Kinesiology	14% 25	Total Sample 13 Departments	100% 178

Source: Data from Student Questionnaires, n = 178

Student Survey Findings ⁹

1. Please start off by telling us a little about you. Are you:

Female		128	72%
Male		50	28%
Total		178	100%

2. How old were you on your last birthday?

19 - 20 years old		53	30%
21 - 22 years old		110	62%
23 - 25 years old		11	6%
Over 25 years old		4	2%
Total		178	100%

3. Are you currently a junior or a senior, according to the Registrar's Office on campus?

Junior		105	59%
Senior		73	41%
Total		178	100%

4. What was your overall GPA, as of last semester, according to the Registrar's Office on campus?

4.0 - 3.8 (A)		11	6%
3.7 - 3.4 (A-)		36	20%
3.3 - 3.1 (B+)		42	24%
3.0 - 2.7 (B)		65	37%
2.6 - 2.4 (B-)		15	8%
2.3 - 2.0 (C+)		5	3%
No answer from respondent		5	3%
Total		178	100%

⁹ In each chart, the highest frequency in the category appears in bold type.

5. What is your major?

Anthropology and Sociology		10	6%
Art and Art History		0	--
Classical Languages		1	1%
Communication		46	26%
Cross-Cultural Studies		0	--
Economics		4	2%
English and Drama		16	9%
History		11	6%
Kinesiology		25	14%
Liberal and Civic Studies		9	5%
Modern Languages		0	--
Performing Arts: Dance, Music, and Theater		1	1%
Philosophy		0	--
Politics		21	12%
Psychology		16	9%
Religious Studies		1	1%
Women's Studies		0	--
If other, including double majors, please specify:		17	10%
Total		178	100%

6. As a Humanities or Social Sciences major, what one type of research paper do you write in your classes most frequently? (Please choose one answer only.)

Argument papers about a societal issue (e.g., 4 - 6 pages)		54	30%
Literature reviews		30	17%
Case study analyses		17	10%
Theory papers (applying a theory covered in class to a topic)		29	16%
Semester-long projects (e.g., thesis)		17	10%
No answer from respondent		20	11%
If other, please specify:		11	6%
Total		178	100%

7. What is the first step you take in your own research process for a 4-6 paper in Humanities or Social Sciences course?

A. Use a textbook or other reading(s) from the class.		72	40%
B. Talk to the professor outside of class, who assigned the research paper.		22	12%
C. Use a search engine to find resources (e.g., Google, Yahoo!).		24	13%
D. Use an online a “community encyclopedia,” where anyone can contribute content and post it on the Web (i.e., Wikipedia).		6	3%
E. Use an online or print scholarly encyclopedia (e.g., Britannica).		0	--
F. Use the online resources available through the SMC Library Web site.		41	23%
G. Consult a reference librarian in the SMC Library.		7	4%
H. Visit the SMC Library and see what I can find on the shelf.		4	2%
I. Buy a book(s) that has information I can use.		1	1%
No answer from respondent		1	1%
Total		178	100%

8. What is the second step you take in your own research process?

A. Use a textbook or other reading(s) from the class.		33	19%
B. Talk to the professor outside of class, who assigned the research paper.		23	13%
C. Use a search engine to find resources (e.g., Google, Yahoo!).		36	20%
D. Use an online a "community encyclopedia," where anyone can contribute content and post it on the Web (e.g., Wikipedia).		7	4%
E. Use an online or print scholarly encyclopedia (e.g., Britannica).		9	5%
F. Use the online resources available through the SMC Library Web site.		43	24%
G. Consult a reference librarian in the SMC Library.		7	4%
H. Visit the SMC Library and see what I can find on the shelf.		13	7%
I. Buy a book(s) that has information I can use.		4	2%
J. If other, please specify:		2	1%
No answer from respondent		1	1%
Total		178	100%

9. What is the third step you take in your own research process?

A. Use a textbook or other reading(s) from the class.	24	13%
B. Talk to the professor outside of class, who assigned the research paper.	26	15%
C. Use a search engine to find resources (e.g., Google, Yahoo!).	25	14%
D. Use an online a “community encyclopedia,” where anyone can contribute content and post it on the Web (e.g., Wikipedia).	12	7%
E. Use an online or print scholarly encyclopedia (e.g., Britannica).	21	12%
F. Use the online resources available through the SMC Library Web site.	23	13%
G. Consult a reference librarian in the SMC Library.	18	10%
H. Visit the SMC Library and see what I can find on the shelf.	25	14%
I. Buy a book(s) that has information I can use.	0	--
J. If other, please specify	3	2%
No answer from respondent	1	1%
Total	178	100%

10. What SMC Library resources do you find you helpful when you are conducting research for a 4 - 6 page research assignment? How much do you agree with each one of the following statements?

	Strongly Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Strongly Agree	No answer from Respondent
SMC reference librarians are helpful to me during the research process.	4 2%	14 8%	38 21%	60 34%	61 34%	1 1%
Online databases available through the SMC library Web site are helpful to me during the research process.	7 4%	9 5%	6 3%	73 41%	83 47%	0 --
Resources that I find on the shelf in the library are helpful to me during the research process.	1 1%	17 10%	39 22%	91 51%	30 17%	0 --
In-class sessions on how to conduct research that are taught by librarians are helpful to me during the research process.	12 7%	22 12%	49 28%	68 38%	27 15%	0 --

11. How do professors help you do better at completing their research assignments? How much do you agree with each one of the following statements?						
	Strongly Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Strongly Agree	No answer from Respondent
Professors help me do better on their research assignments when they have separate deadlines for different parts of the entire assignment (e.g., introduction due first, then body due later, and so on).	14	25	14	58	65	2
	8%	14%	8%	33%	37%	1%
Professors help me do better on their research assignments when they let me turn in drafts that they comment on so that I can revise my work.	6	7	16	54	93	2
	3%	4%	9%	30%	52%	1%
Professors help me do better on their research assignments when they have one-on-one sessions where they "coach" me through the research process and make suggestions about how to proceed.	5	11	32	54	75	1
	3%	6%	18%	30%	42%	1%

12. Now let's turn to the <u>problems</u> you may have experienced when you are conducting research for Humanities and Social Sciences assignments. How much do you agree or disagree with each of the following statements? I have problems conducting research...						
	Strongly Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Strongly Agree	No answer from Respondent
I have problems with the research process when I don't have enough information from the professor to begin the assignment.	3 2%	7 4%	17 10%	65 37%	85 48%	1 1%
I have problems with the research process when I have to start on the assignment and overcome my own tendencies to procrastinate.	10 6%	12 7%	24 13%	67 38%	63 35%	2 1%
I have problems with the research process when I have to narrow down a topic and make it manageable.	10 6%	25 14%	36 20%	72 40%	33 19%	2 1%
I have problems with the research process when I need to evaluate what constitutes a credible resource for a given assignment.	24 13%	44 25%	43 24%	49 28%	17 10%	1 1%

(Q. 12 cont'd.)	Strongly Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Strongly Agree	No answer from Respondent
I have problems with the research process when I become overwhelmed by all the information that is out there.	11 6%	30 17%	29 16%	66 37%	41 23%	1 1%
I have problems with the research process when I have to figure out how to avoid plagiarizing in my paper.	46 26%	45 25%	36 20%	34 19%	15 8%	2 1%
I have problems with the research process when I have to figure out what each professor wants in their particular assignment.	8 4%	19 11%	31 17%	83 47%	36 20%	1 1%
I have problems with the research process when I try to find resources using the SMC library Web site.	22 12%	54 30%	54 30%	39 22%	7 4%	2 1%
I have problems with the research process when I have to conform to the professor's perspective, instead of my expressing my own perspective.	9 5%	21 12%	45 25%	56 31%	44 25%	3 2%

(Q. 12 cont'd.)	Strongly Disagree	Somewhat Disagree	Neither Agree or Disagree	Somewhat Agree	Strongly Agree	No answer from Respondent
I have problems with the research process when I have to write the actual paper.	25 14%	53 30%	48 27%	37 21%	14 8%	1 1%
I have problems with the research process when I have to overcome my own anxiety with the research process.	17 10%	38 21%	44 25%	53 30%	25 14%	1 1%

13. On the average, how much time do you allocate for researching and collecting resources for a 4-6 page research paper for a Humanities or Social Sciences class? (Please choose one answer only.)

Under 1 hour		1	1%
1 - 2 hours		38	21%
3 - 5 hours		99	56%
6 - 9 hours		33	19%
More than 9 hours		7	4%
Total		178	100%

14. On the average, how much time do you allocate for writing and editing a 4-6 page research paper for a Humanities or Social Sciences class? (Please choose one answer only.)

Under 1 hour		2	1%
1 - 2 hours		20	11%
3 - 5 hours		109	61%
6 - 9 hours		39	22%
More than 9 hours		8	4%
Total		178	100%

15. What one-thing matters to you the most when you are working on a 4 - 6 page research paper for a Humanities or Social Sciences class? (Please choose one answer only.)

The grade I get from the professor.		78	44%
Getting the assignment finished.		36	20%
Learning something new.		12	7%
Being creative with an assignment.		18	10%
Finding the best research resources I can.		16	9%
Improving my research skills.		3	2%
No answer from respondent		4	2%
If other, please specify:		11	6%
Total		178	100%

– END OF STUDENT SURVEY DATA –

Appendices

- Appendix A: Research Project Plan and Timeline
- Appendix B: Discussion Group Protocol
- Appendix C: Sample Segmentation for Discussion Groups
- Appendix D: Coding Form for Content Analysis
- Appendix E: Sample Segmentation for Student Survey
- Appendix F: Select Readings

Appendix A: Research Plan and Timeline

Background and Rationale:

The quest to raise students' information literacy is a formidable one, with no apparent end in sight. This proposed research project provides a systematic analysis of concepts associated with, but not entirely indicative of, information literacy. As opposed to delving into measuring and defining the nature of information literacy skills, this project takes a different approach. We propose exploring, defining, and measuring attributes associated with the construct of the *student research process*—how research is conceptualized by lower division undergraduate majors in Humanities and Social Sciences at a Liberal Arts college, how research is undertaken (from a students' point of view, not librarians' or faculties' delivery of instruction), and what challenges, barriers, and obstacles exist for students conducting research for course-related work.

Research Questions:

R1: How do students, majoring in lower division Humanities or Social Sciences courses, conceptualize the course-related task of research and operationalize these concepts into research activities that are assigned by faculty in courses they are teaching? When a professor assigns a project, requiring research, what does this learning task involve, from students' points of view?

R2: What information resources do students majoring in Humanities and Social Sciences turn to and use to carry out course-related research? Where does the search for research materials start, where does it end, and why? How do lower division students in Humanities and Social Sciences ultimately select research sources for course-related work and how do they determine "quality" resources vs. "non-quality" resources?

R3: What challenges, barriers, and obstacles exist for students conducting research in the Humanities and social sciences fields?

Policy and Practical Implications:

Research findings from this proposed study could potentially provide a deeper understanding of how students in the Humanities and Social Sciences at Liberal Arts colleges perceive and conceptualize the tasks associated with course-related research. Ultimately, these findings could have considerable impact on how information literacy training is provided in the classroom by professors and academic librarians and how course curriculum can about conducting research may meet students' needs and constraints with greater efficacy, especially in an age characterized by the ubiquity of the Web and the convenience of a Google search.

Phase One

As a small group, how do juniors and seniors conceptualize course-related research tasks and how they operationalize these concepts into research activities?

Purpose: To collect qualitative data, showing consensus among students, about how they conceptualize and operationalize research tasks. When a professor assigns a project, requiring research, what does this learning task involve, from students' points of view? The opinions and attitudes from the focus groups will be used to inform the survey tool, which will quantitatively measure attitudes and habits with a larger sample in the Phase Three.

Method: **Focus Groups**

Sample: n = 5 - 8 members each focus group session. Sample population is made up of juniors and seniors, majoring in Humanities or Social Sciences at SMC.

Discussion
Topics:

- How do you define research?
- What does the activity of research entail for you?
- What kinds of research projects have you generally undertaken?
- What types of research tasks do you regularly conduct as a student?
- Where do you look for sources to fulfill course-related research assignments? (i.e., first, second, third choices)
- How much time do you allow for fulfilling research tasks?
- How do you determine quality during the selection of resources for your research?
- How do you choose between different sources?
- What do you need to know before you can begin your research?
- What barriers/obstacles do you encounter during the research process?
- What matters to you most during the research process?

Timeline: February 27 – March 1, 2007

Phase Two

What type of research assignments do professors assign to juniors and seniors in Humanities and Social Science courses?

Purpose: To collect quantitative data for developing a “research assignment typology.” What types of research assignments do professors assign in their Humanities and Social Sciences classes? The typology developed from the content analysis will be used to inform the focus group discussion in Phase Two and the survey tool in Phase Three.

Method: **Content Analysis**

Sample: 30 different written research assignment descriptions that professors have used between 2005 – 2007.

Coding: What different kinds of assignments exist? How can they be categorized into a typology?

Themes: How often are the following concepts used in research assignments?

- Explanation of what research entails and what is expected of students from a professor’s point of view.
- Does the assignment entail group or individual assignment work?
- Suggestion of using reference librarians for assistance.
- Suggestion of using library resources specific to SMC.
- Suggestion of using Web resources (what students can find on their own on the Web).
- Suggestion of using journals, newspapers, magazines, and books.
- Grading criteria (range of excellence and corresponding grades).
- Outline of paper structure or how it should be organized.

- Necessity of determining and evaluating quality of sources (credibility and authority of sources).
- Requirement of set number of sources for an assignment.
- Requirement of number of pages for an assignment.
- Plagiarism and ethics issues related to conducting research.

Timeline: January 29 – February 17, 2007

Phase Three

Based on a questionnaire administered to a large sample, how do juniors and seniors, majoring in Humanities or Social Sciences, individually conceptualize research tasks and how do they operationalize these concepts into research activities?

Purpose: To collect quantitative data about the information resources students turn to and use to carry out course-related research. Where does the student search for research materials start, and where does it end, and why? The survey will be used to test assumptions from the focus group discussions and quantify these assumptions, opinions, and behaviors.

Method: **Survey** administered in individual Humanities and Social Sciences classes on SMC campus.

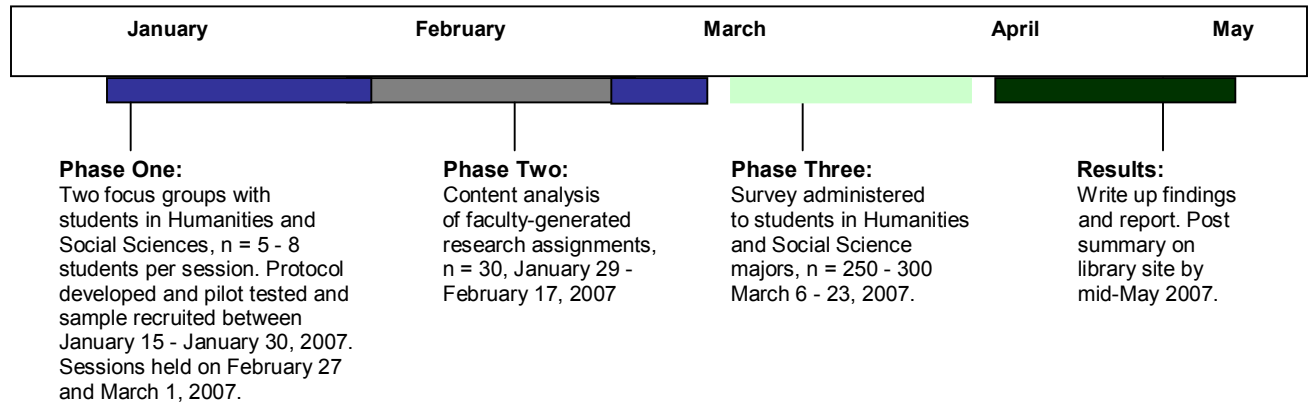
Sample: n = 178 juniors and seniors, majoring in Humanities or Social Sciences. Questionnaire items = 15 questions, including rankings and Likert scale construction, approximately a 15 minute-completion time.

Survey Areas:

- Basic demographics, including gender, age, GPA, and major.
- Type of research project most frequently required as majors.
- Steps taken during the research process.
- Ranking of perceived usefulness of library resources.
- Ranking of perceived usefulness of professors and coaching techniques.
- Ranking of research obstacles/barriers to conducting research.
- Time spent on assignments (research and writing).
- Ordering of what matters most during the research process.

Timeline: March 6 – March 23, 2007

Project Timeline:



- END OF RESEARCH PLAN -

Appendix B: Discussion Group Protocol

Introduction and What Today's Discussion Is about

Welcome to today's discussion group with majors in the Humanities and Social Sciences at SMC. Some of you may know us from campus already, but in case you don't, I'm Alison Head and I teach in the Communication Department. This is Neeley Silberman, who teaches in the Communication Department, too, and Sarah Vital who is an academic librarian on campus—both will be here and will be taking some notes.

First of all, we would like to thank you for the time you made for us today. Second, I would like to talk to you a little about your participation and the informed consent form I am going to ask you to review, and if you decide to participate in the research, I will need you to sign the form. If you choose to participate in today's session, this form assures you that all the identifying information from you during this session will be kept confidential. This means your name or any identifying information about you, individually, will not appear in any findings or reports we produce. In fact, findings from this discussion session will be summarized into themes from the group, instead of comments from any one individual.

[Informed Consent Form for Focus Group Session Distributed and Collected]

[Back to the Focus Group Session]

Today, we want to hear how you and others go about conducting research on papers that professors in your Humanities and Social Sciences courses here on campus have assigned you.

[Summarize these points]

- Holding discussions on with your group and others throughout the Spring.
- Results will be brought together and analyzed for use in understanding how students majoring in Humanities and the Social Sciences on this campus conduct research for courses.

We're glad you've volunteered to participate because:

- We want to tap into your experiences
- Discuss your thoughts and opinions
- Your likes/dislikes

Before we begin -- some things to make our discussion more productive:

- No wrong answers, just differing points of views
- Don't hold back
- Feel free to share your opinion, even if -- and especially if -- it's different from others
- Interested in negative as well as positive experiences
- Please speak up - but one at a time

- Assured confidentiality
- As to timing -- 1 hour, may run over a few minutes

My role:

- Ask questions
- Listen
- Won't participate in the actual discussion -- feel free to speak with one another
- I've got about four major topic areas to talk to you about, based on your interest
- I'll move us from topic to topic
- It's important to hear from everybody
- Tendency in these groups for some people to share a lot while some are quiet. If someone is sharing a lot, I may ask others to talk as well
- If you're quiet, I may ask your opinion

Focus of the Discussion

Let's begin. For the next hour, we're going to be talking about how you conduct research for course-related assignments, as a student, in Humanities and Social Science courses. By *research*, we mean the process of defining a topic, collecting research materials, and using them in writing up an assignment that asks you to conduct research for class. We know there are many different places to look for research materials (the library, the Web, even a personal interview with someone) and we know that professors can assign different kinds of research assignments.

Today, we're especially interested in finding out from you, as a group, how you go about carrying out research for assignments that might require a critical analysis of some topic you are studying in a class, an application of a theory, a biographical sketch, an argument about an issue, or a literature review.

Any questions about those definitions?

Main Topic Areas of Discussion

1

Let's begin by finding out a little about each other...

Please tell us about where you are in your studies at SMC, that is, whether you are you a junior or a senior. Also, tell us a little about some of the research assignments you've worked on in Humanities and Social Sciences courses you've taken, so far.

Probes:

Is this assignment "typical" of the kind of research professors ask you to conduct here?

What did the research entail for you on this particular assignment? How did you go about it?

Overall, what kind of research tasks do you regularly conduct as a student?

In general, how do you look for research sources, in general, when you have an assignment?

In general, what's your first stop, second stop, and third stop when you're looking for research materials?

As a group, do you agree that most students go through these steps (identified in the session) when they conduct research?

Say, a research paper (type identified in the session, based on consensus) is due in a week, when do you start the research process? How much time do you typically spend on a research part of the paper? How much time you spend writing your paper?

General Probes Used Throughout the Discussion

- “Anyone see it differently?”
- “Are there other points of view?”
- “Tell us more,” “Would you explain further,” “I don’t understand”
- “Could you clarify?” “Would anyone like to add something to this?”
- “You look like you’re agreeing/disagreeing/finding something odd about this - what do you think?”

2

Okay, now let's say that you've followed these steps (identified in the session) when you conduct research for a typical course assignment. How do you determine the quality of the research resources that you find?

Probes:

What do you consider *high quality*? What do you consider *low quality*?

How do you determine the quality of a resource? What is your assessment based on?

How do you, ultimately, choose between different sources you could use for a paper?

What makes a source a *credible* one?

3

Now, let's talk about one last thing—about frustrations, barriers, and obstacles you tend to face when you conduct the research process for an assignment. What's frustrating for you when you need to conduct course-related work in Humanities and Social Sciences courses?

Probes:

What do you need to know from professors before you can begin a research paper? Are you getting that information? What helps, what hinders?

What obstacles do you encounter during the research process? Is there a group consensus that most, if not all of you, run into these (identified in the session) problems the most often when you are asked to do research for a class assignment?

What matters to you the very most during the entire research process (e.g., accuracy, currency, getting the assignment done)? Is there a group consensus that most, if not all of you, care about this (identified in the session) the most when you are asked to do research for a class assignment?

Conclusion

- Assistant moderator summarizes themes, disagreements, and main points; asks if they are an accurate representation and if anything was missed. Moderator answers final questions about the group discussion.
- Thank the group for participation.
- Incentive drawing for the gift card will occur next week, winner will be notified.

- END OF DISCUSSION GROUP PROTOCOL -

Appendix C: Sample Segmentation for Discussion Groups

Gender

	Juniors	Seniors	Total
Male	62% 4	38% 2	46% 6
Female	57% 4	43% 3	54% 7
Total	62% 8	38% 5	100% 13

Source: Data from discussion group demographic survey, n=13

Age

	Juniors	Seniors	Total
19-years-old	100% 1	-- 0	8% 1
20-years-old	100% 4	-- 0	31% 4
21-years-old	60% 3	40% 2	38% 5
22-years-old	-- 0	100% 2	15% 2
25-years-old	-- 0	100% 1	8% 1
TOTAL	62% 8	38% 5	100% 13

Source: Data from discussion group demographic survey, n=13

Ethnicity

	Juniors	Seniors	Total
Caucasian	37% 3	63% 5	61% 8
African-American	100% 1	-- 0	8% 1
Asian	100% 3	-- 0	23% 3
Latino	100% 1	-- 0	8% 1
TOTAL	62% 8	38% 5	100% 13

Source: Data from discussion group demographic survey, n=13

Grade Point Average (GPA)

	Juniors	Seniors	Total
3.7 – 3.4 (A-)	25% 1	75% 3	31% 4
3.3 – 3.1 (B+)	50% 1	50% 1	15% 2
3.0 – 2.7 (B)	83% 5	17% 1	46% 6
2.6 – 2.4 (B-)	100% 1	-- 0	8% 1
TOTAL	62% 8	38% 5	100% 13

Source: Data from discussion group demographic survey, n=13

Major

	Juniors	Seniors	Total Sum
Communication	50% 3	50% 3	46% 6
Economics	100% 2	-- 0	15% 2
Health	-- 0	100% 1	8% 1
Liberal Studies	100% 1	-- 0	8% 1
Politics	-- 0	100% 1	8% 1
Psychology	-- 0	100% 1	8% 1
Double Major	100% 1	-- 0	8% 1
Total	62% 8	38% 5	100% 13

Source: Data from discussion group demographic survey, n=13

- END OF SAMPLE SEGMENTATION FOR DISCUSSION GROUPS -

Appendix D: Coding Form for Content Analysis

ID# of Handout:

Coder's Initials:

I	
II	
III	
IV	
V	
VI	
VII	
VIII	
IX A	
IX B	
IX C	
IX D	
X A	
X B	
X C	
X D	
X E	

I. ASSIGNMENT TYPE (defines a certain kind/type of research paper):

The type of research assignment is coded as:

- Argument paper about an issue or subject (1)
- Historical paper about a certain period or event (2)
- “Critical thought paper” that interprets a work of art or a written work (e.g., novel, poem, film) (3)
- Case study analysis (4)
- Literature review (5)
- Biographical sketch (6)
- Theoretical paper, which practically applies a theory covered in a class (7)
- Multimedia product that requires research (8)
- Undefined “research paper” is an assignment that falls into any other categories (9)

II. TOPIC DEFINITION (The topic of the paper is...):

The topic of the paper can be either one assigned by the professor or chosen by the student:

- Defined by professor (1): The handout must have a specific question(s) to answer.
- Chosen by student from multiple professor defined topics (2): The handout must have a list of eligible topics. .
- Defined by student (3): The handout will indicate that the student is expected to choose and define the topic under general parameters of the course (e.g. something related to women in the Civil War).

III. DEGREE OF COLLABORATION (assignment requires student to work in groups or individually):

For INDIVIDUAL (1) to be assigned, the handout must indicate the assignment is to be completed by only one student. A handout indicating that one assignment is to be completed by two or more students is coded as GROUP (2).

IV. ARRANGEMENT (provides information on structure of paper):

For a YES (1) to be assigned, the handout must include instructions on how to arrange the final product (e.g. Introduction, specific questions to answer, Summary/Conclusion, References page, copy of articles used). If arrangement instructions are not given, assign a NO (2).

V. REQUIRES- CITATION (requires a set number of citations):

List here the least accepted number of citations (e.g., if handout says 6-8 sources, 6 will be listed); if there are not a specifically stated number of required citations, mark 999.

VI. REQUIRES- PAGES (requires a set number of pages):

List here the least accepted number of pages (e.g., if handout says 6-8 pages, 6 will be listed); if there are not a stated number of minimum pages, mark 999.

VII. CONTEXT (provides explanation of how the research assignment is related to course material):

For a YES (1) to be assigned, the handout is to include discussion on the purpose of the assignment to the overall objectives of the course (e.g., cites a class reading or lecture discussion, or asks student to draw a relationship). If a relation to course objectives is not discussed, assign a NO (2).

VIII. GRADING (includes grading criteria):

For a YES (1) to be assigned, the handout must include a method for tallying evaluation of work (e.g., points/percentages assigned to parts of the paper). If grading criteria is not mentioned, assign a NO (2).

IX. SPECIFIC RESEARCH RESOURCES TO CONSULT:

A - D. Makes suggestion regarding the use of the following research resources... : For the code to be assigned, the following words need to be present in the description of the assignment

- Required (1): must (e.g., must cite scholarly articles).
- Recommended (2): should, might, may, can.
- Discourages (3): (e.g. can be used, but not advocated as appropriate).
- Prohibits (4): not (such as must not, do not, not acceptable).
- No mention (5): topic is not mentioned at all.

- | |
|--|
| <ul style="list-style-type: none">A. Reference librarian for assistanceB. Online library resourcesC. In-library print resources (e.g., on the shelf)D. Internet / Web resources |
|--|

X. QUALITY CONTROL:

A. Includes information on plagiarism: For a YES (1) to be assigned, the handout is to include information about plagiarism specifically (e.g., defines plagiarism, cites SMC honor code), or the need to cite sources used for quotes or paraphrase. If plagiarism is not mentioned, assign a NO (2).

B. Includes proper citation style: For a YES (1) to be assigned, the handout is to include a requirement for citation format (e.g., MLA, APA, Chicago, or any style as long as consistent and formulaic). If citation format is not mentioned, assign a NO (2).

C. Suggests reviewing currency of materials used: For a YES (1) to be assigned, the handout is to include information about reviewing the currency of materials used, that is what date the materials were published. If currency of materials is not mentioned, assign a NO (2).

D. Suggests reviewing authority of materials used: For a YES (1) to be assigned, the handout is to include information about reviewing the authority of materials used, that is the source of authorship and the publication are provided. If authority of materials is not mentioned, assign a NO (2).

E. Makes recommendation to spell-check final product: For a YES (1) to be assigned, the handout must recommend spell-checking final paper. If a recommendation to spell-checking is not made, assign a NO (2).

- END OF CONTENT ANALYSIS FORM -

Appendix E: Sample Segmentation for Student Survey

Gender

	Juniors	Seniors	Total
Male	26% 27	32% 23	28% 50
Female	74% 78	69% 50	72% 128
Total	59% 105	41% 73	100% 178

Source: Data from student survey, n=178

Age

	Juniors	Seniors	Total
19 to 20-years-old	46% 48	7% 5	30% 53
21 to 22-years-old	51% 53	78% 57	62% 110
23 to 25-years-old	3% 3	11% 8	6% 11
Over 25-years-old	1% 1	4% 3	2% 4
TOTAL	59% 105	41% 73	100% 178

Source: Data from student survey, n=178

Grade Point Average (GPA)

	Juniors	Seniors	Total
4.0 – 3.8 (A)	6% 6	7% 5	6% 11
3.7 – 3.4 (A-)	17% 18	25% 18	20% 36
3.3 – 3.1 (B+)	24% 25	23% 17	24% 42
3.0 – 2.7 (B)	35% 37	39% 28	37% 65
2.6 – 2.4 (B-)	12% 13	3% 2	8% 15
2.3 – 2.0 (C+)	4% 4	1% 1	3% 5
No answer from respondent	3% 3	2% 2	3% 5
TOTAL	59% 105	41% 73	100% 178

Source: Data from student survey, n=178

Major

	Juniors	Seniors	Total Sum
Anthropology and Sociology	6% 6	6% 4	6% 10
Classical Languages	1% 1	-- 0	1% 1
Communication	24% 25	29% 21	26% 46
Economics	1% 1	4% 3	4% 2
English and Drama	8% 8	11% 8	9% 16
History	6% 6	7% 5	6% 11
Kinesiology	13% 14	15% 11	14% 25
Liberal and Civic Studies	7% 7	3% 2	5% 9
Performing Arts: Dance, Music, and Theater	-- 0	2% 1	1% 1
Politics	14% 14	8% 6	12% 21
Psychology	8% 8	11% 8	9% 16
Religious Studies	-- 0	1% 1	1% 1
If other, including double majors, please specify:	13% 14	4% 2	10% 17

Source: Data from student survey, n=178

- END OF SAMPLE SEGMENTATION FOR SURVEY DATA -

Select Readings

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- END OF RESEARCH REPORT -