



Do as I Say and as I Do: An Adaptation of McElroy's Mentor Demonstration Model for Multiple Independent Study Projects

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A wide body of literature exists declaring the benefits of undergraduate research experiences for both students and faculty (Cooley, Garcia, & Hughes, 2008; Beckman & Hensel, 2009; Kuh, Chen, & Nelson Laird, 2007; Crisp & Cruz, 2009; Marshall, 2008). Learning by inquiry is encouraged by academic administrations, but at many institutions little faculty support is available for projects supervised outside of the traditional classroom. Thus the opportunity costs are high for faculty, particularly junior members, who are primarily recognized in the tenure and promotion process for their own scholarship (Schulthesis, Farrell, & Paul, 2011; Cooley, Garcia, & Hughes, 2008; O'Meara & Braskamp, 2005). Until greater weight is placed on mentoring undergraduate research and adequate compensation methods become common, time-saving methods should be developed and implemented to encourage faculty involvement in undergraduate research.

Undergraduate research is either student-initiated or faculty-initiated. Independent

studies and Honors in the Major projects are typically student-initiated and require a considerable time commitment from the supervising faculty, especially when the topics go beyond the faculty research agenda. Managing multiple independent projects is potentially impossible.

McElroy (1997) developed the Mentor Demonstration Model (MDM) to incorporate writing into an economic seminar course without having to sacrifice content. The model offers a teaching-by-doing experience for students while also promoting productive faculty scholarship. It can be modified to guide multiple independent study projects to successful completion without detracting from other faculty responsibilities and enhance faculty creativity and scholarship.

This paper outlines how I revised the MDM to manage six undergraduate research projects in the spring of 2011. The method was successful, as all students earned the Honors in the Major distinction. Among the group, several students won awards and gave conference presentations. Student feedback

suggests that the experience refined their research skills, encouraged continuing their education at the graduate level, and generated confidence in their research ability. The greatest reported benefit was becoming part of a learning community. Synergies also included strong faculty research productivity, such as a successful grant application and substantial progress on several research projects. This paper builds upon McElroy's work and serves as an informative piece for faculty guiding multiple undergraduate research projects.

Background

Roanoke College is a small liberal arts college in western Virginia. The Business Administration and Economics Department is the largest on campus in terms of majors, minors, and concentrators. A business or economics major can enroll in an independent study to attempt the distinction of Honors in the Major. Prior to enrollment, a student must submit an application describing their project and have a 3.4 GPA. The application requires a brief project proposal and signatures of the sponsoring faculty and Department Chair. Once approved, students delve into the existing research on their topic. In order to achieve the honors distinction, the student must write a quality research paper, present the paper to a committee of three faculty members, and earn at least an A- on the project. The primary advisor is expected to mentor the student through the research.

In the spring semester of 2011, I was the primary advisor for six Honors in the Major projects. Guiding multiple independent projects, in addition to the course and advising load carried by the typical small liberal arts college faculty member, was impractical. I sought suggestions to efficiently guide the projects, provide a valuable learning experience, and maintain my own productivity. McElroy (McElroy, 1997) suggests participating in the writing process alongside students. His goal was for students to produce a piece of writing of conference or journal quality. Key requirements were 1) producing the paper in stages and 2) having the professor go through the research process

with the students to demonstrate how research is done (McElroy, 1997). The MDM offers a teaching-by-doing experience for students while also promoting productive faculty scholarship. Elements of the research process are presented, including mini-drafts, a week before the student pieces are due. These "demonstrations" allow the professor to address crucial issues such as expectations and writing style. Additionally, students offer feedback on faculty writing.

I adapted McElroy's model to aide in the supervision of multiple independent student researchers. The group of students involved was diverse and varied by age, research experience, gender, and status of their research project. This paper addresses our group objectives, achievement targets, and results which are supported by evidence from five sources: 1) a student feedback survey, 2) student reflections, 3) faculty reflection, 4) student outcomes and 5) professor outcomes. Additionally, alternative methods of mentoring multiple undergraduate research projects are discussed.

Undergraduate Research Models

Undergraduate research mentoring models typically take two forms: 1) the student as an independent researcher needing guidance from a faculty mentor (student-initiated) and 2) the student as an active participant in a faculty mentor's research project (faculty-initiated). Student-initiated projects are typically either part of a required course or an independent study; faculty-initiated projects utilize the student as a paid research assistant or as a research volunteer. Some fields of study lend themselves to the latter, such as the natural sciences. Undergraduate projects in economics, however, are commonly student initiated and often do not take advantage of the spillovers and economies of scale produced by working in groups.

Grant, Dillon and Malott (1980) implemented a behavioral system for undergraduate research in psychology to successfully guide individual undergraduate research projects. There were four basic features of the system: 1) written descriptions

of required tasks and their criteria, 2) deadlines for all tasks, typically weekly, 3) weekly rewards and penalties based on a student performance record, and 4) weekly meetings between supervisors and students. The supervisory system resulted in completion of the research projects, implementation, and the subsequent written reports and presentations. A considerable share of the supervisory work was undertaken by graduate students, an option not available to faculty without graduate programs. Nonetheless, productivity was higher compared to the traditional one-on-one mentoring method used with student initiated work. For those institutions without graduate students, experienced undergraduate research assistants or research volunteers and the faculty mentor could split the supervisory role. This would increase output per hour and provide valuable managerial experience to the undergraduate supervisor.

The remaining literature largely addresses faculty initiated research or joint creation models (Multhaup, et al., 2010). The consultant model typically used to guide independent studies has flaws including divergent research interests between student and faculty, reduced probability of publication and strained faculty time resources. Although the faculty initiated and joint creation models do not fit the needs of managing multiple independent studies, creative techniques and qualities can be adopted from them. Successful undergraduate research experiences have several common traits. They 1) have a quality mentor (Shellito, Shea, Weissmann, Mueller-Solger, & Davis, 2001), 2) are community building, 3) are structured around a known schedule with concrete deadlines (Beer & Myers, 1995), and 4) incorporate time saving techniques for both the student and faculty involved (Coker & Davies, 2006).

Adaptation of the Mentor Demonstration Model

A gap in the pedagogy literature exists for efficiently guiding multiple student-initiated independent studies. The existing techniques of successful student- and faculty- initiated

research projects were blended with McElroy's Mentor Demonstration Model to develop a method to and fill the gap in the literature.

Modifications to McElroy's model

Unlike McElroy, my six undergraduate research projects were not a part of a seminar course, rather each student was registered for an independent study credit and I had agreed to serve as their primary advisor. Similar to McElroy, rather than only meeting with students individually, we agreed to form a work group which met once a week and worked through the research process together. Individual meetings were used to address econometric modeling issues and data analysis. I selected several of my ongoing research projects to work on over the semester so that the students could see projects at varying stages of completion. In this way, I served as a mentor. Unlike McElroy, I worked on my research elements at the same pace as the students. This was possible as the students were not graded on each piece, rather the final product. Additionally, we were each other's mentors in the sense that we all participated in peer review and critiqued drafts of our work. The group operated as a team and successfully generated quality work.

The Group Meetings

Our research group met once a week for an hour. Prior to the start of the semester, we determined a common free period and reserved a classroom to hold our meetings. I provided a syllabus stating my goals for the group, a schedule of topics, deadlines for sections of the project and a list of undergraduate journals and conferences for the students to consider. Additionally, the syllabus provided an explanation of the MDM. The topics were ordered according to the stages of the research process and student needs.

Each meeting had either a dedicated topic or served as a day for peer review, critique, and discussion about the ongoing projects. The meeting topics were as follows:

1. Developing the research question and hypothesis
2. Conducting a literature review
3. IRB applications
4. Purpose and development of a prospectus
5. Writing survey and interview questions
6. Writing the abstract
7. Developing a PowerPoint presentation and delivery of the presentation
8. The journal submission process

A brief summary of these topics and the tools used in the group meetings is shown in Appendix 1. Peer review was a common theme in the sessions. We critiqued research questions, abstracts, literature reviews, data analyses and manuscript drafts. Students and faculty alike benefited from the reviews and made substantial adjustments and revisions because of them. The peer review sessions also fostered a sense of community. A session on data analysis was not included as this was discussed in individual meetings to address the particular needs of each paper. Presentation of data was reviewed in the session addressing the PowerPoint presentation.

Assessment of the Adaptation

My objective was to develop a method which successfully guided multiple student initiated research projects and provided a valuable yet efficient experience for faculty and students. The achievement targets included 1) all student papers achieve the Honors in the Major distinction, 2) all students present their work to an audience beyond their committee, 3) the faculty mentor makes marked progress on at least one research project, 4) the research group builds a sense of community, and 5) students and faculty are more productive as a group than in a traditional consulting model.

Outcomes

All students achieved the Honors distinction in their major. Four presented their papers at an on campus conference (Roanoke College Conference for Undergraduate Research and Creativity), while two also presented their work at off-campus

conferences (NCUR at Ithaca College and Alpha Chi National Convention, San Diego). The young man presenting at the Alpha Chi National Convention was awarded “Best Paper” at the conference. One student won a Roanoke College paper competition, awarding him \$1,000 towards graduate school, and has submitted his paper for consideration by an undergraduate journal. The faculty mentor was awarded the 2011 Mednick Memorial Fellowshipⁱⁱ for an ongoing research project, for which the students assisted in the application preparation. Additionally, the faculty mentor developed a research question, literature review, and preliminary analysis for a project within the group setting.

Students completed an online survey after their final Honors in Major presentationsⁱⁱⁱ. The survey was a modified version of David Lopatto and Grinnell College’s SURE III, including questions that were developed for surveys of other research based courses (Lopatto D. , 2004). Five of the six students responded, although only four completed the survey. This is a small sample size, but the responses are informative. Students indicated that all topics covered were useful, but the most learning was gained from the PowerPoint sample, group discussions and feedback about the projects, presenting work at multiple venues, and individual meetings outside of class.

All students had an opportunity to present their work to peers before their final defense. Some presented several times, including at an on-campus undergraduate research conference. Students indicated that they were nervous prior to and during the first presentation, but much less so in subsequent presentations, including the final Honors defense. In fact one student commented “The first presentation helped me identify flaws in my presentation. It also helped me see the things that I liked in my presentation. It allowed me to familiarize myself with my research project by explaining it to others.” Students also seemed to make adjustments to improve their presentations after receiving feedback at conferences, an indication of a thoughtful and mature researcher. One student commented, “I could deliver my data

in a better way – a more effective way; what I was doing initially was not very engaging or interesting.”

The SURE III survey contains a series of questions pertaining to the benefits of an undergraduate research experience. As benefits were deleted, added, or modified, 15 potential benefits of the undergraduate research experience included in the survey given to the research group were revealed. These results are shown in Table 2. The rating scale for the 15 benefits is 1-5, where 1 indicates that the item did not benefit the student at all and 5 suggests that it is extremely beneficial. The greatest benefits reported by the students were 1) becoming part of a learning community, 2) gaining self-confidence, and 3) learning to work independently. Other strongly rated benefits included a readiness to carry out more sophisticated research; an understanding of how knowledge is constructed, the research process, how researchers work on real problems, and that assertions require supporting evidence; and the ability to integrate theory and practice. These benefits were also amongst the highest rated in Lopatto’s survey of 2003 researchers. The largest difference between the responses of my research group and Lopatto’s (2003) concerned “becoming a part of a learning community.” My students were unanimous in noting that this was an extremely beneficial aspect of the research experience, suggesting that the MDM fosters this type of environment.

The undergraduate research experience inspired several students to consider graduate school. Three of the five respondents indicated that after taking the course, they planned to pursue graduate school: one a PhD program in economics, one a Master’s program in a field other than economics, and one a law degree. Despite the small sample issues, these results are encouraging for undergraduate programs seeking to increase student interest in graduate education.

The students gave high praise to the MDM. When asked “How did your learning benefit specifically from the Mentor Demonstration Model?” one student replied,

“I was able to incorporate some of the ideas that Dr. Kassens and the other students mentioned in my paper. This helped bring new ideas to my paper that I would not have thought about before. Also, this model helped me see how a research paper was supposed to look, but I was also able to do it on my own, which provided a challenge to me.”

The MDM also saved a significant amount of time compared to the traditional one-on-one consulting model. I have mentored undergraduate research previously and always employed the consulting model. Each student required weekly meetings (one hour each) and at least two additional hours per week for tasks including research on the topic and editing (at least 30 hours). In total, each individual project required at least 45 hours of faculty time over the course of the semester. The MDM saved time in several places, largely from taking advantage of economies of scale. Our group meetings replaced 80% of the individual meetings (a reduction of 12 hours per student). Additionally, since students were helping in the peer review process and editing, the group meetings also generated a savings of at least seven hours per student. Six students participated in the group, resulting in a total savings of at least 114 hour of faculty time.

Student Reflection

Three students from the research group were asked to reflect on their experience more than six months after the conclusion of the experience. Sara Caudle is a senior economics and business major, who received Honors in the Major in business in the spring of 2011 and economics in the spring of 2012. Sara came into our group the spring of 2011 having never completed a large research project and was a year younger than the rest of the research group.

Sara commented:

Dr. Kassens was thoroughly prepared throughout the whole process, which I believe helped me trust her. She gave us a syllabus the first day of class that outlined each of the topics we would discuss throughout the semester. Each topic we discussed

corresponded to parts in the research paper. For example, we started the class with introductions and developing a hypothesis, which is the first step in building a research paper. By Dr. Kassens breaking down the complex paper into sections, it helped me tackle each section of the paper independently, making the paper less intimidating. This gave me confidence that I would be able to write this challenging paper. To this day, I still have the syllabus, and I heavily rely on it when I am writing research papers.

I believe working with other students also helped me write this paper. A few of my peers were adding on to their papers from their econometrics course with Dr. Kassens. Since they were already ahead of me in the research process, they were able to help me. During times when I was struggling, I used sections of their papers to help guide me in the course of my writing. They also brought forth new ideas that I had not thought of to enhance my paper.

Another helpful component of our research group was the peer review process. We would write sections of our paper and then bring them into class to review with each other. This prevented me from procrastinating, and I devoted more time to the writing knowing both my peers and Dr. Kassens would be reading my work. My peers are of high caliber, and it motivated me to work harder to earn their respect. Dr. Kassens was able to get more out of me as a student by putting all of us in a group together.

Sara was selected with five other Roanoke College students to compete as a team in the Federal Reserve Challenge in the fall of 2011. Sara and her teammates adopted some of the methods used in the prior spring to complete their report for the fall competition:

The College Federal Reserve Challenge is a yearly team competition for undergraduate college students. It is intended to encourage students to learn about the Federal Reserve System, monetary policy, and the macro economy. Each team is responsible for creating a 20 minute presentation, which is delivered in front of a panel of judges from the

Federal Reserve Bank. A 15 minute question and answer session follows the presentation. Our team decided to break up the economy into different sectors: housing and gross domestic product, unemployment, consumer confidence, and international economics. We met as a group each week and discussed topics that pertained to our presentation. Although we were presenting as a group, we were all responsible for a certain section of the presentation, which is why we used the McElroy's Mentor Demonstration Model. First we came to a team agreement on the solution to fix the economy, and then we would write our own individual parts, which were based around the team solution. We would bring our parts to our group meetings each week to review and discuss with one another. After doing this for several weeks, we were able to construct a team paper and presentation to showcase at the competition.

While Sara used some of the methods from our research group in another Roanoke College setting, Justin Tuma is using what he learned in graduate school. Justin is in his first year of a Master's program in management at Durham University. While at Roanoke College, Justin was a business major with a minor in economics. He was also a Division III Men's Lacrosse All-American and Academic All-American. **Justin reflected:**

The MDM was helpful to me as a student as it allowed me to observe how actual research is performed by an experienced researcher. The whole time we were working on our research projects Dr. Kassens was working on one as well, often times at the exact same stage in the process. This allowed me to compare my work with both Dr. Kassens's and my peers within the group. It was nice to see how a time-tested and published researcher goes about preparing a paper. In a sports-related example, it is easier to learn from a coach who actually demonstrates and shows you how to properly shoot a lacrosse ball, as opposed to just telling you.

The MDM also helped me to capitalize on the helpfulness and creativeness of others, as well as receive feedback from my colleagues

and Dr. Kassens. When we would meet, we often bounced ideas off one another on each other's papers. We would read one another's work, and give each other ideas and suggestions for improvement or new ways of thinking. Often, another set of eyes spurred creative solutions and ideas for my own paper. We would even give recommendations to Dr. Kassens on her work. We were in a learning environment where suggestions could be made for the betterment of everyone's paper.

The use of the MDM model in my experience also gave me a lot of confidence. I was not only working alongside an experienced and published researcher and faculty member, but I was working alongside very bright and gifted students, many of whom are now pursuing graduate degrees. By the end of the process, I had gained confidence in my writing, research, and presentation abilities.

I now use what I learned from that research experience in graduate school. The ideas and suggestions made by my colleagues and mentor are still engraved in me as a student at Durham University. I have stood by an experienced researcher and learned how she operates and maneuvers through writing a researcher paper. I have learned new writing styles and presentation methods from my colleagues. I have gained enough confidence to apply all these tools in any academic project in graduate school.

Tyler Rinko graduated in 2011 with a major in economics and was the first Roanoke College student in some time to present a paper at the National Conference on Undergraduate Research. He returned to Roanoke College for the 2011-12 academic year to earn a teaching license in elementary education. **Tyler reflected:**

The education classes that I have taken have taught me how to effectively teach information to my students. The professors stress having a cooperative learning environment. A cooperative learning environment is where students work together in groups performing together and learning from one another. The teacher is flexible and has many instructional strategies. This type of learning has shown to increase student

achievement, motivation, and accountability. Dr. Kassens's style of teaching for our honors project was just that.

I began my research paper the semester before in my econometrics class. My research focused on the European Debt Crisis and how it has influenced U.S. exchange rates and interest rates. I decided to continue my research by expanding the number of observations and adding two additional variables. At the start of my honors project, I had no expectations. It was the first time that I would be working on a paper while meeting with my professor and a handful of fellow students weekly. Each of us was on different stages of our papers, including Dr. Kassens. Meeting once a week allowed us to share what we had been doing and give suggestions to others. For those who had already started our papers, we were also able to give suggestions and show examples of our work to those students just starting off.

For me, one of the most influential parts of the MDM model was seeing how Dr. Kassens formulated her own research. Knowing that Dr. Kassens was doing research and writing her own paper alongside of us gave me some comfort. I was able to see what she was doing and apply it to my own work. Before starting my paper, I had no idea what an abstract was or how to create a table showing all of my data. Dr. Kassens was able to show us examples of both that were related to her current findings. It is easy for a professor to tell their students to just begin a research paper. It's a different story for a professor to do her own research and have her students use that to guide themselves.

This style of learning, I believe, demonstrates what a cooperative environment is all about. Meeting once a week encouraged us to get our work done in an efficient manner. Doing our own research also gave us a sense of accountability. We had to make sure we had our work done every week so we were prepared for the meetings. Knowing that we had to achieve an A- or better to receive the Honors award meant that we needed to be prepared with accurate information. Dr. Kassens's also motivated us throughout the semester. She was

enthusiastic about submitting our papers to competitions, conferences, and publications. She gave us handouts with descriptions and timelines of where we could submit our papers. Her attitude about submitting inspired me to do so. I was fortunate enough to win a competition at Roanoke that awarded me a cash prize, I was accepted to NCUR at Ithaca College, and I have recently submitted my paper to be published.

This experience gave me a great appreciation for research. Not only do I know how to write a research paper, but I am excited to do more research in the future. With my elementary education background, I would like to attend graduate school for economics and focus my studies on improving our education system. If I decide to teach at the elementary level, I will use Dr. Kassens's style of teaching in my own classroom. Of course things may need to be changed given the age and maturity level of my students.

Professor Reflection

Supervising undergraduate research experiences via the MDM was rewarding. The thoughtful discourse of our group discussion stimulated rigorous work between meetings. The students came to our meetings prepared, enthusiastically offered recommendations to their peers, and incorporated suggestions into their work. The learning community, based upon the MDM, created and nurtured a level of undergraduate research that is difficult to foster under the traditional method of advising student projects individually.

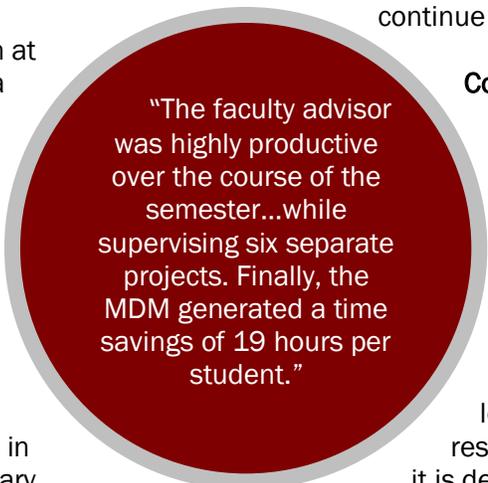
I worked on several research projects throughout the semester to demonstrate developing the research question, working with the writing process, and presenting research. One project I brought into the semester as an idea, and by the end of the semester I had a strong research question, literature review, and initial data analysis. Additionally, I completed a fellowship

application and developed a presentation for a conference. The group mentored all of these projects and offered valuable suggestions. The model pushed me to give careful guidance to each student project and continue my own research agenda.

Conclusion

McElroy's Mentor Demonstration Model (MDM) provides an efficient and effective way to supervise multiple independent undergraduate research projects. It cultivates a creative environment in which students become part of a learning community. Instead of research largely being a solo effort, it is developed and nurtured amongst a group of peers. Students not only observe an experienced researcher, but they learn to work both independently and as a group. The MDM was modified to address mentoring multiple independent student-initiated research projects, incorporating aspects of models successfully used in faculty-initiated research projects. The experience was highly rated by the group of students, who reported greater self-confidence, ability to take on more sophisticated projects, understanding how research is conducted, and the desire to pursue studies at the graduate level. The faculty advisor was highly productive over the course of the semester, rather than experiencing flagging research productivity and other responsibilities while supervising six separate projects. Finally, the MDM generated a time savings of 19 hours per student.

The adaptation of the MDM is amenable to areas of study beyond economics that do not lend themselves to the faculty-initiated research models found in the natural sciences. Social sciences, such as psychology and sociology, are logical fits for the MDM as they implement research methods similar to economics. The MDM is a good fit for the humanities and fine arts as well. For example, a faculty member in philosophy could be an active member of a research community, each developing independent research papers.



"The faculty advisor was highly productive over the course of the semester...while supervising six separate projects. Finally, the MDM generated a time savings of 19 hours per student."

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Appendix A: MDM adaptation topic list

<p><i>Topic 1: Developing the research question and hypothesis</i> Define research question and hypothesis; emphasize the need to narrow the focus of the question; individually write out each and then share with the group; comment and critique each other</p> <p>Materials – Sample student and faculty research questions/hypotheses; worksheets</p>
<p><i>Topic 2: Conducting a literature review</i> Discuss the purpose of the literature review and places to look for the literature; what papers to include in the review and why (students bring their working literature to class)</p> <p>Materials – Sample student and faculty literature review; live online journal search examples</p>
<p><i>Topic 3: IRB Approval</i> Explain the purpose of an Internal Review Board and when an approval is needed; split into two groups to help the two group members needing IRB approval develop their applications</p> <p>Materials – Sample student and faculty IRB applications; blank IRB applications; IRB webpage</p>
<p><i>Topic 4: Purpose and development of a prospectus</i> Explain the purpose of a prospectus and its uses</p> <p>Materials – Sample student and faculty prospectuses; rubrics used to evaluate prospectuses in economics courses</p>
<p><i>Topic 5: Writing survey and interview questions</i> Work with students developing questions in individual meetings but bring survey and interview questions to group to review; have group take online surveys developed by students to ensure logics are in place and proof</p> <p>Materials – Online survey technology; sample student and faculty survey questions; link to current student surveys</p>
<p><i>Topic 6: Purpose and development of an abstract</i> Explain the purpose and uses of the abstract; discuss style, content and format</p> <p>Materials – Sample student abstracts and current faculty abstract; drafts of groups' abstracts for peer review brought to following class and/or posted on SharePoint site for review by peers</p>
<p><i>Topic 7: Oral presentation skills and development of visual aids</i> Discuss content that should be included on slides; typical format and order of slides; emphasize importance of concise graphics/visual aids (tables, charts, etc.) when presenting results</p> <p>Materials – Sample student presentation slides and current faculty presentation slides</p>
<p><i>Topic 8: The journal submission process</i> Discuss the search for the appropriate journal (a “good fit”); emphasize the importance of reading and following the formatting directions for submissions</p> <p>Materials – Online undergraduate journal and submission process description; live submission site for walk through of the process</p>

Table 2. SURE III research experience rating comparison		
Benefits from research experience	Kassens (2011)	Lopatto (2004)
1. Clarification of career path	3.3	3.4
2. Skill in the interpretation of results	4.3	3.8
3. Tolerance for obstacles faced in the research process	4.3	4.0
4. Readiness for more demanding research	4.5	4.0
5. Understanding how knowledge is constructed	4.5	3.8
6. Understanding of the research process	4.5	4.1
7. Ability to integrate theory and practice	4.5	3.8
8. Understanding of how researchers work on real problems	4.5	4.0
9. Understanding that assertions require supporting evidence	4.5	3.8
10. Ability to analyze data and other information	4.3	3.8
11. Skill in writing	4.3	3.3
12. Self confidence	4.8	3.5
13. Learning to work independently	4.7	3.9
14. Becoming part of a learning community	5.0	3.8
15. Time management	4.3	---
N	4	1,135

ⁱ The syllabus is posted on <http://kassensmaroonsinaction.blogspot.com>.

ⁱⁱ The Mednick Memorial Fellowship is a monetary grant awarded by the Virginia Foundation for Independent Colleges to support faculty research and advanced studies.

ⁱⁱⁱ The survey was approved by the Roanoke College IRB. (IRB Study #11BU086)