**INTRODUCTION**

The Center for Partnerships to Improve Education (CPIE) offers EHHP students the opportunity to develop research skills under the mentorship of an EHHP faculty member during a summer session—Maymester (approximately 2.5 weeks), Summer 1 (approximately 4 weeks), or Extended Summer (approximately 6 weeks). The Summer Research Employment Program began in Summer 2017 and continues to enhance the experience of students and faculty. Only students recruited by a faculty member are eligible for the program, and all hired student researchers earn $11 per hour for up to 20 hours per week. CPIE serves as the hiring department responsible for approving timesheets; however, each student works under the daily supervision of the faculty research mentor.

During summer 2020, 16 individuals—nine student researchers and seven faculty research mentors—participated in Summer Research Employment. Three faculty represented the Department of Teacher Education and the other four were housed in the Department of Health and Human Performance. Two faculty members worked with two students each, and the remaining five faculty each worked with one student. Due to restrictions induced by the COVID-19 pandemic, all Summer Research Employment activities were conducted virtually.

To assess Summer Research Employment, everyone completing the program was asked to respond to a reflection survey. All nine students responded, for a student response rate of 100%. Four of the seven faculty members responded, yielding a 57% response rate. One of the faculty members who mentored two student researchers submitted separate surveys for each student, therefore five faculty surveys were recorded. With 13 of 16 individuals responding to the surveys, the overall response rate was 81%.

Faculty and students received comparable, not identical, surveys that addressed the same themes—the researchers, the research, impact, overall perceptions, and final thoughts. The faculty survey consisted of 16 items, whereas the student survey was made up of 15 items. The items were a combination of multiple choice and open response.

The survey responses are summarized below by theme. It is important to note that faculty and students did not receive their surveys at the same time. Students were asked to complete the survey prior to the final summer paycheck. Faculty received the survey link on September 2, 2020 and were asked to respond by October 1, 2020.

**THE RESEARCHERS**

All nine students completed the survey. 78% (n=7) were undergraduate students and 22% (n=2) were graduate students. Of the undergraduates, five (or 71%) were seniors and two were juniors. No freshmen or sophomores participated.
The students represented a range of majors, including public health (n=3, 33%), teacher education (n=3, 33%), exercise science (n=2, 22%), and environmental and sustainability studies (n=1, 11%). The specific teacher education majors were elementary education, special education, and middle grades education.

Four of seven participating faculty members responded to the survey. 75% of respondents (n=3) were housed in the Department of Health and Human Performance and 25% (n=1) in the Department of Teacher Education. Nearly all (75%, n=3) were on the tenure-track but not tenured at the time of survey completion and housed in the Department of Health and Human Performance. The only tenured faculty respondent was in Teacher Education.

One faculty member who mentored two students submitted separate surveys for each student. To ensure that all data are represented, the remaining portions of this report will consider each survey individually and as a unique respondent.

**THE RESEARCH**

Five items on both surveys were used to ascertain if the faculty and students on the same research team possessed a shared understanding of the research they conducted together. Respondents were asked to provide a brief description of the research project. The responses ranged from a phrase, to a sentence, to a paragraph. Among the teams in which both faculty and student responded, the researchers demonstrated a common understanding, albeit with varying levels of elaboration.

Each participant was asked to describe the contributions of the students to the research project. For teams in which both faculty and student responded, the responses confirmed a shared perception as evidenced by explanations that mostly aligned. As shown below, the student researchers developed a range of skills while offering a variety of contributions to the projects. Specifically, the student researchers:

- Collected data
- Cleaned data
- Reduced and analyzed data
- Built survey instruments
- Administered surveys
- Created databases
- Organized databases
- Assisted with IRB application
- Recruited participants
- Reviewed literature
- Analyzed videos
- Helped plan research
- Contributed to writing
- Created an infographic
- Presented to partner agencies

Participants were asked if their research team included additional students and/or faculty. 78% of the students (n=9) indicated that no other student was on the team. One student (11%) explained that they “worked after another student had finished their tasks and session.” Another student (11%) selected *I worked on related projects, but not directly with the other student(s) on the team.* 60% of faculty (n=3) reported that no other faculty/student pair was on the research team. Two faculty (40%) selected *Other* and offered explanations naming specific College of Charleston colleagues with whom they collaborated.

Summer Research Employment teams worked with campus colleagues (CofC Athletics, early childhood education faculty) and external organizations. Local external partners included non-profit organizations (Friends of the Lowcountry Lifeline, Charleston Parks Conservancy), government (City of Charleston Parks and Recreation), and a public school (Memminger Elementary). Other partners were NOAA’s Hollings Marine Laboratory, National Marine Mammal Foundation, and the Chicago Zoological Society. When asked if they collaborated with an external organization or entity, 80% of
faculty (n=4) and 44% of students (n=4) responded Yes. 44% of students (n=4) and 20% of faculty (n=1) responded No, and one student (11%) selected I’m not sure.

Both faculty and students were asked to identify the statement that best describes their relationship to the research project. The choices and response rates are below and show that faculty and students largely agree that their research projects were collaborative in nature.

- **Student assisting with the faculty member’s research**: 1 student (11%) and 1 faculty (20%)
- **Faculty assisting with the students’ research**: 0 students (0%) and 1 faculty (20%)
- **Student and faculty collaborating on shared research**: 6 students (67%) and 3 faculty (60%)
- **Other**: 2 students (22%) and 0 faculty (0%)

The two students selecting Other explained, "My faculty mentor and I have collaborated on [their] research project” and “While this initial thought and research study was [name of faculty member]’s doing, I will be cited as an author on the published paper."

**IMPACT**

Faculty and students were asked open-ended questions intended to understand the impact of Summer Research Employment on their work and learning, respectively. The faculty responses indicated that participation in this program improved their productivity, strengthened their teaching, and served as a source of professional pride as they watched students develop during the research process. Faculty feedback included:

**Faculty comments – enhanced research and productivity**

- **my research focuses on [specific topic], so this project helped to advance my own research agenda, this time in a different population than I normally work with**
- **Working with a student on research has allowed me to allocate time towards other tasks (e.g. grant writing, course development) and focus on additional research questions to enhance productivity**
- **The work that [student] did would not have not taken the lead**

**Faculty comments – strengthened teaching**

- **Helped me to better understand concepts from student’s perspective**
- **This experience helped me develop and refine my teaching skills. I was able to teach a student research skills, but not in a typical classroom setting. Instead, I had the opportunity to teach using real-world and professional experiences.**

**Faculty comments – professional pride**

- **Working with students on research is a highlight of my job here at the College of Charleston. Over the past year, I’ve seen [student] grow in research knowledge and skills, and [they have] been able to take a leadership role in this project. [Student] was able to collect and manage data for a project that will be impactful...and answer an important research question.**
- **Under my guidance, [student] was able to complete statistical analyses on [their] own and draft a manuscript for publication**
According to student researchers, the program helped them deepen knowledge and/or strengthen skills and enhanced their appreciation for new topics and the research process. Student responses included:

**Student comments – deepened knowledge/strengthened skills**

- Connections with professors in the department of my degree as well as applying material learned in prior classes towards the research
- My learning at the College of Charleston has been enhanced because this project has given me a more in-depth perspective on [specific topic]
- It has enhanced my professional developmental skills, communicative skills and enhanced my knowledge on [specific topic]
- This research is through the school and has given me an opportunity to learn more about a specific part of my field.
- I did it last summer as well, and it has been the most challenging and useful academically part of my CoC time. I have become a much better researcher and writer because of these opportunities.
- Getting to do research in areas that I am passionate about has made me a more active learner at the College of Charleston. It has also taught me how to gather materials for a variety of different subjects.
- I believe that my research experience has enhanced my learning because it allowed me to study and pursue a topic that I am passionate about, as well as giving me some independence and flexibility in completing work. Passion and independence are important in enhancing learning opportunities.
- New information on [specific topic]
- This grant has enhanced my learning at the college as I was able to continue learning into the summer without having to worry about a grade, or working another job. Having the opportunity to continue our research was priceless!

**Student comments – appreciation for new topics/research process**

- Through this research I have gotten to see what goes behind the scenes of a research project and all the work that is done. So next time I see a flyer for a research project in search of participants I will definitely try to help out and participate in their study.
- This research has allowed me to pursue an area that I never thought I would be interested in but turns out I was wrong

In addition to the scholarly impact, the survey sought to learn about faculty interactions resulting from Summer Research Employment. Faculty were asked how the research experience impacted their interactions with or perceptions of students as researchers. Students were asked how the experience impacted their interactions with faculty. Both sets of respondents explained positive impacts of the program. No negative impacts were reported. Specific comments are included below.

**Faculty comments**

- I had only known [student] a short time from interactions in class. [Their] work ethic and efficiency impressed me, and it was truly an enjoyable experience collaborating with [them]. Since then, I wrote a recommendation for [a graduate program] and [student] was accepted. The relationships that are built through these research experiences are invaluable.

- We have many talented students at the College of Charleston that can be crucial for research projects. One way that [student] has stood out is by creating [their] own research question within this overall project.
**Student researchers are vital to our scholarly productivity!**

Confirmed that students are capable and curious and can work independently on research when given clear directions.

It has been an extremely positive experience being able to work with [student] through the CPIE program and see the potential of students to really engage in research. This experience certainly reinforces my enthusiasm to continue working with students on my own and their research interests. This experience has also made me really grateful that CofC and our EHHP School has the resources and opportunities for students to gain hands on experience with research and work with faculty outside the normal classroom experience.

### Student comments

**Very positive interactions**

I went into this relationship already having a good relationship with [professor], and this project allowed us to continue working together over the summer.

I have been able to continue my relationship with [professor] as a result of the grant! [They are] such a great mentor, and I have been able to learn more about working with faculty, and communication.

This research experience has impacted my interactions with faculty greatly. I have more of a connection and relationship with faculty which allows me to experience professional opportunities.

The research has helped me reach out to faculty more since I check in with my advisor throughout this process. I enjoy meeting with my mentor and look forward to being in one of their classes again.

Working with [faculty member] has given me more confidence in my ability as a student. Additionally, I just generally feel more involved with CofC.

This experience has only strengthened my relationship with [faculty member]. At the end of this experience, I would love to view and ask questions about other students’ works.

This experience made me realize how supportive faculty is in undergraduate research and helping students learn.

**Increased interactions, building rapport**

To determine the broader impact of Summer Research Employment, participating faculty were asked to name the types of resulting scholarly activities. Their combined responses indicate a range of completed and planned ways to disseminate or extend their research activity.

- 2 conference submissions
- 1 community research report
- 1 external grant submission
- 1 IRB submission
- 1 literature review
- 4 manuscripts (in progress)
- 1 conference submission (in progress)
- 1 advocacy plan (upcoming)

Students were asked to describe how the research experience has better prepared them for upcoming coursework, graduate school, or career. Their responses point to specific foundational skills and knowledge, as well as self-confidence. Students said:

**Very prepared**

Part of this project has included me preparing an original manuscript for publication. I intend to pursue a PhD in the future, and preparing and organizing research is vital to being a successful graduate student.

I believe this grant has allowed me to grow into a well rounded student, an added valuable experience to my undergraduate years. Without the grant I would not have been able to devote as
much time as I did to the project. I want to work in nonprofit, so the process of applying for a grant alone was valuable!

This research has allowed me to better communicate with colleagues and the community as well as enhanced my professional developmental skills.

In graduate school I will have to do a research project, so getting to do one now is helping me so I am not as scared or overwhelmed when the time comes. I have seen how to fill out an IRB and make consent forms and more. All that I have learned I will have to do again. So now I feel prepared going into graduate school. Also for my future career I want to be a [specific profession] so learning about a technique that is becoming popular [in that field] is fascinating.

It has prepared me to consider pursuing a PhD. Its also made me very knowledgeable about certain niche aspects of [my chosen profession] which will make me a better [practitioner].

This research experience has very much prepared me for my future goals and careers. ...this has helped me understand the research process to a fuller extent.

This research experience has allowed me to feel confident in continuing research and has made me even more interested in my classes this upcoming semester

**Introduction of [specific topic]. Strengthened knowledge of [different specific topic]**

**OVERALL PERCEPTIONS**

Both faculty and student participants were asked to rate their overall perception of Summer Research Employment. Response choices were highly satisfied, somewhat satisfied, unsure, and dissatisfied. 100% of faculty (n=5) were highly satisfied. 78% (n=7) and 22% (n=2) of students selected highly satisfied and somewhat satisfied, respectively. Overall, 86% of respondents identified as highly satisfied. No respondents selected unsure or dissatisfied. Participants were given the option to include comments. Only students provided comments:

- I only wish it was a little longer! I really enjoyed being able to continue work on the grant into the summer
- I enjoy my major very much, and getting to do a study related to my major is amazing. This study is very interesting and I cannot wait to see the results. I am having a great time working on this with my professor.
- I do not love having to do everything online, but it is an adaptation we have had to make due to COVID-19.
- Coronavirus hindered some progress, causing delays

Faculty members were asked how likely they are to participate in the program again. 100% responded very likely. Students were not asked this question. The optional comment from a faculty member was:

- The CPIE summer research has been a great funding opportunity for both students and faculty, and to move projects along through dedicated (paid) time and effort. I hope it continues.

**FINAL THOUGHTS**

Faculty and students were asked about the program's organization and hiring process, respectively. They were also given the opportunity to include comments. Students were asked to consider the quality of information, application, notifications, and the professionalism of the CPIE staff throughout the hiring process. The options ranged from five stars for very good process to one star for poor process. Eight students (89%) selected five stars and one student (11%) selected three stars. The optional comments for student participants were:

- Communication at the start of the grant was difficult. But nothing was certain due to COVID-19!
I am hesitant in rating this process as I feel like it was skewed due to the restrictions and rules caused by COVID-19. The hiring process was confusing and I feel as if there was a lack of communication and distribution of information. The submitting hours was also confusing as MyCharleston had different timesheet due dates than what was actually required of us.

Faculty were asked to consider the quality of information, communication, timeliness, validation of students’ hours worked, and professionalism when rating the organization of the program. The options ranged from five stars for very well-organized program to one star for poorly organized program. 80% of faculty responses (n=5) were five stars. One respondent(20%) selected four stars. The optional comments were:

- The guidelines and application are clear and reasonable. I’ve always had timely and professional communication with the staff that help manage this program.
- The guidelines, deadlines, and application process have been very easy to follow and complete. Communication with staff regarding application and logistics have also been very smooth.
- Timely communication, clear expectations, helpful
- My only concern was after the students were first awarded the CPIE fellowship, they were later told that the program might be canceled, and it was a couple of weeks of confusion and waiting. I understand this was because of the COVID-19 pandemic and its effect on the university, and not representative of how the program is normally run. It was just a couple of weeks of stress for my student, but I am not sure that really could have been avoided this year, and we were both happy and grateful that in spite of the COVID restrictions the program was still able to continue.

The final item on both surveys was optional and provided an opportunity for respondents to include additional feedback. One student and two faculty responded.

- Thank you for this opportunity! (student)
- I think [this program] is invaluable for both faculty and students. For me, a lot of the resources I need for research are focused on people power, which can be difficult to fund or manage through volunteers only. The dedicated funding allows students to focus on research and the faculty to have tasks completed on research in a more timely manner. The relationships built are also incredibly valuable for the faculty and students, providing a space and time to collaborate. Thank you—I hope this program can continue!! (faculty)
- This funding has been central to moving along projects that are critical to me as a tenure-track faculty. It has also been an invaluable experience for students—for their professional development, to build their resumes, and to form meaningful connections with faculty. Thank you very much, I hope this program can continue. (faculty)

**BUDGET**

Total expenditures for 2020 Summer Research Employment were $7,317.75. All funds were spent on student wages at $11 per hour. The sum of all hours worked was 665.25 hours. On average, each student worked 73.92 hours. The cost per student was approximately $813.08. Two students worked during Maymester (2.5 weeks), three during Summer 1 (4 weeks) and four worked during Extended Summer (6 weeks). The following table provides an historical overview:

<table>
<thead>
<tr>
<th></th>
<th># students</th>
<th># faculty</th>
<th>Total Hours Worked</th>
<th>Average Hours Worked per Student</th>
<th>Total Expenses</th>
<th>Average Cost per Student</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer 2017</td>
<td>6</td>
<td>7</td>
<td>359</td>
<td>59.8</td>
<td>$3,949.00</td>
<td>$658.17</td>
</tr>
<tr>
<td>Summer 2018</td>
<td>11</td>
<td>8</td>
<td>921.5</td>
<td>83.8</td>
<td>$10,136.50</td>
<td>$921.50</td>
</tr>
<tr>
<td>Summer 2019</td>
<td>16</td>
<td>13</td>
<td>1,071.75</td>
<td>67.0</td>
<td>$11,789.25</td>
<td>$736.83</td>
</tr>
<tr>
<td>Summer 2020</td>
<td>9</td>
<td>7</td>
<td>665.25</td>
<td>73.9</td>
<td>$7,317.75</td>
<td>$813.08</td>
</tr>
</tbody>
</table>
CONCLUSION
The 2020 Summer Research Employment was again a beneficial experience for both students and faculty and remains a worthwhile investment of funds. For students, the benefits included development of research skills, connections to prior and future coursework, and relationships with faculty. They also viewed the mentored research experience as good preparation for future courses, career, and graduate school. Faculty were able to advance their scholarly work while positively impacting their mentoring and teaching.

Participation was lower than expected due to COVID-19. CPIE initially approved 11 students and 9 faculty members. Due to restrictions on in-person research experiences, only projects that could be accomplished virtually were allowed to proceed. As a result, two faculty and two students withdrew. The faculty response rate on the reflection survey was low, and CPIE should consider ways to encourage greater participation. Teacher Education faculty participation was lower than past years, perhaps due to the pandemic. If no rebound occurs in 2021, CPIE will determine ways to engage faculty in that department. Based on the Summer Research Employment’s continued positive impact on faculty and students and manageable cost, CPIE intends to offer Summer Research Employment in 2021.
SUMMER RESEARCH EMPLOYMENT 2020

9 students
mapping in public health, exercise science, environmental and sustainability studies, special education, middle grades education, early childhood education, exercise science, elementary education

6 faculty
representing HEIP and TEDU
25% tenured
75% untenured but on tenure track

IMPACT ON SCHOLARLY PRODUCTIVITY

4 Manuscripts under development
3 conference submissions completed or in progress
1 IRB submission
Literature review External grant submission Community research report

REFLECTIONS FROM PARTICIPANTS

This experience helped me develop and refine my teaching skills. I was able to reach a student research skills, but not in a typical classroom setting. Instead, I had the opportunity learn real-world and professional experiences.

—Faculty research mentor

I had only known [student] a short time from interactions in class. Their work ethic and efficiency impressed me, and it truly an enjoyable experience collaborating with them. Since then, I wrote a recommendation for (a graduate program) and (student) was accepted. The relationships that are built through these research experiences are invaluable.

—Faculty research mentor

Through this research I have gotten to see what goes behind the scenes of a research project and all the work that is done. So, next time I see a flyer for a research project in search of participants I will definitely try to help out and participate in their study.

—Student researcher

My learning at the College of Charleston has been enhanced because this project has given me a more in-depth perspective on [the topic].

—Student researcher

ENGAGED RESEARCH

Faculty student research teams collaborated with colleagues representing various offices at CoC, non-profit organizations, government agencies, and public schools.

Student researchers developed skills to prepare an IRB submission; create survey instruments; recruit research participants; administer surveys; organize data; collect, analyze, clean, and reduce data; analyze videos; create infographics; present to community partners; review literature; and plan a research study.

Both faculty and students highlighted the value of student research experiences in supporting positive student-faculty interactions.

It has been an extremely positive experience being able to work with [student] through the CPE program and see the potential of students to really engage in research. This experience certainly reinforces my enthusiasm to continue working with students on my own and their research interests.

—Faculty Research Mentor

Student researchers are vital to our scholarly productivity.

—Faculty research mentor

Read the full report at partnerships.cofc.edu