ASSESSMENT

The Purpose of Research: What Undergraduate Students Say

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Abstract

This research study examines how undergraduate researchers conceptualize the purpose of research. Researchers distributed surveys to students who participated in a campus-wide research symposium to learn about student perceptions of research. The findings suggest that students recognize the importance of sharing scholarship and view research as a way to enhance their learning. Findings also indicate some disciplinary differences in the way students understand research and that perceptions of research may evolve as students advance through their academic careers.

Research is an exciting, passionate venture in the pursuit of advancing knowledge beyond what is currently known. It involves intensive reading, exploring ideas, drawing connections, choosing alternative paths, testing and analyzing, and disseminating results. This perception of research is shared among many in academia, where faculty aim to foster students' abilities to make original contributions to a discipline. Although disciplinary approaches may vary, broad understandings of inquiry and scholarship are common to all research endeavors. These commonalities are highlighted in the "Framework for Information Literacy for Higher Education" published by the Association of College and Research Libraries (ACRL) in 2015. The framework outlines six broad concepts that are important to the development of student researchers. Two of these specifically address the nature and purpose of research: research as inquiry, and scholarship as conversation. *Research as inquiry* emphasizes research as an iterative, often messy process involving the use of multiple perspectives and prior works to develop new questions (ACRL 2015). The framework also describes research as a discursive practice (*scholarship as conversation*), in which to engage in research is to contribute to an ongoing dialogue. To make a contribution, students need to recognize the importance of incorporating previous research and their own ability to "contribute to scholarly conversation at an appropriate level" (ACRL 2015). The description of the process and purpose of research in the framework connects well with the definition of undergraduate research provided by the Council on Undergraduate Research (CUR): "An inquiry or investigation conducted by an undergraduate student that makes an original intellectual or creative contribution to the discipline" (CUR 2019).

Although both the framework and CUR describe research as an inquiry-driven activity that involves a contribution to a larger conversation, it is unclear if students share this understanding. Numerous studies have described the benefits of undergraduate research (Bauer and Bennett 2003; Mabrouk and Peters 2000; Seymour et al. 2004), but less attention has focused on student perceptions of research. This research fills that gap by focusing on how undergraduate students who participate in a campus-wide research symposium characterize research, and the extent to which those characterizations align with the conceptualizations of research as inquiry and conversation that are presented by CUR and in the ACRL framework. Additionally, this

study explores how perceptions of research may vary among students in different disciplines and at different academic levels. These findings are valuable for anyone working with undergraduate student researchers.

Literature Review

Many studies have detailed students' positive views of their undergraduate research experiences or have described the numerous academic and personal benefits students attribute to their participation in undergraduate research (Bauer and Bennett 2003; Baynham 2016; Craney et al. 2011; Harsh, Maltese, and Tai 2011; Lopatto 2004, 2007; Mabrouk and Peters 2000; Seymour et al. 2004). Undergraduate research has been positively associated with students' GPA (Fechheimer, Webber, and Kleiber 2011), graduation rates and time to graduation (Craney et al. 2011; Rogers and McDowell 2015), and future academic performance (Gilmore et al. 2015). Multiple studies suggest that the benefits of undergraduate research also increase the more often a student participates (Bauer and Bennett 2003; Fechheimer, Webber, and Kleiber 2011; Gilmore et al. 2015).

Although much literature on undergraduate research has focused on students' perceptions of their experiences and the benefits for students, less attention has been given to how undergraduate researchers understand what it means to do research or what they consider the purpose of research to be. Two studies focused on students' views of the purpose of traditional research papers found that students' perspectives on research often differ greatly from those of faculty (Nelson 1994; Schwegler and Shamoon 1982). More recently, the study by Ross (2014) of students in a technical communication course found that student "perceptions of 'research' and its goals—such as differences between simply accumulating information and investigating in order to generate new knowledge—are not entirely consistent" (81). There is evidence that students may have significant misunderstandings about the purpose of undergraduate research that can impact their decision to participate in formal research programs (Mathis et al. 2015; Vieyra et al. 2013).

This study contributes to the literature on undergraduate research by focusing on students' perceptions of research as a concept, rather than their experiences or the benefits of participation, and by comparing these perceptions with the definitions of research provided by CUR and ACRL. It provides insight into how students' understandings of research may change as they move from their first and second years to their third and fourth years. Finally, the categories that emerge from the analysis provide a schema for conceptualizing research that can be applied in future studies.

Study Background

At Northern Kentucky University (NKU), student research is showcased at the annual Celebration of Student Research

and Creativity. Each year, hundreds of students present original research through posters or oral presentations, under the guidance of mentoring faculty. In 2016 and 2017, based in part on information from a 2015 pilot study, an extensive survey was distributed to all Celebration participants to glean information about student attitudes toward research. The most interesting results from the survey focused on three questions:

1. How do undergraduates who participate in advanced research projects explain the purpose of research?
2. Do undergraduate student perceptions of research vary by STEMH versus non-STEMH disciplines? (Note: The STEMH group includes all STEM and health-care disciplines.)
3. Do undergraduate student perceptions of research vary by academic level?

Methodology

A mixed-methods approach was applied to understanding student perceptions of research. In 2016, a 23-question survey was distributed to 490 undergraduate and graduate Celebration participants. This survey, which had a 26-percent response rate, resulted in 98 responses from undergraduate students (see Table 1). Participants were provided with a list of eight broad disciplines and asked to select one (or provide an "other" response) that most aligned with their major. One open-ended question asked, "What does it mean to you to 'do' research? Please briefly describe." Two researchers individually applied a combination of descriptive and process coding to each response, identifying main topics and actions in each statement (Saldaña 2013). Researchers compared codes and through discussion began pattern coding to group similar responses and identify emerging themes. Saldaña (2013) described "themeing the data" as an approach to bring meaning to a patterned experience. A theme is a topic that serves to categorize and organize a group of recurrent ideas (Saldaña 2013). While coding and identifying themes, researchers sought to understand "Research means…" and, as a result, identified four themes:

1. Conversation: Research involves building on the work of others or research is a way of improving the knowledge of others in the field or making society better.
2. Inquiry: Research is about asking new questions and seeking answers.
3. Personal learning: Research is learning more about a topic to expand one's personal knowledge.
4. Process: Research is a process that involves a series of actions that culminates in new knowledge.

Using the identified themes, the researchers applied provisional coding to the data and invited a third researcher to also code the data. After clarifying definitions for each of the themes, researchers agreed on about 90 percent of the statements. The remaining statements were discussed at

length to reach consensus. Three comments were excluded from analysis because they either did not fit one of the themes or were too vague. Comments were grouped by theme and summarized by counts and percentages. Chi-square tests were incorporated to analyze by discipline and education level.

In 2017, the survey was expanded to 28 questions and distributed to 406 Celebration participants. The survey had a 32-percent response rate, including 83 undergraduate students (see Table 1). Instead of an open-ended question, participants were provided with five statements and asked to select the one that best matched their perception of the purpose of research:

1. Conversation A: Research is about sharing knowledge and findings with others to the benefit of society.
2. Conversation B: Research involves building on previous knowledge to create new knowledge.
3. Inquiry: Research is about asking new questions and seeking answers.

4. Personal learning: Research is learning more about a topic to expand my personal knowledge.
5. Process: Research is a process that involves a series of actions that culminates in new knowledge.

The five statements aligned with the four themes used during the coding process for the 2016 data. The conversation theme was split into two statements because researchers felt the original theme encompassed two separate but related ideas: sharing knowledge and building on knowledge. Additionally, participants were provided a list of actions and asked to select up to three actions that were most important to their research. Survey responses were again summarized using counts and percentages and analyzed by discipline and education level.

Results

2016 Survey

Open-ended responses contributed by 85 of the survey participants were coded and categorized by theme.

TABLE 1. Demographics

	2016 Survey	2017 Survey
Gender		
Male	30 (31%)	26 (31%)
Female	68 (69%)	57 (69%)
Academic standing		
First-year student	4 (4%)	5 (6%)
Second-year student	17 (17%)	5 (6%)
Third-year student	26 (27%)	23 (28%)
Fourth-year student	51 (52%)	50 (60%)
International student		
Yes	2 (2%)	3 (4%)
No	96 (98%)	80 (96%)
Age		
26 or older	13 (13%)	6 (7%)
25 or younger	85 (87%)	77 (93%)
First-generation student		
Yes	31 (32%)	21 (25%)
No	67 (68%)	62 (75%)
Transfer student		
Yes	18 (18%)	10 (12%)
No	80 (82%)	73 (88%)
Employed full-time		
Yes		4 (5%)
No		79 (95%)
Employed part-time		
Yes		61 (73%)
No		22 (27%)

Note: Sample sizes used for analysis were lower due to incomplete responses.

FIGURE 1. What Is the Purpose of Research? (2016)
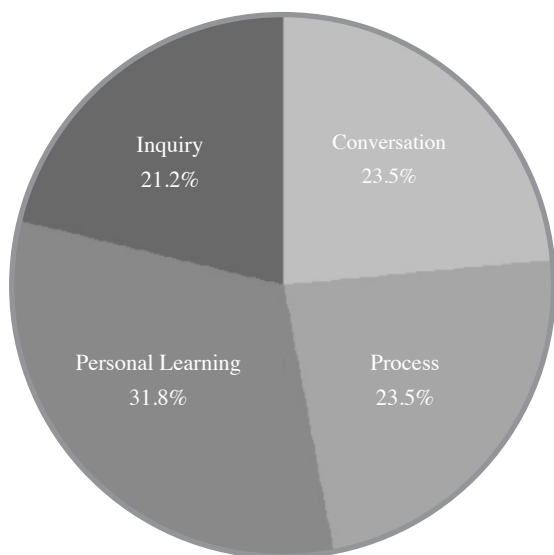
Overall frequencies for each theme are presented in Figure 1. Although comments fell somewhat equally across the themes, respondents were slightly more likely to describe research as something done for personal learning, whether it was to "broaden my knowledge" or to "back yourself up." Comments also fell into this theme if participants connected research with advancing one's interests and being able to "invest time into a topic [that one is] passionate about."

The process and conversation themes each aligned with about a quarter of the student comments. Process responses described research as a series of steps and aligned with a more scientific perception of research. For example, one participant explained research as "creating a hypothesis and investigating using scientific methods to prove or disprove said research." Another described research as "work in a lab under supervision of a faculty member and design your own experiments." Responses that fell into the conversation theme reflected the idea that research is something to be shared with a wider audience, with goals such as "to increase the collective knowledge of humanity." Comments in the conversation theme also reflected the idea that researchers "use previous knowledge to develop new knowledge that will benefit a certain population." Students surveyed were slightly less likely to describe research as an inquiry-driven activity. Inquiry comments reflected that research was meant "to find the answer to a question that others are asking" or that research involved "working to find a solution to a problem."

Disciplines (student reported) were grouped into STEMH and non-STEMH disciplines. Table 2 displays the frequency of student comments assigned to each theme by discipline. A chi-squared test showed no clear evidence of an association between theme and discipline ($X^2 = 2.40$, $p = 0.4923$). STEMH student responses were nearly equal across all four themes, whereas non-STEMH students placed less emphasis on inquiry and more on personal learning.

Additionally, participants were split into two categories based on academic level (see Table 2). Findings indicated that first- and second-year students were significantly more likely to view research as personal learning ($X^2 = 9.1288$, $p = 0.0276$). Expected counts for the significant chi-square test exceeded 4.47, which meant that validity conditions for that task may not have been met.

2017 Survey

To advance emerging understandings about student perceptions of research, the four themes identified during the 2016 analysis were redeveloped into five statements, with the conversation theme split into two components. On the survey, participants were asked to indicate whether they completed a research project or a creative activity. Those that indicated they had completed a research project were asked to select one of the five statements that best matched

TABLE 2. Frequency of Themes by Discipline and Education Level (2016)

	Conversation	Inquiry	Personal learning	Process	Total
STEMH	12 (25.5%)	12 (25.5%)	12 (25.5%)	11 (23.4%)	47
Non-STEMH	8 (21.0%)	6 (15.8%)	15 (39.5%)	9 (23.7%)	38
First- or second-year students	4 (21.1%)	3 (15.8%)	11 (57.9%)	1 (5.3%)	19
Third- or fourth-year students	16 (24.2%)	15 (22.7%)	16 (24.2%)	19 (28.8%)	66

Note: Cells within the table include discipline count (percentage of discipline total) and education-level count (percentage of the education-level total), respectively. STEMH included students majoring in biology, chemistry, physics, geology, environmental studies, mathematics, statistics, data science, computer science, psychological science, and health-care-related disciplines.

FIGURE 2. Understandings of Research (2017)
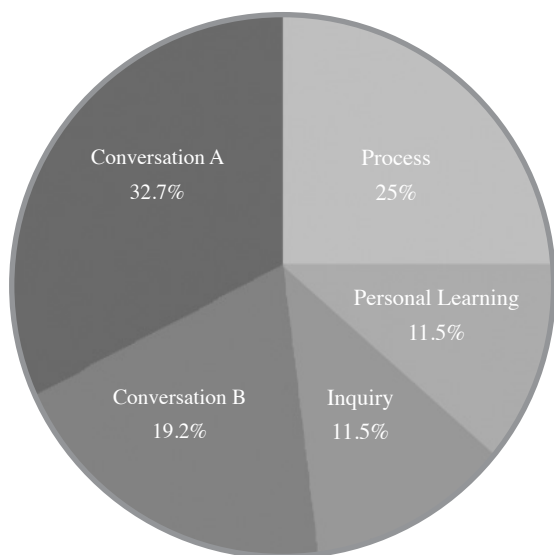
their understanding of research (*n* = 55). Overall, students were most likely to select the statement that suggested the purpose of research was to share knowledge (conversation A). The statements that aligned an understanding of research with inquiry and personal learning were selected the least amount of times (see Figure 2).

As before, the frequency of responses were evaluated for STEMH and non-STEMH students and education level (see Table 3). Six participants did not indicate a discipline and thus were not included in the disciplinary breakdown. Although the 2017 sample size was too small for statistical testing, within this sample STEMH students were most likely to align the purpose of research with the conversation categories. Non-STEMH students identified more with conversation A, but not conversation B, and placed a higher emphasis on process.

Three participants did not indicate an academic level and were excluded from the education-level analysis in

Table 3. The 2017 sample included few first- and second-year respondents, but these students were most likely to select the process category, followed by personal learning. Third- and fourth-year students were most likely to select conversation A, followed by process and conversation B.

Participants were also provided with a list of actions and asked to select up to three that were most important to research (see Table 4). Of the actions, data collection was selected the greatest number of times, followed closely by data analysis. No participant selected critique. When comparing STEMH and non-STEMH responses, there appear to be some disciplinary differences, with STEMH students placing lower emphasis on literature reviews and writing and higher emphasis on data analysis and lab work than non-STEMH students. Proportion tests showed statistical evidence that STEMH students thought more in terms of lab work (Z = 3.20, *p* = 0.0014), whereas non-STEMH students thought more in terms of writing (Z = 2.73, *p* = 0.0063) and literature reviews (Z = 3.03, *p* = 0.0025).

Discussion

This study compared how undergraduate researchers, from STEMH and non-STEMH disciplines and across education levels, conceptualized research. It also examined the extent to which student descriptions of research aligned with the inquiry and conversation components identified by CUR and the ACRL framework. The analyses presented above align well with Ross's (2014) finding that students have complex and divergent understandings of research and that no single understanding of research dominates. In fact, the most commonly indicated understanding of research varied from the 2016 survey to the 2017 survey, with 2016 students being slightly more likely to relate the purpose of research to personal learning and 2017 students most frequently indicating that the purpose of research was to share knowledge in order to benefit society.

Conversation and Inquiry

Although no single perception of research dominated, it is encouraging that many of the student participants connected research with conversation, as reflected in this

TABLE 3. Frequency of Themes by Discipline and Education Level (2017)

	Conversation A	Conversation B	Inquiry	Personal learning	Process	Total
STEMH	10 (31.3%)	9 (28.1%)	4 (12.5%)	3 (9.4%)	6 (18.8%)	32
Non-STEMH	6 (35.3%)	1 (5.9%)	1 (5.9%)	3 (17.7%)	6 (35.3%)	17
First- or second-year students	1 (12.5%)	1 (12.5%)	1 (12.5%)	2 (25.0%)	3 (37.5%)	8
Third- or fourth-year students	16 (36.4%)	9 (20.5%)	5 (11.4%)	4 (9.1%)	10 (22.7%)	44

Note: Cells within the table include discipline count (percentage of discipline total) and education-level count (percentage of the education-level total), respectively.

TABLE 4. Research Actions by Discipline and Education Level (2017)

	Data collection	Data analysis	Literature review	Interpretation	Application to practice	Writing	Lab work	Critique
STEMH $n = 34$	21 (61.7%)	22 (64.7%)	5 (14.7%)	15 (44.1%)	14 (41.2%)	4 (11.8%)	17 (50.0%)	0 (0.0%)
Non-STEMH $n = 18$	11 (61.1%)	9 (50.0%)	9 (50.0%)	6 (33.3%)	5 (27.8%)	9 (50.0%)	0 (0.0%)	0 (0.0%)
First- or second-year $n = 8$	4 (50.0%)	3 (37.5%)	2 (25.0%)	5 (62.5%)	2 (25.0%)	3 (37.5%)	3 (37.5%)	0 (0.0%)
Third- or fourth-year $n = 47$	29 (61.7%)	29 (61.7%)	14 (29.8%)	18 (38.3%)	17 (36.2%)	12 (25.5%)	14 (29.8%)	0 (0.0%)
Total $n = 55$	33 (60.0%)	32 (58.2%)	16 (29.1%)	23 (41.8%)	19 (34.5%)	15 (27.3%)	17 (30.9%)	0 (0.0%)

Note: Cells within the table include discipline count (percentage of discipline total) and education- level count (percentage of education-level total), respectively. Percentages do not total 100% due to option to select multiple items on the survey.

statement from a third-year social science/business student: "To me, doing research is attempting to gain knowledge on a subject and sharing it with others so that they too can understand what you have discovered." A statement such as this aligns with CUR's view of undergraduate research as making "an original intellectual or creative contribution to the discipline." It also aligns with the ACRL framework*'s* description of researchers as engaging in "sustained discourse with new insights and discoveries occurring over time as a result of varied perspectives and interpretations." The emphasis on research as conversation, particularly the idea of sharing, was especially evident, with more than half the 2017 respondents aligning the purpose of research with the conversation categories. Although the focus on sharing may be prevalent because participants responded to the survey during the week of the Celebration event, when they were in the midst of sharing research results with the campus community, the findings suggest that many students not only recognize but also value the communication that occurs between scholars (and themselves) and the greater purpose of sharing research results with a wide audience.

Students were somewhat less likely to express an understanding of research as inquiry. In 2016, fewer responses were coded as representing inquiry than any other category, and for the 2017 survey inquiry was one of the least selected responses (along with personal learning). Further, of the activities selected by 2017 Celebration participants as most important to research, it is particularly noteworthy that not one participant selected critique. The very act of critiquing is an inquiry-driven activity in which students analyze literature to identify information gaps and consider alternative approaches. However, the 2017 survey was not field tested, so it may be that more description was needed for students to understand critique as a research activity.

The apparent lack of emphasis on inquiry may be considered somewhat concerning, especially considering the prominence of inquiry in the perceptions of research presented in the ACRL framework and by CUR. One possible reason for a low emphasis on inquiry may be the way that students are often introduced to undergraduate research. More than half of Celebration students from both years indicated on the surveys either that their research projects were a requirement of a course or program or that their instructors had recommended a topic for study. Less than one-third indicated a deep interest in their topic prior to conducting the research, a finding that was consistent with that of Craney et al. (2011). Although a faculty member's introduction to a topic may help recruit otherwise reluctant student researchers, a significant component of inquiry is missing when a student is provided with a topic or when course requirements limit the student's ability to pursue a topic of personal interest.

In addition, the potential for overlap between the inquiry and conversation categories must be acknowledged. The description of research as inquiry in the ACRL framework includes the understanding that asking questions is part of "the collaborative effort within a discipline to extend the knowledge in that field." Such a view recognizes that a connection often exists between "asking new questions and seeking answers" (inquiry) and "building on previous knowledge to create new knowledge" (conversation B). A student's selection of conversation B might, therefore, implicitly indicate an appreciation for research as inquiry. Viewed in this manner, the lack of emphasis on inquiry may be less worrisome than it first appears.

Disciplinary Differences
The initial impetus for this study was that students interviewed in the 2015 pilot study, primarily from STEMH fields, did not seem to consider information searching or

integration to be a part of research endeavors. This apparent failure to use information to guide inquiry or integrate the voices of prior research led to concern that student researchers from STEMH and possibly other disciplines might be taking an approach that focused too much on the process of research, particularly data collection and laboratory work, and not enough on more complex integration of current research with prior knowledge. This concern was somewhat validated by the actions selected by STEMH students as the most important to their research. STEMH students placed the most emphasis on data collection, data analysis, and lab work, while almost completely ignoring the tasks of conducting a literature review and writing. In a large survey of STEM employees and analysts, Jang (2016) identified getting information as the most important work activity for STEM occupations, and literacy skills, such as reading comprehension and writing, were among the most important skills necessary for STEM job success. Jang argued that a gap exists between STEM education and the necessary workplace communication skills. This gap is reflected in the comment from one biology student who stated that research "means to test hypotheses with experiments." Although the statement is not inaccurate, it does suggest that STEMH students may undervalue key components of research that are most valued in the work environment.

Although STEMH students somewhat naturally emphasized procedure, it is encouraging that many STEMH students recognized research as conversation, such as the chemistry student who described research as "to work on something for the betterment of humanity." Many STEMH students selected interpretation and application to practice as important research activities. Both of these actions align with the idea that research is about making sense of and sharing findings with others so that they may be used to improve current practice and build upon prior work.

A somewhat surprising finding from this study was that students from non-STEMH disciplines also placed emphasis on data collection and analysis as integral research activities (albeit with no emphasis on lab work). Further, the process theme was prevalent among non-STEMH students. This perception was found in comments such as the social sciences/business student who described research simply as "collect data and analyze it." This finding lends support to the research of Mathis and his colleagues (2015) that suggested some business students' understandings of research aligned with laboratory perceptions of research. Mathis suggested that the pragmatic approach of many business employers in valuing internships rather than research experience may hinder student involvement in research. Interestingly, Mathis suggested that undergraduate STEM students are better exposed to research information than business students. In this study, students in many social science subjects would have been grouped in the

non-STEMH group and may have included not only business majors but also students studying criminal justice, organizational leadership, economics, or communication. All of these subject areas might take an approach similar to that Mathis described, de-emphasizing the role of research within the discipline and focusing on student employment in their degree field after graduation.

Although non-STEMH students appeared to emphasize data collection and analysis as an important part of research, these participants also strongly emphasized writing as an action most relevant to research, significantly more so than STEMH students, and also emphasized the literature review. This is not surprising, as students from arts and humanities disciplines are included in the non-STEMH category. Craney and colleagues (2011) found that undergraduate researchers from the humanities highly ranked "the ability to synthesize and integrate information" as a learning goal for research experiences, more than science or math students. Craney went on to state that "what you research strongly influences how you conduct and value your research" (109). In summary, varied disciplinary approaches may influence how students perceive and value research.

Evolving Perception

On the 2016 survey, more than half of first- and second-year students articulated a perception of research that reflected personal learning, a distinction that rose to the level of statistical significance when compared with third- and fourth-year students. For example, one first-year student stated that the purpose of research was "to look into a topic in a way that you will personally have a connection with" and a second-year student described the purpose as looking "further into something that intrigues you using whatever methods best fit." In 2017, the number of first- and second-year students completing the survey was too small for statistical assessment, but no contradictions to the 2016 result were observed.

The finding that a student's perception of research may change over time reflects the emphasis of the ACRL framework on the progression of information literacy development from novice to expert. Novice learners are likely unaware of their potential to enter a conversation and therefore do not perceive the conversational components of research. A report from Project Information Literacy found that new students exposed to research projects were excited to explore new ideas, but also overwhelmed "because they were unfamiliar with what college research entailed" (Head 2013, 12). For most students, one or two initial research projects during their first semesters are not enough to create experts who "understand that a given issue may be characterized by several competing perspectives as part of an ongoing conversation" (ACRL 2015). At the first- and second-year levels, students are

only beginning to gain exposure to a field of interest. Learning about that field and topics of interest serves as a necessary introduction, but recognizing a greater purpose of research, and their own individual role in that research, most likely does not come at the novice level.

Limitations and Future Work

One limitation of this study was small sample sizes in several comparison groups. Although the overall response rates were strong (26 percent for the 2016 survey and 32 percent for the 2017 survey), when distributing responses across categories, small sample sizes impeded the ability to make broad generalizations concerning disciplinary differences in the purpose of research. Further, the number of first- and second-year students who participated in the 2017 version of the survey was too small for statistical comparison. Future research efforts should attempt to gather larger numbers from targeted disciplines and academic levels.

Understanding how students conceptualize research is challenging, especially in terms of how to categorize the responses. As Pitcher (2011) notes, in the small body of literature devoted to this topic (focused primarily on graduate students), there does not exist any consensus as to which, or how many, categories should be used. Although the initial coding of students' responses divided the conceptualizations into four themes, the second survey provided students with five categories to choose from, demonstrating the challenges with clearly demarcating categories. Ultimately, students likely do not approach the idea of research from the perspective of any single category. Future research efforts might uncover additional conceptualizations of research and should recognize that understanding student perceptions of research does require analysis across multiple domains.

It should also be noted that definitions of undergraduate research can vary significantly and can include formal summer undergraduate research programs, paid internships or fellowships, course-based research, and more informal research experiences. It may be difficult to generalize the findings to all undergraduate research experiences. Additional research that explores how students' perceptions of research vary across different research experiences, formal or informal, required or voluntary, is needed. This includes the need for further study of how students' understandings of research as an inquiry-driven process may be impacted if their selection of topic is limited, due to either class requirements or instructor recommendation.

Lastly, this research did not track the same students across different levels (from first- to fourth-year status), limiting the ability to make judgments on how perceptions may change over time. A longitudinal study following the same students over time would be highly intriguing.

Conclusion

Understanding what students think about research—not just about their experiences in research, but what they perceive the purpose of research to be and what they think research actually involves—is of great importance. If students hold misconceptions about the purpose of research, they may be less likely to engage in research themselves (Mathis et al. 2015; Vieyra et al. 2013). The findings indicate that students have a strong recognition of the conversational components of research. Many students in this study perceived that the purpose of research is to build upon and share knowledge with a wider community, suggesting that students recognize the potential contributions of their own work on society. When considering disciplinary differences, there is also some evidence that STEMH students and non-STEMH students emphasize different aspects of the research process, with STEMH students more likely to focus on the data collection, analysis, and lab components of research, rather than literature reviews or writing. It also is worth highlighting that this study supports the idea that research perceptions evolve with experience. First- and second-year students were more inclined to indicate that the purpose of research was related to personal learning than were third- and fourth-year students. These findings offer a preliminary understanding of student conceptualizations of research and may be used to foster conversations and discussions among academics and student researchers.

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