A Case Study of Social Science and Humanities Undergraduate Research in Bhutan

DOLMA CHODEN RODER[1], KENCHO PELZOM[2], VANLALLAWMKIMI[3], & MOHAN RAI[4]

ABSTRACT: This research investigated the undergraduate research experiences of social science and humanities students at Royal Thimphu College, a private college in Bhutan. For the purpose of this study, the focus was five social science and humanities programmes that each have a year-long research project module. The study used sequential exploratory mixed methods. Data were collected in two phases: first qualitative data were collected followed by a survey informed by the qualitative findings. The findings from the study indicate that final-year research helps students become more independent learners. By the end of the year, most students felt a sense of ownership, confidence, and agency. Although most students felt their prior learning somewhat prepared them to undertake the project, many also found that applying what they learned about research was challenging. Time and workload were found to be common challenges for both faculty and students. Finally, it was found that the relationship between students and their supervisors as well as feelings of ownership varied based on faculty personality as well as the informal programme culture.

Keywords: Undergraduate research, independent learning, research curriculum, research supervision

Introduction

Student research is an increasingly important part of an undergraduate degree. Universities across the world offer research-related modules to undergraduate students with varying degrees of intensity in terms of content and length. There is consensus on the positive impacts of undergraduate research experience on students (see for example Lopatto, 2010). According to Myatt (2009, p.89), undergraduate research experience led to gains in areas such as "knowledge extension, understanding research, interpreting results, confidence in the ability to undertake research and understanding what everyday research work is like". It often cements

[1] Associate Professor, Anthropology, Royal Thimphu College; Lead author: dolma.roder@gmail.com
[2] International Relations Manager, Royal Thimphu College
[3] Associate Professor, Humanities, Royal Thimphu College
[4] Associate Professor, Humanities, Royal Thimphu College

students' love for their discipline and may influence future career choices or further studies. Knowledge creation, however small, is significant for developing countries such as Bhutan. Additionally, home-grown skilled researchers are an asset to the country as they are likely to have a deeper understanding of and commitment to the needs of their society.

Almost all undergraduate studies offered in Bhutan, especially programmes offered under the Royal University of Bhutan (RUB), including the Royal Thimphu College (RTC), require undergraduate students to take research-related modules. This is especially true for the social science and humanities programmes offered across RUB colleges. Although the quality and quantity of research-related modules offered vary across programmes and colleges, the importance that the RUB places on research cannot be denied. While there is awareness of the importance of undergraduate research experiences in colleges in Bhutan, what is lacking is knowledge about the impact of these experiences on students and student learning.

RTC places immense importance on student research because it sees the potential positive impact on student learning. Therefore, this study's main aim was to investigate RTC students' experiences with their final-year research projects. In particular, it sought to understand how research skills are learned and applied by students. Further, the study also sought to explore the similarities and differences in student experiences across different programmes and uncover the factors impacting their experiences.

This project collected data from the five degree programmes at RTC that include a yearlong project in the final year. These programmes are Anthropology, Development Economics, Political Science and Sociology, Environmental Management, and English Studies. The number of cohorts who graduated from these programmes varies based on the age of the programme but in general each has on average 30 graduates each year with this research experience. All the programmes except Political Science and Sociology were developed at RTC. The final-year projects are discipline-specific and the research approaches and methods vary based on the discipline and the expertise of the faculty leading the project module.

This project was prompted by a European Union-funded capacity building in higher education project called HAPPY (Qualitative research in Higher Education Teaching APProaches for sustainabilitY and well-being in Bhutan)[5]. The aim of HAPPY is to enhance qualitative research methods in higher education institutes in Bhutan. RTC is the lead Bhutanese partner. A baseline need assessment was carried out in four higher education institutions and its findings suggest that there are many areas for improvement. Although almost all social science and humanities programmes offered in Bhutan have research related modules, the student experiences varied greatly among the colleges and even within programmes at the same college (Royal Thimphu College [RTC], 2021).

Literature Review

Students' research experiences are broadly classified into two types: Undergraduate Research Experiences (URE) and Course-based Research Experiences (CURE). While UREs provide opportunities for a small number of individual students to be involved in active research

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in a faculty-led research laboratory, CUREs have one or more mentors to guide a large number of students and is an experience open to most students (Linn et al., 2015). Linn et al. (2015) note that while UREs allow students to see science happening, CUREs offer students more opportunities to integrate lectures and readings with actual research and help them to develop a conceptual understanding of research. CURE seems to best describe RTC's yearlong final-year project. Much of the research on undergraduate research focuses on natural sciences with very little on the social sciences and humanities (Ishiyama, 2002).This study provides an opportunity to help address this gap.

Independent learning is often described as students' ability to navigate complex learning that is self-directed and self-regulated to achieve learning goals that enhance deep learning (Balapumi & Aitken, 2012; Broad, 2006; Gunasekara, 2008). Independent learning skills such as critical thinking, navigating complex concepts, the ability to generate new knowledge, and the ability to self-direct their own learning are associated with independent learning (Balapumi & Aitken, 2012; Broad, 2006). There are ample studies done on the correlation between undergraduate research and independent learning (Ishiyama, 2002; Petrella et al., 2008; Weston et al., 2015). Most of this research suggests that undergraduate students undertaking research led to confidence in the subject and learning to be independent learners (Todd et al., 2004; Weston et al., 2015; Petrella et al., 2008). Feelings of ownership and skills development (including reading, writing, thinking like an expert, and critical analysis) were also attributed to students engaging in research (Cuthbert et al., 2012; Linn et al., 2015; Myatt, 2009; Wayment & Dickson, 2008; Ishiyama, 2002).

When research is integrated into the curriculum, it helps the students to understand by providing both theoretical and practical knowledge (Dolan, n.d.; Ishiyama, 2002; Wilson, 2003; Crowe & Boe, 2019). Debates on whether the final product is more important than the learning process are also present (Beckemn & Hensel, 2009). Many undergraduate students report feeling unprepared to undertake individual research. These feelings are linked to the way research is taught. If learning is the primary focus, helping students to develop research skills through practice from the first year itself is suggested (Beckemn & Hensel, 2009; Jenkins & Healey, 2009). However, developing nuanced research skills that require students to use research theories while working in their field of study is complex and messy. For this to happen, the curriculum must be carefully designed to nurture the skills of an independent researcher (Beckemn & Hensel, 2009), putting research at the centre of the curriculum (Jenkins & Healey, 2009). The more integrated research skills are into courses that are not explicitly teaching methodology, the better-prepared student feels while undertaking independent research projects (Parker, 2012; Beckemn & Hensel, 2009). Although there are numerous tangible benefits to undertaking research, many students do not see connections especially when practice and theory are not explicitly connected (Ambrosia et al., 2010; Fung, 2017).

Many studies looking at undergraduate research identify the relationship between students and their supervisors as having a strong positive impact on students' experiences (Lopatto, 2014; Davis & Jones, 2020; Pfund, 2016), particularly on future study and career

plans (see for example Adedokun et al., 2012; Colbry et al., 2013; Cuthbert et al., 2012; Houser et al., 2013).

Todd et al. (2004) described the critical role the supervisor played during periods when students faced challenges in the research process. Other positive impacts included increased research productivity (Houser et al., 2013; Joshi et al., 2019; Wilson et al., 2018) increased confidence and competency (Davis & Jones, 2020; Petrella & Jung, 2008) as well as serving as a form of disciplinary socialization helping students feel more like researchers (Davis & Jones, 2020; Wilson et al., 2018). In contrast, Delly et al. (2021) found that students' dissatisfaction with supervision was linked to higher failure rates in research projects in one Botswanan business programme. These students complained about the supervisor's knowledge, feedback, and availability. This suggested that the personality and competence of the supervisor are also important to student research experiences.

Morales et al. (2017) found that faculty most likely to choose to be research mentors often placed greater value on increasing diversity, while faculty who felt the work was time-consuming or not adequately rewarded by their institution were also less interested in mentoring. Houser et al. (2013) found that mentorship style played an important role in the research productivity of students, with more engaged and structured mentorship leading to higher levels of productivity. Davis and Jones (2020) argued that faculty who choose to be mentors in these programmes might be self-selecting for the very qualities that made them good mentors, which might have an impact on the positive results.

Methodology

The study employed a sequential exploratory mixed-methods approach. The chosen methods were consistent with other studies looking at undergraduate research with a particular focus on methods that allowed for reflection. In the first phase, we used semi-structured interviews and focus group discussions with final-year students, interviews with alumni, and interviews with faculty teaching the yearlong research project. In the second phase, a survey of final-year students at the end of the academic year (after the completion of their projects) was conducted. For our analysis, we also included data that was gathered for the HAPPY project (RTC, 2021). However, only data collected from RTC was considered for our project.

Data collected in the first phase are detailed below (Table 1):

1. In-depth interviews with 10 students from the five programmes at 3 different stages of their final year research were conducted. The goal was to interview the same students at different stages in order to capture their feelings, impressions, and experiences at different points in the research process. One set of interviews was conducted when students completed their literature review and research proposal and most were poised to begin data collection over the winter break. The second was conducted around the time that most students were engaged in data analysis. The final interview was conducted after students had completed the project and submitted it for final

assessment. The first set of interview questions focused broadly on expectations and experiences while the second set responded to issues raised by students in the first set of interviews. The final interview question was based in part on recurring themes but was also intended to have students reflect on skills developed as well as to capture their overall impressions of the experience.

2. In-depth interviews were conducted with 9 alumni from the 5 programmes. Interview questions were open-ended and focused both on memories of students' research experiences as well as the way that experiences shaped their career trajectory and aspirations.
3. The focus group discussion (FGD) was conducted around the same time as the second in-depth interview with individual final-year students. 5 focus group discussions with students from the 5 programmes who were not already part of the project as respondents were conducted. The size of each focus group varied but none were smaller than 4 students. Groups were diverse in terms of gender and academic performance. The questions used during the FDGs were open-ended and based in part on findings from the first set of in-depth interviews with individual students asking about their experience of research in general as well as about key aspects of experiences such as the challenges they faced, the skills they felt they developed, and their relationship with their supervisors and peers.
4. In-depth interviews with faculty who had taught the final year research project module were also conducted. We made a particular effort to select those faculty who have been supervising this kind of work for many years. We attempted to interview 2 faculty from each of the programmes, however, while all programmes were represented we were only able to conduct 9 interviews. These were done in part to include their perspectives and experiences. Their interviews are also a way to compare student experiences and perspectives to that of the faculty they worked with in order to seek out consensus, overlaps, and contradictions.

In the second phase of the data collection, a self-assessment survey of 66 questions was deployed via Google Forms. The first part of the survey collected demographic information such as gender, programme, student's high school history, and parents' level of education and current job information. The second part of the survey had questions from five general themes that emerged from the qualitative data: Preparation, Personal Interest, Supervision, Skills Gained, and Time and Resources needed or used. Each question was framed in the form of a statement and respondents were asked to choose one response from: *strongly disagree*, *disagree*, *neither agree nor disagree*, *agree*, or *strongly agree*.

The survey was distributed via email to students of all five programmes. Of the 113 students who were eligible for the survey, 44 students completed the survey. While students from all programmes responded, the representation of some programmes was substantially higher than others.

Table 1. Data Sample Description

Description of Method	Male	Female	Total number of students	Data collected
In-Depth interviews with current final year students	3	7	10	28 interviews
In-Depth interviews with alumni	2	7	9	9 interviews
Focus group discussion with final year students	14	16	29	5 interviews
Faculty interviews	5	5	10	9 interviews
Survey	17	27	44	44 completed surveys

Analysis of the findings was done in three phases. A thematic coding was first done with preliminary data after conducting the first round of interviews. The second round of coding was done after collecting the rest of the data. The final themes were in part influenced by the relevant literature however there was room also for emergent themes. Finally, the survey findings were analysed using descriptive analysis to cross-tabulate the qualitative and quantitative findings.

Findings & Discussions

The rich array of data collected for this project provided a range of findings. However, we have chosen to focus our findings on the three most prominent themes, namely independent learning, curriculum, and relationship with supervisors. The literature on undergraduate student research supports the centrality of these themes to the undergraduate research experience. We will also discuss the emergent theme of the impact of informal programme culture, a theme that was not explored in the literature. The themes also appeared to intersect, for example, the informal department culture and personality of the supervisor unexpectedly had a direct impact on the student-supervisor experience as well as students' enjoyment of the research process while the supervisory style could encourage or impede independent learning.

However, several other themes particularly related to the challenges of research also come up repeatedly and are worth briefly discussing. The first was the perceived lack of resources particularly in terms of money, time, and locally relevant academic sources. For example, students who had to conduct some form of data collection that involved travel mentioned that they had to spend their own money on transportation. Faculty and students both mentioned that time was another resource in short supply. Faculty described the grading load and the weight of supervising a large number of students. Students talked about the stress of doing research while keeping up with work for other modules. As most final-year students had expected to collect data during the winter breaks but were impeded by long lockdowns in both

winters of 2021 and 2020, the COVID -19 pandemic was also mentioned as a challenge. Many students for example mentioned having to change their sample size or data collection strategy because of the lockdowns.

Informal Programme Culture

One of the significant findings of this research was the importance of informal programme culture on student research experiences. Most studies on the undergraduate experience tend to look at a single disciplinary setting so this project which explored the experiences across 5 different programmes offered a rare opportunity to see the differences. The differences in informal programme culture were particularly notable in looking at supervisory norms within each programme, especially in terms of the relationship between the two faculty assigned to a cohort of research students, the level of formality in the relationship between students and faculty, and the frequency and style of engagement.

Though two faculty are assigned to teach each cohort, they divide the lecturing and supervising duties so that they are each only supervising half the students in the cohort but this does not limit students from seeking help from the other supervisor when needed. The level of coordination and cooperation between two assigned supervisors varied widely and seemed to strongly reflect the programme culture. In some programmes the supervisors operated more or less independently and may not even be present when the other supervisor is teaching a particular topic, while in other programmes they were both present at almost all levels of engagement from formal lectures to less formal one-on-one meetings. Students in at least three programmes frequently described getting conflicting feedback, one student, for example, noted "perspective collides and what we want to say gets lost between their communication as well". Students in other programmes describe the way in which the two supervisors gave complementary feedback, sometimes focusing on different aspects of the project. As noted by a student, "one of the supervisors, she would give me advice on the grammar and how to write it smoothly or nicely. The other one would give me on the technical expertise".

Some programmes diversify the sources of feedback even further, for example, by formally teaching and incorporating peer feedback or assigning students a second reader in the programme beyond the supervisory team. One faculty describes this extra supervision that their programme provides saying:

> The second supervisor doesn't mark or give any grades but the second supervisor is always available to give advice or to ask for readings or comments. So they always get two supervisors in that sense, one main supervisor and second supervisor.

These practices are usually beyond the description of the official Definitive Programme Document and seem to be the result of specific programme cultures.

The style and tone of relationship between students and their supervisors varied greatly and seemed to reflect programme culture. In some programmes the relationship appeared to be more loose and informal while in others there was a high degree of formality and attempts to

officially document engagement. However, across the programmes, students were more likely to share challenges and frustrations with peers than their supervisors suggesting that all the relationships carried some degree of formality. In one of the more heavy-handed programmes where the supervisors exerted the most control over projects at least two students described using some form of subterfuge to either get more useful feedback or secure their preferred supervisor. One student, for example, described the way she worked to ensure she had a particular supervisor:

> I had heard from my seniors that he's the best supervisor for research and so, I was praying, praying, praying that I'd get him and I don't know if I should say this but it was my unconscious, it was biased sort of way because I was so adamant on wanting to be his supervisee. That I would kind of manipulate my topic so that it's something that he would pick.

Relationship with Supervisor

The importance of the relationship dynamic between the student and their supervisor(s) was one of the main findings and was found to be true in a wide range of other research on this subject (see for example Adedokun et al., 2012; Colbry et al., 2013; Cuthbert et al., 2012; Davis & Jones, 2020; Houser et al., 2013; Lopatto, 2014; Pfund, 2016).

Morales et al. (2017) and Davis and Jones (2020) argued that faculty who choose to be research mentors were self-selecting for more committed and engaged mentors, however, this is not the case for research mentors at RTC as faculty teaching allocations are finalized by the Programme Leader and the administration and reflect the realities of available human resources. Faculty do not usually get to choose if they will teach or guide research modules. Despite this, most students reported that they felt supported by their supervisor and described their experiences as largely positive, however, the handful of students who had less positive experiences largely attributed their difficulties to issues with their supervisor or even the dynamic between the two supervisors teaching the module. At least two final-year students described the way in which comments from their supervisors lead to a decrease in motivation and confidence. This is similar to findings from Davis and Jones (2020) as well as Petrella and Jung (2008). One student described his relationship with his supervisor as follows:

> It was very difficult for me to connect with my supervisor. So, there is that gap between what the supervisor expects and what I can deliver…there are times that you feel so demotivated because of the comments or because of the grades at the same time and I think that motivation factor is important.

However, most students described their relationship with their supervisors as encouraging and helpful. In at least one programme, students described the relationship as a friendship (suggesting a high degree of mutual trust and affection).

While the experience of the supervisor, their own personality, and the informal culture within a programme influenced the style of supervision, most supervisors, both from student and faculty accounts, appear to be engaged and available. Faculty in almost all programmes were more likely to initiate engagement. Many students admitted that though they were encouraged to reach out, they usually waited for their supervisor to contact them; conversely, many of these same students described asking friends and peers for advice. This was especially true during the lockdown periods when in-person meetings were not possible. One final-year student reported:

> Frankly speaking, I didn't reach out to my tutor but my tutor used to email me a lot reminding that we need to work on it. It is time. Hope you have enjoyed your vacation. Now you need to work on your research. There was a constant reminder from my tutor.

Todd et al. (2004) similarly noted that the role of the supervisor can become particularly important when students face challenges.

Some programmes had a very hands-on research supervision culture with frequent meetings and engagements (both formal and informal) while other programmes appeared to have more minimal and more formal engagement as per the dictates of formal structures like their Definitive Programme Document or the expectations of the Academic Affairs Department. Houser et al. (2013) explored the impact of mentorship style on the research experience. They found that more engaged and structured mentorship led to higher levels of productivity. Our findings are more mixed suggesting that engaged mentorship can lead to students feeling supported and confident but that too much micromanagement can result in the opposite.

While frequent and detailed feedback characterized the experience in almost all programmes (though students in at least one programme noted that feedback was sometimes delayed), several students noted that they were not always able to use the feedback. One student noted, "we had like an individual time to talk with the professor but it was really difficult for me to understand what my professor wants me to do. They explained but somehow I didn't like, comprehend." One of the faculty similarly noted, "a lot of feedback … is hit and miss because you have to sit with them to go through the feedback because they don't understand".

Supervisors in at least three programmes appear to have a very strong influence on the choice of topic. In at least one programme, students repeatedly described their supervisor as "rejecting" topics. This suggests that the weight of guidance varied between programmes, that in some programmes, changes were mandated while in others students had more agency to choose what suggestions to apply. Students in at least two programmes described having to "fight" with their supervisors in order to maintain control of their projects. One student, for example, noted, "I feel like students have to fight for what they want to research about rather than just going with what the tutor says". However, the fact that in all programmes the various

stages of the project were graded does imply that student work was evaluated and needed to reach a particular standard, a standard set by the programme and supervisors.

Table 2. Survey findings on supervision

Question/measurement	Mean	Median	Mode
I felt that I could go to my supervisor with questions and problems.	4.61	5	5
My supervisor made a regular effort to check in with me on the progress of my project.	4.7	5	5
I felt that my supervisor cared about me and my project.	4.66	5	5
I found the feedback and advice my supervisor gave me confusing or contradictory.	2	2	1
I chose my topic because my supervisor recommended it.	1.32	1	1

The survey data on supervisor support and care to students (Table 2) validate the qualitative data, however, the qualitative data finding on the co-supervisors confusing students with different feedback and supervisor dynamic due to choice of topic could not be validated due to the limited data set.

Independent Learning/Personal Development

In most programmes the final year research provided an important opportunity for students to become independent learners. Most students felt that although the final year research was demanding and challenging, they learned to study on their own and advocate for themselves. This is in agreement with most research on undergraduate research experience (Todd et al., 2004; Weston et al., 2015; Petrella et al., 2008) which suggests that undergraduate research experience contributes to independent learning. Some also felt that they were able to discover their potential as the research allowed them to delve deeper into the subject and hone their research skills. One student said, "One more thing is I feel we gain more confidence and independence. Going to unknown village and talking itself gains more confidence. I feel that is one of the best skills that I have learned from my research."

How confident and prepared students felt to undertake independent learning varied across programmes in part linked to their programme's curriculum structure. Students from programmes that provided programme specific research method modules in earlier years felt more prepared and confident compared to students from programmes with no or little research methods. As suggested by literature (Dolan, n.d.; Ishiyama, 2002; Wilson, 2003; Crowe & Boe, 2019) research integrated into the curriculum helps students to be more prepared for research.

Students (both final-year students and alumni) and faculty mentioned feelings of ownership, agency, and pride in the research product. Despite the work pressures, both groups were largely satisfied with the end product. A student expressed:

> In the beginning, I thought that I would be happy if I was just done with it. Now I kind of feel like a proud mother because I'm proud of my project and because I dedicated one year, do it and it's nice when I printed it and binded it and I felt proud.

This was linked to the hard work they put into their projects and doing research on their own which was different from their experience in more coursework-based modules.

The ability to choose their own topic was a key source of agency and responsibility. The students who chose their research topic based on their interests and personal connections did not just enjoy the process of research more but were also motivated to work even harder when they encountered challenges. A final-year student who loved her research topic said:

> I was really worried in my first year because I could tell that they (her seniors) really hated the research and they kept on complaining about how hard it was but then now that I am in my final year I actually enjoy it. And I love that I am focusing on something that I really want to learn about and I think what I realize is that it really differs on whether the person actually puts in efforts.

However, in some programmes students felt that their own choice of a research topic was not supported which resulted in frequent changes in the research topic. This seemed to impact their confidence at other stages in the research process. This was also true for students who could not pick their own topic and relied on topics suggested by tutors and friends. One faculty said that when students pick a topic suggested by their friends or supervisors it often hampers the quality of their work. Many faculty interviewed narrated success stories of students who were passionate about their choice of topic. This could be seen as similar to other research that saw successful student research experience as building a sense of disciplinary identity and commitment to their chosen field of study (see for example Davis & Jones, 2020; Wilson et al., 2018).

Most faculty were pleased with the progress made by students during their research process. They mentioned that they felt students learned important research skills. However, the faculty did point out that the quality of work produced by students was not uniform and for some faculty, their sense of satisfaction depended on the quality of student work.

Most students felt their research skills improved during the course of their final year research even if the degree of improvement varied. The final year research project also encouraged some students to pursue research in the future. For example, one student said, "I definitely also kind of found an interest in doing research and I definitely see myself exploring more fields of research."

Almost all students and alumni also reported personal development during the research process that changed their level of confidence. Skills development is a significant outcome of student research (Cuthbert et al., 2012; Linn et al., 2015; Myatt, 2009; Wayment & Dickson, 2008; Ishiyama, 2002). Apart from the research skills, they were able to hone skills such as interpersonal communication, reading, writing, and time management. They believed that these

skills will be of immense use after graduation. Most working alumni who were interviewed spoke about how they were able to use their research skills in their work even if they were not directly involved in field research. For example, one alumnus said, "I work as an assistant…officer…there is lots of research work and even in our daily normal work also, we always have to check information and do some analysis".

Table 3. Survey findings on independent learning

Question/measurement	Mean	Median	Mode
I have become an independent learner.	4.09	4	4
I have become more confident.	4.16	4	4
I chose my research topic based on my own interest.	4.48	5	5
I enjoyed working on my research topic because I was interested in the topic.	4.25	4	5

The survey data (Table 3) validate the qualitative finding on student feeling of agency especially in choosing topics of their interest and being motivated to work on it without being forced. Student feelings about becoming independent learners were also high as were feeling confident and responsible for their project.

Preparedness and Curriculum

All programmes except one had dedicated methods classes that students took before they began the final year of research. Students from programmes where research was integrated into multiple modules (not just the methodology modules), taught over the course of the entire degree, and where students had multiple opportunities to practice research skills and methods, were found to be more confident and better able to discuss research and articulate their research process. They were also more confident going into the research process. For example, one of these students said, **"**I think we were pretty much prepared from all the small research we have done so far…we were ready to interview them. How to approach them. We knew that we had to get their consent and all this ethical consideration". In some programmes, students were able to discuss and explain their final year research, but many others expressed that they were not prepared to do the final year project.

Many students also expressed that the gap between knowledge of research methods and the lack of actual application of the methods until the final year was a challenge for them. Also, making connections with prior learned theories during the analysis phase was also reported to be challenging. This was also reported to be a challenge (Tucker et al., 2016) while other authors (Dolan, n.d; Ishiyama, 2002; Wilson, 2003; Crowe & Boe, 2019) have also noted the importance of paying attention to how methods and theory are linked within the curriculum. An alumnus said, "I think in terms of what we were being taught, the tools and everything it was very good but I think more practical sessions may be because we can see it really fall apart

during the data collection with them". This was even more strongly reported by students from programmes that had either no practice with using theory or where this practice was fragmented or disconnected. For example, one final year student said, "When it comes to analysing the data, though we study software like the Excel Strata before, the previous semesters, we are finding it very difficult to how to use this and implement what we have studied". In some programmes both students and faculty said that students forget the research methods they learned in the previous semesters by the time they start their final year of research. The need to more strategically and deliberately integrate research into the curriculum was also noted frequently noted in the literature (Beckemn & Hensel, 2009; Jenkins & Healey, 2009; Parker, 2012).

Across all programmes, students and faculty agreed that reading literature, writing an annotated bibliography, and a literature review posed one of the biggest challenges. This was particularly true for students belonging to programmes without research methods modules. One student said, "It was very hard for me to read and capture what was written in the article". Students felt that they had to suddenly dive into research without preparation and felt overwhelmed. Faculty were aware of this issue and changes have been made to the programme curriculum. For example, in the new BA in English Studies programme, which was recently revised, a module on Introduction to Literary Research Methods has been added to better prepare students for their final year project.

Students from programmes where discipline-specific research methods are taught expressed the desire to learn other research methods. For example, students who study quantitative research methods also wanted to learn qualitative research methods and vice versa. This was because some students wanted to use both methods in their final year research and some alumni expressed the need in their work. One alumnus said, "I wish I could have learned how to analyse qualitative data more too because…right now, I really need to apply this in my field."

Table 4. Survey findings on skills

Question/measurement	Mean	Median	Mode
I felt the prior modules I learned in my 1st and 2nd years have prepared me for the final year research project.	3.7	4	4
The actual practice of doing research was much more difficult than I expected.	4	5	5
I have improved my writing skill.	4.24	4	4
I have learned how to do a literature review.	4.18	4	5
I now know how to look for credible sources.	4.52	5	5

The qualitative data suggest that the feeling of preparedness amongst students varied, and the quantitative data (Table 4) states the same. However, whether this was programme-specific is more difficult to validate since the representation from all five programmes in the survey was not as balanced as the qualitative data.

Students' feeling of being able to learn skills such as writing, finding credible sources, and literature review while doing the final year research was reported to be higher in both qualitative and quantitative data although students suggest they struggle the most with it while doing research.

Limitations

The current study has two limitations. First, the survey response representation is skewed to a few programmes with only 113 total possible respondents. The survey rate was 39%, but most of the respondents were from one of two programmes. Respondents from the other three programmes accounted for less than 8% of the total. Second, the current findings cannot be generalized to other Bhutanese colleges at large due to RTC's more formal institutional structure.

Conclusion

The current study on the undergraduate research experience of the student in five programmes in humanities and social science at RTC suggest that experiences for both faculty and students were mostly positive, accounting for many learning gains for the students. One of the distinctive findings that are not reflected in the literature on the topic is how informal programme culture impacts student research experience at the undergraduate level. Although the programme descriptors of all five programmes in the final year research are similar, the way programmes mentor and supervise final-year research varied from programme to programme. This was tied to the impact of supervision on student research experience. Although supervision was seen mostly in a positive light, there were some negative experiences with supervisors that greatly impacted student experience and willingness to learn.

Another important finding was that the research module allowed students to become "independent learners" and have increased their confidence and ownership of the learning process. Almost all students reported learning new and sometimes transversal skills while doing the final-year research. Students' feelings of preparedness to take research in their final year varied, with many students not feeling completely prepared. The most common challenges among students were finding credible sources and writing a literature review, although most students felt that by the time they completed the project they had improved these skills. This suggests that some programmes may not be assigning students readings that reflect the kind of discipline-specific research they are expected to produce in the final year. In other words, they are not consuming and discussing the kind of literature that they need for their literature reviews before the final year. As the literature suggests, there is a need to re-visit the curriculum to align efforts right from the first year to prepare students to do research in their final year.

Both faculty and student data suggest that time and workload were an issue. For faculty, the current workload distribution structure does not account for the kind of effort that supervision and guidance of final-year research requires. For students, since this is often the first

module that required independent undertaking at many levels, the time and amount of effort needed were much more than they were used to. There needs to be a system in place that better recognizes the efforts and time of students and faculty to encourage meaningful learning and supervising experience.

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