

THE IMPORTANCE OF SUPPORT PROGRAMS TO
SCIENCE AND TECHNOLOGY STUDENTS
ENROLLED AT
VANCOUVER ISLAND UNIVERSITY
NANAIMO, BRITISH COLUMBIA

BY

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IN

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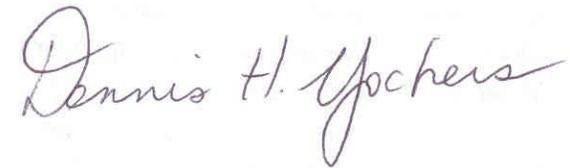
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APPROVED BY THE GRADUATE COMMITTEE OF:

A handwritten signature in cursive script that reads "Dennis H. Yockers". The signature is written in dark ink on a light-colored background.

Dr. Dennis Yockers
Emeritus Professor of Environmental Education

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This project was only possible with the help and encouragement of many individuals otherwise it may not have happened.

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*“The jump is so frightening between where I am and where I want to be.....
Because of all I may become I will close my eyes and leap!” ~Maryanne Hershey*

ABSTRACT

It is important to get an understanding of 1) how Science and Technology (S&T) students feel supported at Vancouver Island University and 2) the level of knowledge of the available support programs by the faculty themselves since they are the first point of contact by students looking for guidance.

This study was designed with a mixed methodology approach that included conducting on-line surveys and face to face interviews. Surveys were issued to S&T faculty at the Nanaimo Campus as well as to 400 students enrolled in S&T based courses during the spring 2016 semester. Fifteen faculty and seventy student participants were asked to provide comments on how to improve the overall student experience in the upper part of the campus. Face to face interviews were conducted with 8 student volunteers. The responses provided insight to what is important to S&T students at VIU. The importance of feeling connected with other like-minded peers, and faculty were very strong factors in the overall positive academic experience.

Through the use of thematic analysis, responses to the suggestions from both surveys and the interview responses were coded and categorized. These major categories included academic support programs, electronic support, social support, faculty support, and program structural support, barriers to support and finally, recommendations. Results showed what was important to the enrolled students were also important to the faculty: accessibility to support programs, peer support programs, feeling connected to faculty and other students, and interdisciplinary discussion. Student participants

expressed the importance of social media to feel connected to the campus and further develop student social structure.

During the interview process, barriers to accessing support were identified that included first year struggles, scheduling, transit/parking, computer access, library access, location and faculty access.

The researcher provided a list of recommendations that may be useful for faculty and VIU Administration in identifying key supports that could be offered with a science based focus in the upper campus.

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CHAPTER 1 : INTRODUCTION

The purpose of this research project is to determine the sources of academic support that Science and Technology (S&T) students use at Vancouver Island University's Nanaimo campus. The study will document and compare student demographics along with the accessibility to campus support programs, and program faculty. This study will also look at the level of awareness of student academic support services amongst S&T faculty since students look to them as the first point of contact for both support and direction when needing assistance.

Vancouver Island University (VIU) has conducted three student experience surveys (SES) since 2012 that were focussed at the entire student body.

Unfortunately the results were not readily available for this study in order to do a comparison of the S&T participants' response rate. The University would not share the information from these past surveys because the researcher was conducting the project as a student not as a faculty member. It is recommended that the results from the SES be examined and compared with the results of this project.

The S&T faculty and assigned teaching classrooms are located in the upper portion of the campus. This area of the campus is not conducive to group study areas, nor student lounge sites. With this in mind it is of interest to what educational support S&T students' access, be it faculty support or other auxiliary support systems that are in place. One study describes a campus environment as a web of interconnected experiences that overlap and influence students'

overall satisfaction (Elliot & Shin, 2002). It also indicated that the extent of interaction between students and university personnel heavily influenced whether students recommended the university to friends or family. Having an understanding of how S&T students reflect on his/her own campus experience will provide an idea of the perception of what is currently offered or lacking in the upper campus area.

Study site

Vancouver Island University (VIU), located in British Columbia, Canada is a post-secondary institution that is known as a center of excellence for teaching, applied research and learning. The University's roots date back to 1936 when Nanaimo's first vocational training school opened its doors.

Today, VIU supports a student population in excess of 16,000 full-time and part-time students. This includes over 1,800 international students, and 1,500 aboriginal students. The total number of students enrolled in Science and Technology programs was 707 in 2013/2014 and 658 in the 2014/2015 academic year. VIU currently employs over 2,000 faculty and staff.

VIU consists of four campuses including a main campus in Nanaimo and regional campuses in Duncan, Powell River and in the Parksville-Qualicum area.

The focus of this study is on the Nanaimo campus which has a total student population of 11,532 (2014/2015). Approximately 500 of these students live in residence whereas the remainder commute to campus. Nanaimo is situated on Vancouver Island and has approximately 85,000 residents.

The project is being conducted across both the student and faculty demographic of science and technology to determine what the key academic supports are to enrolled students. In the late 1990's the researcher was a student in this area of the campus. With a combination of a tight academic schedule and a commute to Nanaimo, there was not a lot of time to assess support on campus nor fully understand what was available. This was a common concern for many attending in her program. Now as an employee of VIU for approximately 10 years, the same comments are being voiced by students attending classes in the same area of the campus. Though the times are different from when the researcher was a student, it would be of interest to look at how S&T students feel about his/her student experience in regards to the support programs that are offered to today's enrolled students.

Research Goals:

1. To determine which academic support programs at VIU have higher S&T student participation.
2. To identify barriers to accessing educational support by students attending the upper campus area for courses.
3. To compare demographic use of these support areas at VIU.
4. To identify academic support programs where S&T faculty /staff at VIU have a low level of knowledge and exposure level to.
5. To identify strategies that might support students and help contribute to academic success.

Importance of the Study

Aside from the Student Experience Survey (SES) issued to students throughout the VIU campuses, there has been no prior study conducted that has focussed on the awareness of and accessibility to educational support mechanisms for S&T Faculty and students. Unfortunately the surveys are not issued annually. The results from previous surveys and information on whether changes were implemented in response to the findings were not forthcoming for this project. It is hopeful that this study will identify important areas of academic support used by students and faculty that work and learn in the upper campus area.

During times of fiscal constraints, faculty are pushed to take part in committees, work in overload conditions and be involved with new campus initiatives.

Conducting a survey that will involve faculty and the amount of time spent directly with students will provide a perspective of how time is managed and utilized in dealing directly with student concerns from the faculty perspective. This may help provide a working framework to the general work description provided in the Vancouver Island University Faculty Agreement (VIUFA).

Research Question

What sources of educational support and barriers to accessibility of identified programs are experienced by S&T students enrolled at Vancouver Island University in Nanaimo BC?

- Sub Problem 1: The first sub-problem is to identify the educational support methods that are in place to assist students enrolled in S&T programs at VIU.
- Sub-Problem 2: The second sub-problem is to evaluate the level to which these support methods are utilized by S&T students.
- Sub Problem 3: The third sub-problem is to identify the barriers to participation in these support programs that students in S&T programs face.
- Sub-Problem 4: To identify other strategies that could be implemented within S&T to provide more accessible and used support programs.

Limitations

This mixed methods study will use a convergent parallel design (Creswell John W. and Plano Clark, 2011). This is a form of design where both quantitative and qualitative data are collected in parallel. The data are analyzed separately however the results are then merged. Data will be collected with the use of on-line surveys and personal face to face interviews. There are two surveys being conducted. One is directly focussed on the enrolled S&T students whereas the second is solely issued to faculty of the same study area. The ability to get students to participate in the on-line survey creates a limitation due to the unpredictable number of respondents.

Due to time constraints of issuing the survey during a busy time in the academic year, it is hopeful that respondents vary in year class, experience and program focus. Students are asked to consider volunteering for interviews during the

introduction to the survey. The purpose of the interview is to gain more insight into the concerns of participating students that hopefully represent portions of the science student body.

The limitation of the interview design is that volunteers must seek out the researcher. The VIU ethics approval does not allow for the researcher to canvass students for this component of the research, therefore it may be that the researcher has a higher response level from students she interacts with.

The study design will not predict outlying barriers, not associated with VIU's Nanaimo campus, which participants may experience in accessing educational support relating to conditions of a more personal nature.

CHAPTER 2 : REVIEW OF LITERATURE

For the purpose of this study, literature was divided into three categories. These categories are based on (1) student satisfaction with the academic environment and, (2) faculty influence on student success, and (3) auxiliary educational supports designed and focussed on improving the post-secondary experience for all students.

Student Satisfaction/ Experience

The Office of University Planning and Analysis (OUPA) has conducted student experience surveys over three years (2012 to 2015). The results are used to inform program review by providing feedback on program strengths and weaknesses. They are also used in the Summative Program Assessment (SPA) by determining how programs/departments compare. Results from the Student Experience Survey were posted on-line regarding the student demographic by faculty and year. The trend has been that the representation of S&T students across the total number enrolled at VIU are approximately 4% domestic, 0.5% International and 0.3% Aboriginal. Over the same duration of time, the majority of this group averages at approximately 58% enrolled are male and the majority age range is represented by students 18 to 21 years old. However students enrolled in science courses range from under 18 years of age to over 65 which covers a wide demographic (Office of University Planning and Analysis, 2015). The ratio of students to faculty is said to be 16:1. It is not clear whether non-teaching faculty are included in this ratio. Unfortunately further information was

not directly available on how the surveys instigated any changes to improve the student experience at VIU.

May and Chubin (2003) determined that there is a connection between the quality of the learning environment and the level of student involvement which is explained as the physical and psychological energy devoted to the academic experience. They indicated that the definition of outcome-based engineering program success relates to the combination of pre-college preparation, recruitment programs, financial assistance, academic intervention and graduate school preparation. Through these four key points, May and Chubin investigated how these related to minority engineering students. Key findings included that there is a huge discrepancy between resources provided to minority students and that there needs to be an increased focus on providing opportunities to all students with significant increases in resources, funding, quality of instruction and computer access. Similarly these circumstances may be relative in preparing British Columbia's minority youth for post-secondary education. Minority students may not only lack role models in his/her chosen field of study but also face or perceive distinct barriers in developing relationships with faculty and other students. It is suggested that through collaborative learning in a classroom may show increased inclusion resulting in improved academic performance, retention, communication skills, improved self-esteem, and improved student satisfaction with the overall learning experience. Other suggestions worth mentioning for increased success amongst a cohort and increased inclusiveness could include (1) a freshman orientation course that provides introductions to similar students

(minority) in order to allow for a development of a support system, (2) clustering of courses that allow for group study as this brings students into a supportive environment and reduces isolation. It must be noted that this is not to create minority only sections (3) Study Centers and (4) Structured Study Groups. (May & Chubin, 2003).

Astin (1984) developed a student involvement theory that had five basic assumptions which included (1) involvement refers to the investment of physical and psychological energy in various objects. These may be very generalized (student experience) to specific (preparing for an exam) (2) Involvement is a continuum (students vary in the level of involvement each has with a subject) (3) Involvement has both qualitative (hours spent studying a subject) and quantitative (level of comprehension and review of a subject) features. (4) Amount of student learning and personal development associated with any educational program is directly proportionate to the quality and quantity of student involvement in a program and (5) Effectiveness of any educational policy or practice is directly related to the capacity to increase student involvement.

Astin described the uninvolved student as one that “neglects studies, spends little time on campus, abstains from extracurricular activities, and has infrequent contact with faculty members or other students”.

Universities are known to focus on the academics that surround the student, however it is important that a student may not weigh the emphasis of his/her university experience in the same way (Elliot & Shin, 2002). This study developed a gap-score analysis for a student satisfaction survey. It was

determined that further research would need to be conducted as like traditional yes/no survey questions, there was still the presence of interpersonal characteristics that affected scoring. For example a question that asks overall satisfaction of the university experience at graduation –could still be affected by a negative experience during a registration process years before that may have no implication on the experience of that same student in a more semester experience.

Faculty influence on student success

Lillis (2011) studied a randomly assigned faculty mentoring initiative to first year students enrolled in an introductory level management course. Lillis' approach focussed on the informal relationships between the faculty and student and how it impacted the resulting behavioural intention of the student and how the relationship was influenced by the faculty mentor's emotional intelligence. The results showed that faculty should look for increased ways to develop and promote supportive dialogue with students. When students interact with faculty mentors on multiple occasions, there is an increase for generating beneficial outcomes regardless of the mentor's emotional intelligence. Historically research has shown that intervention strategies are designed to be directed at the student however this study set out to show that training programs should be directed and designed for faculty on the approach of developing mentoring skills in order to minimize the risk of attrition. The study showed that certain emotional intelligence competencies are more influential of a student's attrition intention

(empathy, influence, inspirational leadership and change catalyst (willingness to try new things).

Astin (1984) acknowledged how administrators and faculty must appreciate how the university's policies and practices affect students' time and academic effort.

Astin also indicated that campuses where the majority of students commute is cause for students to not be as involved in campus activity nor faculty involvement simply because students have other commitments off campus.

Students who interact frequently with faculty have been seen to have a higher satisfaction with all components of their post-secondary experience. It is perceived to be strongly advantageous to an institution to encourage faculty interaction and involvement with students (Astin, 1984).

Elliot and Shin (2002) stated that recommendations made about an academic institution to students' to family and friends are highly related to the experience and interaction between university personnel and the student.

It is said that when students are selected for programs through a rigorous application process, traditional methods of teaching work well (lecture and supplemental lab); however when admission becomes more generalized in order to increase seats, there is more student diversity in the classroom. This diversity includes those students who are not as academically inclined (Biggs, 1999).

With an increase in diversity, there may be a relative increase in the need for faculty awareness and contact with students.

Auxiliary support

Miller and Packham (1999) examined the Peer Assisted Student Support Program (PASS) at the University of Glamorgan where students in 3^d and 4th year are recruited to mentor and support students with academic difficulties in 1st and 2nd year. Mentors encourage students to initiate study groups with peers to help each other with academics. It is advantageous to the University to foster these types of programs and relationships in order to enhance student success. It has been shown that research on peer tutoring (act of learning material to teach someone else) can be an effective way of increasing student mastery in a subject area. Currently there is a peer-support program in S&T at Vancouver Island University, the Math Help Center. It is recommended for VIU to further develop peer support programs in other science areas to promote student success.

Hastings et al (2015) examined the impact of mentoring relationships on generativity in college students. Generativity was defined as contributing to the next generation. The case studies in this study were 4th year college students mentoring students in the kindergarten to grade 12 system. Each pair met once a week for 3 years. The impacts of these relationships formed a large part of the study. Interviews were conducted within those pairs that had recognized a level of generativity that was integrated into everything they did. Results showed that college students who mentor influence others to realize their own strengths and challenge the further development of those strengths.

Part-time work on campus has been shown to promote student retention. These jobs can allow for increased student and faculty relationships, a way for students to practice what has been learned and form an attachment to the campus (Astin, 1984).

With a varying demographic, one must realize the importance of family responsibilities, social and cultural connections within community. At VIU there is a large overall international community (17% of enrolled students) as well as Aboriginal community (approximately 9%). Preston (2008) stated that Aboriginal students who aim to succeed in postsecondary education must be supported by an array of initiatives. For example, successful postsecondary programs include: *“transitional supports into programs, the presence of Elders, Aboriginal resources, Aboriginal instructors and staff members, community-based programs, and curricula and pedagogy reflective of Aboriginal cultural beliefs and value”* (Preston, 2008).

With a large focus by VIU on encouraging Aboriginal students into post-secondary education, it is important that support mechanisms are considered. Malatest & Associates (2010) identified the above barriers along with indigenous students struggling with language differences, the level of family or band responsibilities, lack of role models in the new setting of PSE and separation from the location of remote and rural communities. VIU has made a great effort in implementing a Gathering Place, public longhouse on campus, an Aboriginal peer support group, and hiring Elders (who represent various Canadian First Nation Groups) as faculty.

CHAPTER 3 : METHODS

Data:

Data for this research project will be collected using a mixed methods approach via the use of on-line surveys and personal face to face interviews with students and faculty associated with the S&T (S&T) area. The VIU Student Experience Survey design was utilized to aid in framework of the student survey design. There will be two distinct surveys distributed –one for students enrolled in S&T and the second for S&T faculty. The purpose for focussing the study on those directly involved in the S&T area was in order to gain an understanding and overall perception of those students and faculty directly involved in the upper campus teaching area. The survey process will be the primary method of collecting information and is chosen due to the accessibility and the quicker time frame for responses. Upon completion of the student survey, students are asked to volunteer for a personal interview. Volunteers will be asked to state which year class they are associated with when contacting the researcher. In the case that there is an abundance of volunteers, participants will be selected randomly from the year class group they have volunteered for. This process will ensure that the interview process is not biased to a specific year class in order to have a broadened perspective of the student experience. However, if the volunteer count for the interview process remains low (under 10), then each participant will be interviewed regardless of program focus or year class. Due to the fact that the Ethics approach for the study strictly states that the participation for the

survey must be left up to the student to volunteer for this, any bias is strictly a result of the process and not written into the design of the study.

The interview process is designed to provide a framework of questions to guide the participant to tell his/her individual story of the experience of being a student at Vancouver Island University.

Research Ethics Approval:

This study was reviewed and approved by the Institutional Review Boards located at VIU and at University of Wisconsin Stevens-Point (UWSP), for the Protection of Human Subjects. Copies of the Ethics Approval received from VIU and UWSP are found in Appendix A.

Based on the boards' request all data was collected anonymously or anonymized in the case of face to face interviews. It was also requested that there was to be no mention of individual employees (faculty, administration or support staff) of Vancouver Island University. Each participant received a consent form. See Appendix B for copies of the Consent Form issued for survey and interview participants.

Research Design and Methodology:

The research has been designed using a mixed methodology approach. Data from interviews and questionnaires will be collected, correlated, analyzed and then explained.

Student Survey and Interview Procedures:

1. Prior to survey roll-out, faculty were recruited to help introduce the survey and its purpose to students in classroom environments. These volunteers were well versed on the project goals, privacy protocols and contact information (recruitment letter to students that identifies where to locate the survey online). This was to maximize student participation amongst the S&T programs at VIU as the researcher could not physically interact with each student in a class setting.
2. Participating students were asked to independently access the on-line survey at the link indicated on the handout they received from S&T faculty.
3. The cover letter of the survey outlined the terms of consent. It was made clear that the information will be anonymous. The terms were followed by a statement as follows, "The submission of your completed survey indicates your consent to participate in the survey portion of this research and for the information you provide to be used in study results."
4. Due to the anonymity of the survey, volunteers were asked to contact the researcher to participate in an interview. It was made clear that a representation of the student volunteers would be anonymously selected to take part in the interview, however if volunteer numbers are low (less than 10) all may be interviewed without any selection process. Otherwise selection criteria will require the volunteer to identify which year class (first year student or other) he/she belongs in order to avoid over representation of a specific year class. This will help the researcher gain a perspective of overall student experience.

5. Participants for the interviews will receive a hard-copy letter of consent. Each participant along with the researcher will receive a signed copy. The letter of consent will ensure participants understand that the information provided will be anonymized and that he/she would be required to verify accuracy in the information provided prior to it being used as a portion of the study.

6. Interviews will be recorded and notes made for coding to ensure the process is anonymized. Verification of the interview transcript by the participants will be requested to ensure accuracy in the documentation process prior to analysis.

7. Results from the surveys will be presented in tables to clearly show the responses. Open ended questions will undergo a thematic analysis in order to categorize responses.

8. Results from the interviews will undergo a thematic analysis when looking at the open ended questions. (Example suggestions for future support systems may include specific faculty/student lounge, upper campus computer stations; increased study areas and further development of peer mentoring and tutoring opportunities)

9. All data that is collected will be analyzed with the use of Microsoft Excel and Quantitative analysis software, SPSS, and interpreted using peer-reviewed literature.

Both the survey and interview will request that participants avoid identifying individual VIU faculty, administration or support staff in the process. The following statement will be made clear at the very start of the survey and prior to

interview start: "Please refrain from naming or discussing individual VIU employees (faculty, administrative or support staff) in the survey/ interview process"

Faculty Survey:

- 1) Two faculty members will be contacted to pilot the survey for feedback.

This pilot assisted in checking readability of the survey and the necessary time frame to take the survey.

- 2) All S&T faculty will be contacted by email and asked to participate in a short survey. The email will outline the terms of consent. It clearly states that " Submission of the completed survey indicates consent to participate in the survey portion of this research and for the information provided to be used in the final study results."

2) The survey is completely anonymous in order to encourage a higher completion rate.

3) The results from the survey will be entered into the Microsoft Excel database for reporting and for conducting comparative analysis.

Data Collection

Students in eleven S&T departments (400 students) will be provided access to an on-line survey. Faculty of these departments will be provided access to a separate on-line survey at the same time. Duration for collection of data will be approximately 6 weeks. The data in both surveys will be collected with the use of Simple Surveys, an on-line program. It was important to select this program

since it is a Canadian company. This program was highlighted by the VIU Research Ethics Officer as being reputable and one that is commonly used by current VIU faculty.

It is hoped that a minimum of 10 participants will be selected from a group of volunteers to conduct a face to face interview. Interviews should take no longer than half an hour. The participants will be asked to verify that the transcribed information is correct. The interviews will be recorded using an Olympus Handheld recorder and transcribed by hand from the recording.

Data Analysis

There are two different methods of data analysis that will be used in this study. Descriptive statistics will be used to summarize the data and enable comparisons between the responses found in the surveys. The Simple Survey Program used in the on-line survey process collates the data and delivers it in a Microsoft Excel Spreadsheet form. This format will make it reasonable to use the quantitative analysis software program, SPSS, to analyze the data and examine congruencies and/or discrepancies in the data.

Interview transcripts will be anonymized and undergo the process of thematic analysis in order to make comparisons between student experiences with educational support while attending VIU. Thematic analysis is a method used in Qualitative research that emphasizes the recording of patterns within the data. Six phases of thematic analysis include the familiarization of the data, generating

initial codes, searching for themes amongst the codes, reviewing the themes, defining and naming the themes and finally producing the report (Clarke, 2013).

Tuckett, 2005, explains how in his research this involved the comparison of pieces of data judged to belong to a particular theme, in an effort to recognize the common features of that theme. Incidents or events were coded (labelled) in terms of as many themes as were relevant and then these incidents or events within the theme were compared. Tuckett describes how the themes became guides for further analysis (Tuckett, 2005). The transcripts in this study will be analyzed qualitatively through a similar process to examine for common themes drawn from the dialogues. Themes will be categorized as they appear in the transcript. Once coded, the material will be examined for similarities. These similarities will identify the major themes for the project.

CHAPTER 4 : RESULTS

The purpose of this study was to determine the sources of academic support that students enrolled in programs within S&T at VIU, Nanaimo campus are aware of and access. Faculty were also surveyed to determine level of awareness of academic support on campus as they tend to be viewed as a main student contact and link to campus offerings. There were three methods of collecting data: 1) Faculty Survey, 2) Student Survey and 3) Student Interviews.

This chapter highlights the results from the three data collection methods and displays the results from the thematic analysis of the open-ended questions found within the surveys and the interview process.

Faculty Survey

Surveys were emailed to seventy-six S&T faculty on March 21, 2016. There was a 20% response rate to the survey (15/76). 73% of respondents indicated that they had worked at VIU for over 5 years.

The faculty respondents were asked to identify whether he/she had an awareness of the VIU support programs on the Nanaimo campus. Table 4.1 shows the results of this question.

Support Program at VIU	Awareness of Program (n=15)
Disability Services	15
Discipline Specific Clubs	14
Advising	14
Library (Reference Librarians)	14
Math Help Center	14
Writing Center	14
Elders in Residence	13
Registrar's office	13
Shq'aphut Gathering Place	13
Student Services	13
Student Union	13
Peer Tutoring	12
Lunch hour sessions with VIU Counselling	8
Program Facebook sites	8

Table 0.1 Faculty Survey: "Please check all of the corresponding VIU programs that you currently have an awareness of"

One faculty member indicated that he/she had never referred a student to a program Facebook site, but had referred students to the program webpage.

Another indicated being unaware of the lunch hour sessions with VIU counsellors regarding study habits.

Those two programs are not advertised widely. Facebook is up to independent faculty to put together for their department area in order to support students in the relevant program. Lunch hour sessions are advertised in the Events

Calendar of the main VIU website. Faculty may or may not read the upcoming events available to students during lunch hour sessions.

Referrals made by Faculty to students for one of the services listed in Table 4.1		
Duration	Respondents (n=12)	Percentage of respondents
Daily	0	0%
Weekly	3	25%
Monthly	5	41.6%
Annually	4	33.4%

Table 0.2 Faculty Survey "How often do you refer students to one of these services?" Overall Table 4.2 shows that the level of referrals made on average are quite infrequent by faculty members. One respondent indicated not being teaching faculty and yet refers students to one or more of the services on a weekly basis. One faculty member commented that *"at the beginning of the fall semester I tell the cohort about the services available"* however other faculty members indicated that they referred students to a service *"sporadically"*, *"occasionally"* and *"never up until now"*.

Frequency that faculty meet with students during office hours		
Frequency	Number of respondents (n=15)	%
Five times or less per week	6	40%
Six to ten times per week	5	33.33%
Eleven to fifteen times per week	1	6.67%
Sixteen to twenty times per week	3	20%

Table 0.3 Faculty survey, "How often during a typical week do you meet with students during your office hours?"

When asked how often during a typical week one met with students during scheduled office hours, responses ranged up to a possible twenty times a week, however; the majority showed less than 5 times.

Faculty were then asked to provide suggestions for what S&T faculty could do in order to improve the ways we support students enrolled in our programs. The following are presented in Table 4.4. Each comment was categorized for either an academic or social support. Academic support suggestions were examined for emergent themes. These were identified as increased awareness of supports, peer tutoring, computer labs and faculty accessibility. One faculty member wrote, *"I am beginning to believe that we may be too supportive in many ways- that rather than solving problems for themselves students often take the easy solution and just go and ask their professor (whose door is most likely open), rather than attempting to find their own answers or solutions. I suspect we need to be slightly more hands off – and rather than preventing students from falling we need to be there to catch them when they do. Provide support when needed and not simply on demand."*

Suggestions made by S&T faculty/staff on what could be done in order to improve the ways students enrolled in our programs are supported : (n=7)		
Academic Support		Frequency
Increase Awareness	Make students more aware of the support programs “down the hill”	2
	Let students know at the beginning of each term where to seek out support, such as Dean's office.	
Peer Tutoring	We could use more peer tutoring opportunities similar to the math center, for biology and chemistry	2
	Offer peer study programs hosted by a variety of science programs not just the math center held in the upper campus	
Computer labs	Offer more computer workstations or labs in the upper campus	2
Faculty Accessibility	Provide support when needed – not simply on demand	1
New Course	Offer a seminar course to expose them to current science research and researchers or post grad opportunities	1
Career	Offer science specific career advise	1
Study Areas	Offer more quiet and group study areas	1
Social Support		
	Offer occasional student and faculty functions	1
	Coffee kiosk in the upper campus area	1
	More outside sitting areas	1

Table 0.4 “Do you have suggestions for what S&T Faculty/staff could do in order to improve the ways we support students enrolled in our programs?”

Results show that S&T faculty believe there are areas that require improvement to further assist students and improve the post-secondary experience for those taking courses in the upper campus area.

Student Survey Results

Surveys were issued to 400 students enrolled in S&T courses during class time in the last few weeks of March and early April 2016. The total number of respondents was 70. This was equivalent to an 18% return rate of the survey during this busy time of the term. The following Figures 4.1, Figure 4.2 and Table 4.5 show the demographics of the seventy respondents:

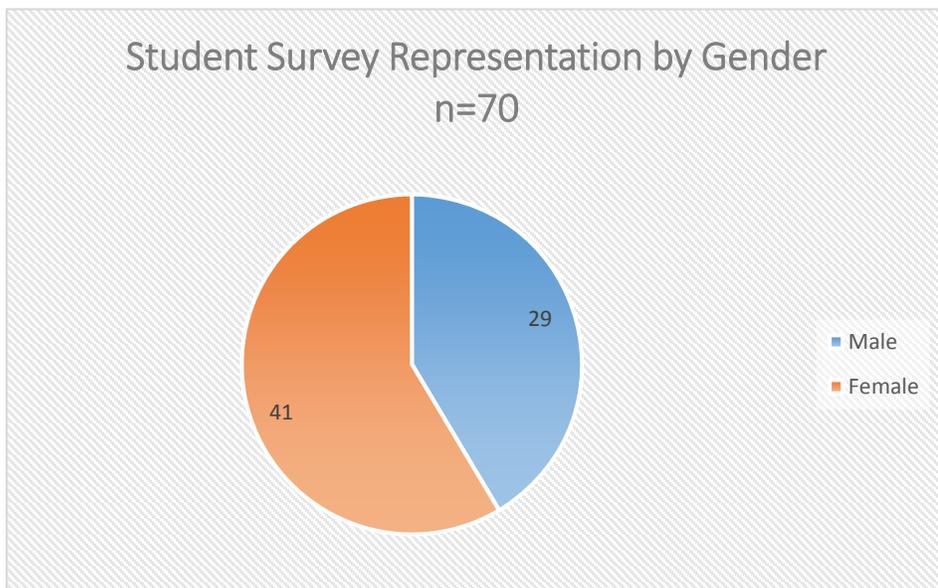


Figure 4.1 : Student Representation by Gender

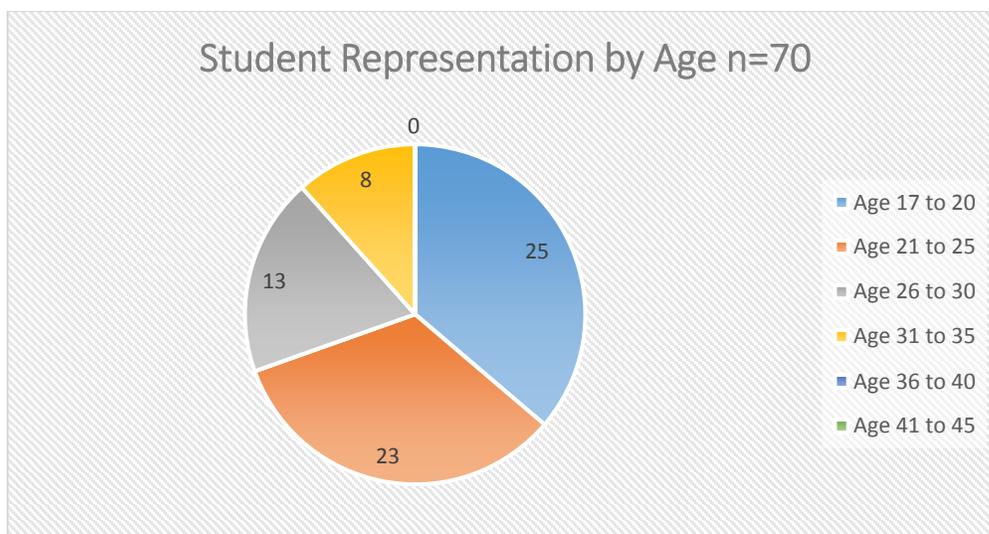


Figure 4.2 Student Survey Age Distribution of Respondents

Student Respondent Demographic : Ethnic Group Association (n=69)	
Ethnicity	Respondents
Caucasian/European	65
Asian	4
Other: Caucasian and Asian	1
Other: Canadian Aboriginal Metis	1

Table 0.5 Student Survey: "Which of the following ethnic groups do you identify with?"

73% of respondents indicated they maintained a residence off campus but within the Nanaimo city limits. 21% commute to the Nanaimo campus from outside the city and the remaining 6% live in residence. The majority of students indicated that they had attended Vancouver Island University for two to four years with the majority projecting a graduation date in 2017 (21%).

79% of respondents indicated that they had not been involved in a specific program or course that helped prepare them for post-secondary education.

Programs represented in the study are shown in Table 4.6.

Identified Program Department at VIU (n=69)	
Program	Number of respondents
Biology	30
Resource Management and Protection	24
Chemistry	11
Fisheries and Aquaculture	6
Forestry	5
Computer Science	5
Math	4
Earth Science	3
Physics	3
Other : Geoscience	1
Other: Engineering	1

Table 0.6 Student Survey: “Which program faculty do you identify with in S&T?”

In Table 4.6 the number of responses exceeds total of 69 (number of participants who completed this question) due to students associating with more than one program indicating both a major and a minor. Overall, 57% of respondents rated their experience as a student at VIU as high, 18% rated it as exceptional.

Awareness of Support Programs at VIU (n=70)	
Support Program at VIU	Respondents
Library (Reference Librarians)	69
Student Union	66
Writing Center	63
Math Help Center	62
Advising	55
Registrar's office	55
Student Services	52
Disability Services	50
Discipline Specific Clubs	49
Shq'aphut Gathering Place	35
Peer Tutoring	34
Program Facebook sites	27
Lunch hour sessions with VIU Counselling	16
Elders in Residence	9
Other: Career Center	1
Other: Counselling	1
Other: Positive Space Alliance	1

Table 0.7 Student Survey: "Please check all of the following support programs that you have used/accessed during your time at VIU?"

As seen in the faculty survey, the student survey also asks students to identify the support programs at VIU that they are aware of. The highest level of awareness amongst students of where they feel supported included the Reference Librarians, Student Union and the VIU Writing Center. The lowest level of awareness was in regards to the lunch hour sessions offered by VIU

counsellors on study habits and the Elders in Residence Program. It would be recommended to further promote these services in order to improve effectiveness and opportunity. Other programs that were identified were the Campus Career Center, Counselling and the Positive Space Alliance (though the preceding two may be considered as not direct academic support programs).

Support Programs Used/Accessed at VIU (n=65)		
Support Program at VIU	Respondents that Directly Accessed Program	Percentage
Library (Reference Librarians)	46	71%
Student Union	45	69%
Advising	36	55%
Registrar's office	27	41.5%
Math Help Center	25	38%
Discipline Specific Clubs	23	35%
Writing Center	19	29%
Student Services	18	27%
Program Facebook sites	13	20%
Welcome Center	7	11%
Peer Tutoring	6	9%
Disability Services	4	6%
Lunch hour sessions with VIU Counselling	3	5%
Shq'aphut Gathering Place	2	3%
Elders in Residence	0	0%

Table 0.8 Student Survey: "Please check all of the following support programs that you have used/accessed during your time at VIU."

The majority of programs identified for use in the study showed that students accessed them. However, only one program was identified for not being used by all 70 respondents, the Elders in Residence. This is mostly due to the relationship of the ethnic groups identified as respondents in this survey (Only one participant identified as Metis). All programs were identified by at least one respondent as either not having enough information to understand how it relates to him/her or that it had not been accessed before.

Students were asked how they accessed faculty support. Contact with faculty was identified in several ways. (Table 4.9)

Access to Faculty Support at VIU (n=69)	
Method of Access	Number of Respondents
Electronically through Email	65
During Office Hours	55
In the classroom near the end of instruction time	53
In the classroom prior to instruction start up	34
Outside Office Hours	28
Telephone	6
Other: on my own time	1
Other: Faculty always makes time	1
Other: Email is paramount, rest is secondary	1

Table 0.9 Student Survey: "How do you Access Faculty Support?"

Sixty-nine respondents answered the question pertaining to contacting faculty. Due to the multiple responses, it clearly indicates that faculty are available to students through a variety of contact methods.

Out of 70 respondents, fifty-two individuals indicated that they had utilized the Program Degree advisor in the department of his/her main course of study and yet 64 had not utilized or were unaware that the support staff in building 360 are available to assist in locating educational supports or tutors.

Students were asked about experiencing barriers that keep him/her from accessing academic support at VIU. The results from this question are presented in Table 4.10.

Barrier to Accessing Academic Support	Number of Respondents (/53)
Timetable	31
I don't know how the programs fit my needs	31
Work Obligations	14
Commute Time	13
Physical Location of Services on Campus	13
Family Obligations	5
Other: No barriers just don't need most of them	1
Other: Too much homework; too little time	1
Other: Yes, very little tailored to mature students	1
Other: no	1
Other: I can work around any of the above conflicts	1

Table 0.10 Student Survey: "Do you experience barriers that keep you from accessing the academic support programs at VIU? (Select all that apply)"

From the fifty three respondents that addressed this question, the majority indicated at least one barrier affected his/her access to support programs offered at VIU. It is understood that each student's experience with post-secondary education is individual. With the diverse range of students attending VIU, it is worthwhile to understand what the barriers may be.

Overall rating of Experience with Educational Support at VIU	
Choice	Total Respondents
Excellent experience	15
Good experience	26
Satisfactory	19
Poor experience	1
Unable to Rate	9

Table 0.11 Student Survey: “How would you rate your overall experience with educational supports at VIU?”

Overall students rated the support programs on campus as satisfactory to good. Due to the range of science programs on campus and the different experiences and individuality of the educational path each student has set, it was important to ask for suggestions on how to improve the student experience regarding support programs. The main goal was to get an idea of what is truly important to the S&T students overall. The suggestions are presented in Table 4.12.

Suggested Improvements for the upper campus to improve student experience (n=34)		Frequency
Academic Support		
Computer labs	Needed in the upper campus area	8
Lab time	Additional lab time or access	4
Increase Awareness	More information on resources and how they apply to my program	4
Peer Tutoring	Multidisciplinary help center (Chemistry, Biology, Physics)	7
Career	Having career advisors more available to upper campus	5
Study Areas	More study areas (including discipline specific areas to study)	8
Social Support		
	More food services. It's hard to study when you are hungry and don't have time to run down to the cafeteria to grab food	4
Other		
	Parking, Flexible scheduling	5

Table 0.12 Student Survey: "If asked to suggest other options for the upper campus that would have improved your student experience (regarding educational support), what would you suggest?"

The results show that science students feel there are direct needs for the upper campus area in order to improve the overall student experience.

Student Interview Results

All survey respondents were asked to consider volunteering for an interview with the researcher. Out of the 70 respondents, eight volunteered. Though there were some similarities between a few of the respondents, overall those interviewed were quite diverse in educational background and experience.

Respondents represented a range of post-secondary experience (first year to entering into a fifth year at VIU). Interviewees represented diploma and bachelor degree programs. A few had prior post-secondary experience from other institutions so were able to provide insight to the comparable experience that was had elsewhere.

All interviews were recorded using an Olympus handheld mini recorder.

Interviews were transcribed and proofed by participants for accuracy. Once the transcript was approved by the participant, the script was examined for common themes and coded appropriately.

The following table provides the results of the open coding analysis of the eight interviews. The process of data reduction that occurred during thematic analysis has drawn out the main congruencies between all interviews. The major categories that emerged in this process included support systems at VIU, VIU Communication, Faculty, Program Structure, Engagement Outcomes, Barriers and Recommendations.

Major Themes and Associated Concepts Derived from Student Interviews (n=8)		
Major Categories	Associated Concepts	Frequency
Academic Support at VIU	Library, Math Help Center, Writing Center, SOS : students offering support, ABE: Adult Basic Education, Toastmasters, Peer Support	32
Electronic Support	Website, Facebook, Email, D2L	9
Social Support	Intramurals, Extracurricular activities, Clubs	8
Faculty Support	Accessibility, Approachability, Knowledge of supports	30
Program Structure	Cohort Model, class size	7
Engagement Outcomes	Social, Peer Mentoring	12
Barriers	First year struggles, schedule, transit/parking, computer access, library access, location, faculty access	14
Recommendations	Classroom structure, Peer help centers, computer access, library hours, Food services, Science lounge, Study areas, student input	22

Table 0.13 Student Interviews: Major Themes

The top two categories from the results of the thematic analysis shown in Table 4.13 reflect the importance of a variety of academic supports available to students, as well as the importance of the accessibility to faculty support. For those that identified the

importance of peer mentoring there was a distinct relationship between receiving the assistance to later being able to participate as a mentor. Barriers identified through the student interview process included first year struggles, scheduling, transit/parking, computer access, library access, location, faculty access. First year struggles involved students being overwhelmed with workload, the campus environment compared to high school, and the feeling of intimidation to approach a faculty member for assistance or direction. Many of these barriers are very real to those attending post-secondary education for the first time.

Recommendations that emerged from this included having space for science students (from all faculties) to study, meet and see each other. This would be a value-added to the experience of all science students instead of remaining in the study silos created to group study in the other locations on campus since nothing like this exists in the upper campus area. Even those programs with designated study areas (Biology “Fishbowl” in building 370) identified the need for an area that would hold more students and allow the interaction and mixing of a variety of students. Students recognize that there is an external program “Students Offering Support” (SOS) on campus that sets up study sessions for a variety of science programs –however it also became clear that the students who can’t afford to pay for this program would appreciate other peer centers for many of the science subjects aside from what is already offered through the Math Help Center. Currently the SOS program charges \$20 depending on what is offered during the exam study session. The recommended fee is between \$15 and \$30. (About Exam-Aid Sessions, 2012)

CHAPTER 5 : CONCLUSIONS AND RECOMMENDATIONS

This study sought to identify whether students and faculty within S&T had an awareness of the academic support systems at the Vancouver Island University campus located in Nanaimo, British Columbia, (2) the accessibility of these support systems, along with (3) identifying any barriers that affected the use of the support systems by S&T students. In order to conduct this study, it was designed with three phases of data collection: The Student Survey, Faculty Survey and Student Interview. The open-ended responses for the surveys along with the interview allowed for all to be analyzed using a thematic coding process. This chapter will provide an interpretation of the results, and offer recommendations for future research.

Interpretation of Results

Results from the analysis of the surveys along with the interviews showed an emergence of distinct similarities. Many of the recommendations put forward in order to improve the student experience in the upper campus were identified by both faculty and student participants. It became apparent that for the majority of both faculty and students, programs were recognized and awareness was high in regards to the academic supports offered at VIU. Where awareness of a particular program (examples to follow) was low, this may have been due to the demographic of respondents. For example, the low awareness and low usage of Shq'apthut: A Gathering Place, a services center for Aboriginal students and community, was most likely due to the fact that only one student self-identified in

the survey as being Metis. It was also clear that both students and faculty were not fully aware of the various lunch hour sessions offered through the Counseling Center for study habit improvement. This may be due to lack of visible advertising on these events.

A common thread that emerged with students was the importance of subject-specific help centers. Students liked the fact that peers were helping them – students like themselves—and more so the fact that when they got more experience, opportunities were available to them to give back to the first and second year cohort. As one student stated, "*the more integrated one gets, the easier school becomes.*" Six out of the eight interview participants identified first year struggles and the importance of talking to peers that had been through similar experiences. Results from the study completed by Collings, Swanson, & Watkins, 2014, showed that peer mentoring has several positive effects on the levels of social support and self-esteem thus an effective tool in retention and providing a level of support to incoming first year students.

Students and faculty explicitly indicated the need for a science social space (upper campus coffee area, lounge or outdoor seating) to interact with each other and provide that common place for peer support. Discussions held in such an area would be interdisciplinary. It was suggested that it would be beneficial to have services offered within one of the buildings in the upper campus for appointments –i.e. career advice, specific peer program support structured similar to the Math Help Center. These services could be science focused in order to improve and foster student success.

Another factor of importance was regarding faculty support. Though one faculty member stated that faculty were too available to students, it was clear that it was a major factor in student satisfaction to have that contact and approachability with their professors. It has been found that in a previous study (Guerrero & Rod, 2013) many instructors feel the strain on personal resources for the ability of finding time for students along with meeting demands to conduct research or participate on committees. It was clear that students accessed faculty outside office hours when it was convenient to them. Students found that scheduled faculty office hours conflicted with student course schedules, as seen in the study conducted by Guerrero and Rod, 2013. It is recommended that each Science and Technology Department look at the demands on each faculty member and look at the potential to develop a distribution of faculty duties to meet institutional, research and community demands to ensure appropriate resources are available to the students.

Students seemed to thrive on the idea of small class sizes, increased faculty interaction, the availability of faculty and both the personal knowledge and connections that develop. This is apparent in one previous study conducted by Wirt and Jaeger, 2014, that having learning communities encourages student engagement. One participant stated that the connections with faculty provided “*increased accountability*” in one’s own courses; something one would not get at a bigger institution where students are identified by a number and only have interaction with a teacher’s aide.

It is very important to all faculty within S&T to realize the important role each plays in the academic success of the students. It is apparent that the importance of classroom structure (small class size equals a “cohort”-like experience), and faculty approachability play a large role in the positive experiences offered at VIU. It needs to be recognized that in this competitive academic market, it is the student that may offer the key to continuing and improving future success at VIU. Students identified similar barriers to those experienced by the researcher back in the late 1990’s that included timetable, location of services, and commute times that are still faced today.

A minor point, but still worth mentioning is the use of social media, Facebook in particular as a support mechanism. Facebook was not deemed to be highly referred to by faculty for student assistance, however students claimed to use Facebook and program websites for social support and up-to date program information daily. Raacke and Bonds-Raacke (2013) showed that due to the amount of time students access FB daily, it is an effective support method for the development of student social structure.

Conclusions and Recommendations

There were three main limitations of this study. One was the small sample size of participants, second was the timing of the study’s implementation (late March to early April) when students are under pressure and stress to complete projects and prepare for final exams; thus faculty are also under duress of marking and preparing final classes; and finally thirdly the results from previous studies done at VIU were unavailable for use in this study. To address these limitations, it

would be recommended to repeat the study early in the spring semester to ensure participants had post-secondary experience at VIU as well as avoid conflicts with time management during the term when other assignments and exams are due. If the study were conducted internally, there may be further information available from past research gathered.

There are many interesting areas this study has outlined which may require further research in order to improve the student experience for S&T students in the upper campus area. It is apparent that the students who participated in the study were enthusiastic about their experience at VIU *however the survey indicated that the experience here was rated as great and not exceptional*. This would be an area that would require further study in order to find out what is lacking in the student experience. It is hopeful that in the competitive market of post-secondary education, the student experience rating could be improved with a better understanding of what is effecting the results.

Earlier it was indicated that faculty feel the strain of maintaining student contact, office hours, along with other work commitments. Further study would be beneficial here to gain an appropriate perspective of the demands on faculty time. It is important to maintain a beneficial environment to the students therefore, VIU needs to identify a manageable faculty workload in order to meet all work obligations. It could also be recommended that further training is offered or identified for faculty in order to provide methods of assistance for all students enrolled in respective courses. (Be inclusive and time effective). If more

students are visiting faculty outside office hours, this could be rectified in scheduling allowing less faculty time to be disrupted.

The information collected in this study detailed a variety of experiences students have in taking courses in S&T programs, it is recommended that further research be conducted due to the small number of respondents in all areas and to ensure a representation of all demographics.

Only a few S&T programs offer Facebook sites. The trends for social media usage will increase in future, so this may be an area that needs further development for individual programs at VIU. It may be useful to encourage further faculty training on developing sites that are inclusive to its students and offer the supports and mechanisms that are necessary to develop social support in all programs.

Finally, it is recommended that a space be located on the campus that may offer a social area for S&T students to gain support from peers and faculty. .

In summary, here is a list of recommendations for improvement to the current ways that S&T students are supported in order to foster future student success:

1. Examine and compare the results from this project with the results from the previous student experience surveys conducted by VIU.
2. Repeat the study early in the spring semester to avoid conflicts with other assignments.

3. All science departments should be encouraged to participate in the study to ensure that faculty and students have a say in this process in order to improve current and future student success.
4. Faculty should create office hours at times when the majority of students they serve, would have access.
5. Faculty should receive up-to-date information and training on the support programs available to science students. This training should include how to facilitate the referral process to support services in order to meet student needs.
6. A social space should be allocated for S&T faculty and students. This could include, but not be limited to, increased outdoor seating, refreshment area or lounge setting.
7. Facebook and other forms of social media should be developed for S&T students.
8. Further study is recommended in order to determine what a reasonable faculty workload is by VIU standards. Faculty have numerous duties in order to meet the demands of students, departments and administration. There is potential to develop a distribution of faculty duties to meet institutional, research and community demands to ensure appropriate resources are available to the students.
9. It is recommended that VIU look at how to get other support services available in the upper campus in order to increase access.

10. Administration should recognize that small class size, hands-on learning and faculty approachability are key factors in the success of VIU.
11. Development of a science help center that represents departments not currently involved in the Math Help Center. Student peer mentors coordinated by participating departments could be quite successful if provided an appropriate space for attendance.

APPENDIX A

Research Ethics Board Approval

- 1) Letter from Vancouver Island University REB
- 2) Scanned Email from University of Wisconsin – Stephens Point IRB

Vancouver Island University
Research Ethics Board Approval



VANCOUVER ISLAND
UNIVERSITY

February 29, 2016

Sarah Greenway
Masters of Science in Natural Resources Program
University of Wisconsin
2100 Main Street
Stevens Point, WI 54481
United States

Dear Ms. Greenway:

The Vancouver Island University Research Ethics Board is pleased to grant approval for the project entitled "Measuring Sources of Support for Students enrolled in Science and Technology Programs at Vancouver Island University," as submitted for review by Dr. Dennis H. Yockers, University of Wisconsin - Stevens Point, on December 4, 2015 and as revised and resubmitted on December 17, 2015.

Please be aware of your obligation to carry out the research as stated in the revised proposal and to comply with the regulations of the Schools and School District involved in your research. Guidelines as posted on the website at <http://www.viu.ca/reb/guidelines.asp> must be followed for all submissions.

Sincerely,

Aggie Weighill, Ph.D.
Chair, Vancouver Island University Research Ethics Board

VIU REB Reference No.	2015-059-UOWS-GREENWAY
Date of Approval	February 29, 2016
Date of Expiry	February 28, 2017

Please sign the acknowledgement below, print and retain a copy for your records, and return the original to:

Research Ethics Officer
Bldg. 305 – Rm. 452
Vancouver Island University
Nanaimo, BC V9R 5S5

As researcher(s) I (we) hereby agree to carry out the research in an ethical manner as outlined in the approved proposal submission. If I (we) need to make changes to the methodology and/or recruitment and consent procedures, I (we) will request an amendment from the VIU REB. If the project runs longer than one (1) year, I (we) will submit a request for continuing review (renewal) to the Ethics Officer one (1) month prior to the expiry date indicated above. At the end of the project, I (we) will notify the VIU Research Ethics Officer that the study has been completed and that the file can be closed.

Sarah Greenway
Masters of Science in Natural Resources Program
University of Wisconsin

February 29, 2016

*University of Wisconsin
Research Ethics Board Approval*

6/2/2016

your project

your project

Palmer, Debbie

Sent: March 18, 2016 7:25 AM

To: Greenway, Sarah M

Cc: Courtney, Sharon; Yockers, Dennis

Hi, Sarah. Now that we have received the hard copies of your protocol that was approved by the VIU's IRB and Dennis has completed the CITI SBE basic course, our IRB at UWSP has all of the necessary information about your project. We acknowledge the approval of your project at VIU and wish you well as you complete your research.

Let us know if you have any questions.

Sincerely,

Dr. P.

Debbie Palmer, Ph.D.

Professor, Psychology Department

Chairperson of the IRB

SCI D240 (Main Psychology Department)

SCI B303 (My office location)

University of Wisconsin-Stevens Point

Stevens Point, WI, 54481

715-346-3953

APPENDIX B

Research Consent Forms

- 1) Student On-Line Survey Recruitment Letter Handout
- 2) Student On-Line Survey Consent Form
- 3) Faculty Recruitment Email
- 4) Faculty On-Line Survey Consent Form
- 5) Student Interview Consent Form

RECRUITMENT HANDOUT

Research Study Seeks Participants

Identifying Sources of Support for Students enrolled in S&T Programs at Vancouver Island University

Dear Participant:

In addition to being a faculty member at Vancouver Island University, I am currently enrolled as a student at University of Wisconsin in the Master of Science in Natural Resources program. As a requirement for my degree, I am conducting a research study as part of my final project. This project may be of interest to you. I would appreciate your assistance in participating in the survey as it would help me fulfill a final requirement in attaining my MSc degree.

Please be aware that, your participation in this research study is completely voluntary. There will be no consequences to you if you choose not to participate. If you do choose to participate, the study will involve completing an anonymous survey online that will take approximately 5 to 10 minutes.

Participants are asked to contact the researcher if interested in volunteering to be interviewed on his/her individual student experience at Vancouver Island University. Volunteers will be asked to indicate years at VIU (first year, second year student etc.) Participants will then be selected randomly from the group indicated in order to have a representation of varying academic experience. Of these volunteers, only those selected will be contacted and will be required to participate in a face to face interview that could take a minimum of 20 minutes. Volunteers will be asked to respond to a few demographical questions to ensure representation is not focussed on a specific faculty or student minority group during selection for participation. Interview participants are asked to contact researcher.

It is hopeful that the results of this project will lead to identifying ways to improve future student success and educational support systems.

If you have any questions about the research study, please don't hesitate to contact me.

Thank you for considering participating in this project.

Sincerely,

Sarah Greenway

Email: Sarah.Greenway@viu.ca

Phone: 250-753-3245 ext 2453

REB Approval #: 2015-059-UOWS-GREENWAY

LINK TO STUDY IS: <http://tinyurl.com/zoq5cdb>

Sources of Educational Support for S&T Students

Consent Form for Survey

*Sarah Greenway
900 Fifth Street
Building 359
Nanaimo BC
V9R 5S5
250-753-3245
Fax # 250-740-6482*

Dear Participant,

As a component of my Master's Degree in Natural Resources, at the University of Wisconsin, Stevens Point Campus, I am undertaking a research project that involves conducting a survey to help measure sources of educational support for students enrolled in S&T programs.

During this study, you will be asked to complete a number of questions concerning your experience with internal and external sources of support throughout your educational experience. You will also be asked a few questions regarding demographics (gender, age). The survey should take 5 to 10 minutes.

There are no known harms associated with your participation in this research. The potential benefits of this project are to identify areas of potential improvement for future student success.

All of the information gathered from participation in the survey will remain confidential such that only my supervisor and I will have access to the information. The on-line survey will be conducted using the software program "Simple Surveys". Security settings on the software will be set to not collect IP addresses or email addresses. Data will be shredded and deleted one year after project completion by July 31, 2017. This project will be submitted in a report format and delivered in a presentation to interested faculty at VIU and via skype to the panel in Wisconsin during the summer of 2016.

Results would be made available to participants on request and could also be potentially delivered to interested faculty at Vancouver Island University during the academic year of 2016-2017. Your participation is completely voluntary. You may withdraw at any time for any reason without explanation and without penalty. You may choose not to answer any question for any reason.

If you have any concerns about your treatment as a research participant, please contact the VIU Research Ethics Officer by telephone at 250-753-3245 ext 2665 or by email at reb@viu.ca.

If you have any question about this research project or would like more information, please feel free to contact me.

Sincerely,

Sarah Greenway
(sarah.greenway@viu.ca)
IRB Approval #2015-059-UOWS-GREENWAY

“The submission of your completed online survey indicates your consent to participate in this research and for the information you provide to be used in study results.”

*** The submission of your completed online survey indicates your consent to participate in this research and for the information you provide to be used in study results.**

I agree to consent that the information I have provided during my participation in this survey, can be used in the results portion of the study

FACULTY RECRUITMENT EMAIL

Research Study Seeks Participants

Identifying Sources of Support for Students enrolled in S&T Programs at Vancouver Island University

Dear Faculty Participant:

In addition to being a faculty member at Vancouver Island University, I am currently enrolled as a student at University of Wisconsin in the Master of Science in Natural Resources program. As a requirement for my degree, I am conducting a research study as part of my final project. This project may be of interest to you. I would appreciate your assistance in participating in the survey as it would help me fulfill a final requirement in attaining my MSc degree.

Please be aware that, your participation in this research study is completely voluntary. There will be no consequences to you if you choose not to participate. If you do choose to participate, the study will involve completing an anonymous survey on-line that will take approximately 5 to 10 minutes.

It is hopeful that the results of this project will lead to identifying ways to improve future student success and educational support systems.

If you have any questions about the research study, please don't hesitate to contact me.

Thank you for considering participating in this project.

Sincerely,

Sarah Greenway

Email: Sarah.Greenway@viu.ca

Phone: 250-753-3245 ext 2453

REB Approval #: 2015-059-UOWS-GREENWAY

LINK TO STUDY IS: <http://tinyurl.com/juo4mvb>

Consent Form for Student On-Line Survey

March
2016

Dear Faculty Participant,

As a component of my Master's Degree in Natural Resources, at the University of Wisconsin, Stevens Point Campus, I am undertaking a research project that involves conducting a survey to help measure sources of educational support for students enrolled in S&T programs.

During this study, you will be asked to complete a number of questions concerning your experience with internal and external sources of support throughout your experience working at VIU (as a point person for referring students). You will also be asked a few questions regarding demographics (employment). The survey should take 5 to 10 minutes.

There are no known harms associated with your participation in this research. The potential benefits of this project are to identify areas of potential improvement for future student success.

All of the information gathered from participation in the survey will remain confidential such that only my supervisor and I will have access to the information. The on-line survey will be conducted using the software program "Simple Surveys". Security settings on the software will be set to not collect IP addresses or email addresses. Data will be shredded and deleted one year after project completion by July 31, 2017. This project will be submitted in a report format and delivered in a presentation to interested faculty at VIU and via skype to the panel in Wisconsin during the summer of 2016.

Results would be made available to participants on request. Your participation is completely voluntary. You may withdraw at any time for any reason without explanation and without penalty. You may choose not to answer any question for any reason.

If you have any concerns about your treatment as a research participant, please contact the VIU Research Ethics Officer by telephone at 250-753-3245 ext 2665 or by email at reb@viu.ca.

If you have any question about this research project or would like more information, please feel free to contact me.

Sincerely,

Sarah Greenway

(sarah.greenway@viu.ca)

IRB Approval # 2015-059-UOWS-GREENWAY

“The submission of your completed online survey indicates your consent to participate in this research and for the information you provide to be used in study results.”

*** The submission of your completed online survey indicates your consent to participate in this research and for the information you provide to be used in study results.**

I Agree and Provide my Consent for the information provided to be used in the study results.

INTERVIEW CONSENT FORM

900 Fifth Street
Nanaimo BC
V9R 5S5
250-753-3245
Fax # 250-740-6482

Dear Participant,

As a component of my Master's Degree in Natural Resources, at the University of Wisconsin, Stevens Point Campus, I am undertaking a research project that involves conducting a survey to help measure sources of educational support for students enrolled in S&T programs.

During this study, you will be asked to complete a number of questions concerning your experience with internal and external sources of support throughout your educational experience. You will also be asked a few questions regarding demographics (gender, age).

There are no known harms associated with your participation in this research. The potential benefits of this project are to identify areas of potential improvement for future student success.

All of the information gathered from participation in the survey will remain confidential such that only I will have access to the information. Data collected will be stored in a locked cabinet and data will be destroyed by shredding at the end of my project, approximately January 2017. All electronic data will be deleted and destroyed at that time as well. All results will be reported in a written research report and an oral report delivered on-line to an audience present at the University of Wisconsin, Stevens Point Campus.

Your participation is completely voluntary. You may withdraw at any time for any reason without explanation and without penalty. You may choose not to answer any question for any reason.

If you have any concerns about your treatment as a research participant, please contact the VIU Research Ethics Officer by telephone at 250-753-3245 ext 2665 or by email at reb@viu.ca.

If you have any question about this research project or would like more information, please feel free to contact me.

Sincerely,
Sarah Greenway
(sarah.greenway@viu.ca)
REB Approval #: 2015-059-UOWS-GREENWAY

I have read the above form, understand the information read, understand that I can ask questions or withdraw at any time. I consent to participate in this research study.

Participant Signature

Date

APPENDIX C

Student Survey Questions

Student Survey Questions

~Retrieved from Simple Surveys site (www.simplesurvey.com)

1) The submission of your completed online survey indicates your consent to participate in this research and for the information you provide to be used in study results.

- I agree to consent that the information I have provided during my participation in this survey, can be used in the results portion of the study

Demographics

2) Gender:

- Male
- Female

3) Age:

- Age 17 to 20
- Age 21 to 25
- Age 26 to 30
- Age 31 to 35
- Age 36 to 40
- Age 41 to 45
- Age 46 to older

4) Which of the following ethnic groups do you identify with?

- Caucasian/European
- Aboriginal

- Asian
- Mid-Eastern
- No specific ethnic origin

Other, please specify

5) Do you reside on campus in residence, or off campus?

- Live in residence
- Live in Nanaimo, off campus
- Outside Nanaimo and commute to campus

Educational Experience

6) How many years have you attended post-secondary education here at Vancouver Island University?

- Less than one year
- One year
- Two years
- Three years
- Four years
- Five years
- Over five years

7) Which year is your projected graduation/completion date at Vancouver Island University?

- 2016
- 2017
- 2018
- 2019
- Later than 2019

8) Were you involved in a program that helped prepare you for the academic courses within S&T? (Example: Adult Basic Education(ABE), Aboriginal Transitions)

- Yes
- No

9) Which program faculty do you identify with in Science and Technology?

- Biology
- Chemistry
- Earth Science
- Physics
- Computer Science
- Math
- Resource Management and Protection (RMOT/ RMAP)
- Fisheries and Aquaculture
- Forestry

Other? Please identify

10) How do you rate your overall experience as a student here at VIU?

Exceptional High Satisfactory Dissatisfied Not really sure

Educational Supports

11) Please check all the corresponding VIU programs that you know exist on campus: (please select all that apply)

- Disability Services
- Discipline Specific Club (Biology Club, RMOT Club etc.)
- Elders in Residence
- General Advising
- Library (Reference Librarians)
- Lunch hour sessions through VIU Counsellors on study habits, time management
- Math Help Center
- Peer Tutoring
- Program Facebook Site
- Registrar's Office
- Shq'aphut Gathering Place
- Student Services
- Student Union
- VIU Writing Center
- Welcome Center

Other, please specify

12) Please check all of the following support programs that you have used / accessed during your time at VIU:

- Disability Services
- Discipline Specific Club (ex. Biology Club, RMOT Club)
- Elders in Residence
- General Advising
- Library - Reference Librarians
- Lunch Hour sessions through VIU Counsellors on study habits, time management
- Math Help Center
- Peer Tutoring
- Program Facebook Site
- Registrar's Office
- Shq'aphthut Gathering Place
- Student Services
- Student Union
- VIU Writing Center
- Welcome Center

13) How often have you utilized the specific programs previously mentioned?

	Once or twice	Weekly	Monthly	Annually	Not at all	Not enough information about program and how it could help me
Disability Services	<input checked="" type="checkbox"/>					

Discipline specific club	<input type="checkbox"/>							
Elders in Residence	<input type="checkbox"/>							
General Advising	<input type="checkbox"/>							
Library - Reference Librarians	<input type="checkbox"/>							
Lunch Hour Sessions	<input type="checkbox"/>							
Math Help Center	<input type="checkbox"/>							
Peer Tutoring	<input type="checkbox"/>							
Program Facebook site	<input type="checkbox"/>							
Registrar's Office	<input type="checkbox"/>							

Shq'aphthut Gathering Place	<input type="checkbox"/>					
Student Services	<input type="checkbox"/>					
Student Union	<input type="checkbox"/>					
VIU Writing Center	<input type="checkbox"/>					

14) As a student, how often do you access educational support in one form or other on campus?

- Daily
- Weekly
- Monthly
- Annually
- Have not accessed before

Other, please specify

15) How do you access faculty support?

- During office hours
- Outside office hours
- Electronically through email

- Telephone
- In the classroom prior to instruction start-up
- In the classroom near the end of class instruction time

Other? Please specify:

16) Have you utilized the Program/ Degree Advisor in the department of your main course of study? (Faculty member that assists in academic planning)

- Yes
- No

17) Have you ever asked for help from support staff in Building 360 in regards to locating an educational support program or tutor?

- Yes
- No

18) Do you experience barriers that keep you from accessing the academic support programs at VIU? (Please select all that apply)

- Timetable
- I don't know how these programs fit my needs
- Family obligations
- Commute time
- Work obligations
- Physical location of services on campus

Other? Please specify:

19) How would you rate your overall experience with educational supports at VIU?

Excellent experience Good experience Satisfactory Experience Poor Experience Unable to rate

20) If asked to suggest other options for the upper campus area that would have improved your student experience (regarding educational support), what would you suggest?

APPENDIX D

Faculty Survey Questions

Faculty Survey Questions

~Retrieved from Simple Surveys site (www.simplesurvey.com)

How long have you worked at Vancouver Island University?

- Less than one year
- Between one to five years
- Between five to ten years
- Between ten years to fifteen years
- Between fifteen years to twenty years
- Over 20 years

Please check all of the corresponding VIU programs that you currently have an awareness of:

- Disability Services
- Discipline Specific Club (examples :Biology Club, RMOT club)
- Elders in Residence
- General Advising
- Library- Reference Librarians
- Lunch Hour sessions with VIU Counsellors (time management, study habits)
- Math Help Center
- Peer Tutoring
- Program Facebook site

- Registrar's Office
- Shq'aphthut Gathering Place
- Student Services
- Student Union
- VIU Writing Center

I am not aware of one or more of these programs

How often do you refer to students to one of these services?

- Daily
- Weekly
- Monthly
- Annually

Other

How often during a typical week do you meet with students during your office hours?

- Five times or less per week
- Six to ten times per week
- Eleven to Fifteen times per week
- Sixteen to twenty times per week
- Twenty one to thirty times per week
- More than 31 times per week

Do you have any suggestions for what S&T Faculty/staff could do in order to improve the ways we support students enrolled in our programs?

APPENDIX E

Student Interview Guiding Questions

Guiding Questions for Voluntary Interviews

The purpose of this interview is to gather information from students, enrolled in Science and Technology Programs, on the sources of educational support and student experience at Vancouver Island University. Interview participants will be reminded to keep from naming individual VIU employees, faculty or support staff during the interview. Participants have been selected randomly based on year class of student experience.

*** (Main objective is to allow the student to tell his/her personal story of experience as a science and technology student at VIU.)*

Have student participant explain:

- A) Demographic (age, gender)
- B) His/her experience at VIU and how they have experienced feeling supported in their educational endeavors via faculty, and programs on campus.
- C) His/her experience dealing with any barriers to educational support
- D) Any ideas of improvements or changes to current offerings of educational support in order to improve student experience.

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