Bow Valley College

RESEARCH ETHICS – CAPSTONE PROJECTS

Introduction

A Capstone Project is a project or assignment that is given at the end of a course or program and is designed to assess if the learner can apply the knowledge and skills that they have acquired during the course/program in real-world contexts. The final product submissions for a capstone project/assignment can vary widely. Research and analysis of data are often part of capstone projects/assignments.

Students who choose to do primary data collection (i.e., answer specific questions through the collection of data using interviews, focus groups, observations, surveys, or other data collection methods) on human subjects must follow ethics guidelines. Bow Valley College (BVC) Research Ethics Board (REB) has created an ethics procedure students must follow if they choose to collect primary data as part of their project. REB can assist the instructor or supervisor in overseeing the Capstone research. This information booklet includes the following tools and templates (Appendix A) for students to use to address ethics concerns in the research project:

1. Ethics Self-Assessment Flow Chart
2. Ethics Workplan Template
3. Informed Consent Form Template

Research Ethics Board at BVC

The Research Ethics Board at the college oversees and provides guidance on research that involves human participants including research conducted by students as part of a Capstone Project. Instructors/supervisors of Capstone research are encouraged to contact the REB for assistance in helping their students meet ethical standards. Students who plan to collect primary data or analyze secondary data (e.g., data that has already been collected by someone else) must submit their Ethics Workplan to the REB for review and approval prior to the start of data collection. The Ethics Workplan is designed to help the student meet research ethics standards.

Please reach out to the board with any questions by email researchethics@bowvalleycollege.ca

Research Ethics Procedure

To ensure that ethics standards are met in Capstone research, students must closely follow the procedure outlined below.

1. Ethics Self-Assessment

Students are required to complete the Ethics Self-Assessment Flow Chart. The chart will help students determine if their research project's Ethics Workplan must be submitted to the REB for review and approval.

The self-assessment requires the student to critically assess the nature of the project and the intended involvement of human participants. If the research involves interacting with human participants either directly (e.g., interviews) or indirectly (e.g., analyzing information about human participants that has been gathered by others) then the student must complete and submit the Ethics Workplan to their instructor/supervisor and REB for review and approval.

2. Ethics Workplan

Students whose intention is to involve human participants for their research must complete the Ethics Workplan (Appendix A) and submit to their instructors/supervisors and the Research Ethics Board for review before recruitment and data collection begins. Students who do not submit their workplan risk their research to be determined unethical and may face academic misconduct charges. The workplan asks students to describe their research objectives, the group of people from whom data is collected, by what means they will be contacted, the method and setting of data collection, the associated risks of harm to participants, strategies to protect the information and identity, and the informed consent process. The consent form must accompany the workplan for review. Once submitted, students should expect it to take REB approximately five (5) business days to review. The REB may require the student to modify their workplan to better address ethics issues and resubmit within five (5) days of the original review.

3. Informed Consent

The collection of data from humans requires that the participant be fully informed about the project and how their data will be protected and used. Consent must be voluntary, informed, and ongoing. Students must describe the consent process in their workplan and attach a copy of the consent form to be reviewed by the REB.

Ethics Guidelines for Students and Instructors/Supervisors

As primary research involves human participants including students, colleagues, and members of the community or community partner, ethical issues must be considered and ways to mitigate the associated risk integrated into the design of the research activity. Ethical issues include but are not limited to vulnerable participants, conflict of interest, informed consent, risk of harm, anonymity and confidentiality. Information describing each of these issues is included below. Students and instructors/supervisors may contact the REB for consultation and guidance on these issues as they pertain to the Capstone project.

Vulnerable Participants

Populations that have diminished decision-making capacity, or limited access to rights, opportunities, and power are considered vulnerable under the TCPS 2. This may include but is not limited to children, older persons, women, prisoners, those with mental health issues, those with diminished capacity for self-determination, and ethnocultural minorities (Chapter 1, Article 1.1).

Capstone projects that directly engage with vulnerable populations will generally not be permitted unless it is part of a larger research project overseen by a lead researcher.

Conflict of Interest

A conflict of interest may arise when situations place an individual or institution in a real, potential, or perceived conflict between research responsibilities and personal, institutional, or other interests (TCPS 2, 2022, Chapter 7). Conflicts may come from interpersonal relationships (e.g., family or community relationships), financial partnerships or other economic interests, academic interests or incentives, the involvement in dual and multiple roles inside or outside the institution. For example, when an instructor is also the person responsible for the research activity, they may experience situations where these two roles conflict. The power imbalance (instructor/student) may unduly influence or pressure students to participate in the research, violating ethics consent guidelines. Conflicts must be disclosed, assessed, and mitigated as they could jeopardize the integrity of the research. Mitigating the conflict may include removal, disclosure, recusal, third party evaluations and/or codes of ethics. For more information about conflict of interest, see Chapter 7 of TCPS 2.

Informed Consent

In research, informed consent refers to the dialogue, information sharing and general process through which prospective subjects choose to participate in research. Consent needs to be voluntary, informed, and ongoing.

Consent should be given voluntarily and as such, participants should be able to withdraw their consent during the research process. If participants do withdraw their consent, they should also be able to request the withdrawal of their data (TCPS 2, 2022, Article 3.1).

In order to make sure that consent is given freely, no undue influence should exist on the participant to participate. For example, the power dynamic between an instructor and a learner may sway the learner to participate in research involving the instructor because they fear that it may affect the instructor's perception of them if they decline to participate.

Also, the consent process should be free of coercion. Coercion is a "more extreme form of undue influence, involving a threat of harm or punishment for failure to participate" (TCPS 2, 2022, p. 33). Incentives may be used as a form of remuneration for the participant's time and effort in participating in the study, but they should not be so attractive that they encourage disregard of the risks of participating in the study (TCPS 2, 2022, Article 3.1)

Researchers must provide potential participants with all information necessary for them to make an informed decision to participate in the research study.

The following should be addressed in the informed consent:

- Branded with Bow Valley College logo.
- Written at an appropriate language level for the intended participant group(s).

- Written in non-expert terms. Required technical terms are clearly explained.
- Written in the active voice.
- Sources of funding are disclosed.
- Basis for participant inclusion and/or exclusion in the research is provided.
- Goal of the research is clearly outlined.
- What is required of the participant, including time commitment and information to be collected.
- Level of confidentiality and how participant data will be stored and used.
- Risks and benefits of participation.
- Voluntary nature of participation.
- Conflicts of interest are disclosed.
- Withdrawal procedures and what will happen to the data upon withdrawal.
- Remuneration.
- Contact information for Principal Investigator and/or project coordinator.
- Statement that the study has received approval from the Bow Valley College Research Ethics Board and board contact information.
- Statement to the effect that, by consenting, participants have not waived any rights to legal recourse in the event of research-related harm.
- Participant is provided with a copy of the consent for future reference

Researchers have an ongoing responsibility to provide participants with relevant information for their ongoing consent to participate in the research. Consent is a process that begins with initial contact with the potential participants (e.g., recruitment) and carries through to the end of the participants' involvement in the project (TCPS 2, 2022, Article 3.3). This becomes relevant to any changes to the research project, especially changes to the potential risks or benefits of the research.

For more information on the consent process, please see *TCPS 2 - Chapter 3* and *Appendix A* for the Bow Valley College Informed Consent Form Template.

Risk of Harm

Risk is a "function of the magnitude or seriousness of the harm, and the probability that it will occur" (TCPS 2, 2022, p. 25). Risks may cause a degree of emotional, psychological, social and/or physical discomfort. Real and potential risks need to be considered and anticipated by researcher(s) relative to the probability and magnitude of potential harm deemed no greater than what the subject(s) may potentially encounter in everyday life.

Minimal Risk research is that "in which the probability and magnitude of possible harms implied by participation in the research is no greater than those aspects of their everyday life that relate to the research" (TCPS 2, 2022, p. 25)

Considerations for Assessing Risk:

- Will participating in this research cause participant(s) to be at risk physically?
- Will participant(s) be unduly vulnerable for any reason (s) (e.g., developmental disability; age; culture; social/economic status)?
- Will participant(s) feel any pressure/obligation to participate in this study, whereby they may not have volunteered under other circumstances (e.g., inmates; adult learners registered in programs; workplace employees; agencies receiving funding or other forms of support from BVC)?
- Do risks flow from confidentiality (e.g., might the information be of interest to a law enforcement agency)?
- Will participant(s) suffer undue psychological stress?
- Might individuals or groups be stigmatized by participating in the study?
- Might individuals' or groups' reputation be at risk by participating in this study?
- Might individuals or groups be at risk with regards to political and/or immigration status by participating in this study?

Categories

No risk: None of the above apply, although it is very likely that some components of this research will involve at least minimal risk if human participants are involved.

Minimal risk: Risk that would normally be experienced and sustained in everyday life.

More than Minimal Risk: Risk that would be experienced above and beyond that experienced and sustained in everyday life (e.g., Interviews with participants about past life events which may have been traumatic and could trigger psychological or emotional distress).

Note: Most applied research projects involving human participants will have some minimal risk associated with it.

Anonymity and Confidentiality

As private information becomes more difficult to associate with a particular person, ethics concerns lessen. Concerns also vary with the sensitivity of the information being collected and the potential for harm to the participant or community. Ideally researchers should strive for anonymity, but this is not always possible. When anonymity is not possible then it is appropriate to promise confidentiality.

Anonymity refers to information that is not identifiable by name to a specific participant, even to the researcher. The TCPS defines anonymous information as that which "never had identifiers associated with it" (TCPS 2, 2022, p.80).

Confidentiality is an ethical duty which is important in upholding the trust relationship between researcher and participant and the integrity of the research project. It refers to safeguarding entrusted information. Researchers have an obligation to protect information from unauthorized access, use, disclosure, modification, loss, or theft (TCPS 2, 2022, Chapter 5).

Researchers should consider the information presented below when making decisions about data access and storage.

1. Contact data of participants
2. Access to raw data (including audio or video files)
    a. How will data be stored? How long will it be stored? Will it be public? What security measures have been put into place to safeguard the information?
    b. How will the data be destroyed or archived?
    c. Note: There is a five-year minimum for data storage
3. How will the participant's privacy be respected (for data storage and report write-up)?
4. Write-up of the results:
    a. qualitative (e.g., with names, quotes) vs. quantitative (aggregated data)
    b. use of pseudonyms vs. real names
    c. participant review of data before publication
5. Size of sample – small samples may be more identifiable even with anonymized information
6. Possible identification of participants due to uniqueness or recognizability (are there precautions to alleviate this?)
7. Is the researcher under any obligation to report on specific findings (e.g., child abuse, risk of suicide, safety, etc.)?
8. For group settings, how will the researcher manage confidentiality for the participants? How will confidentiality guidelines be described to the participants?
9. If anonymity is optional, include a provision in the consent form to have the participant allow the use of their name

Note: REB advises instructors to have students sign a confidentiality agreement if they have access to participant information.

See *Appendix B* for a Risk Matrix tool to help assess the level of risk as it relates to participant information.

Disclaimer

This booklet is not intended to replace comprehensive guidelines set out in TCPS 2 or in college research policies and procedures.

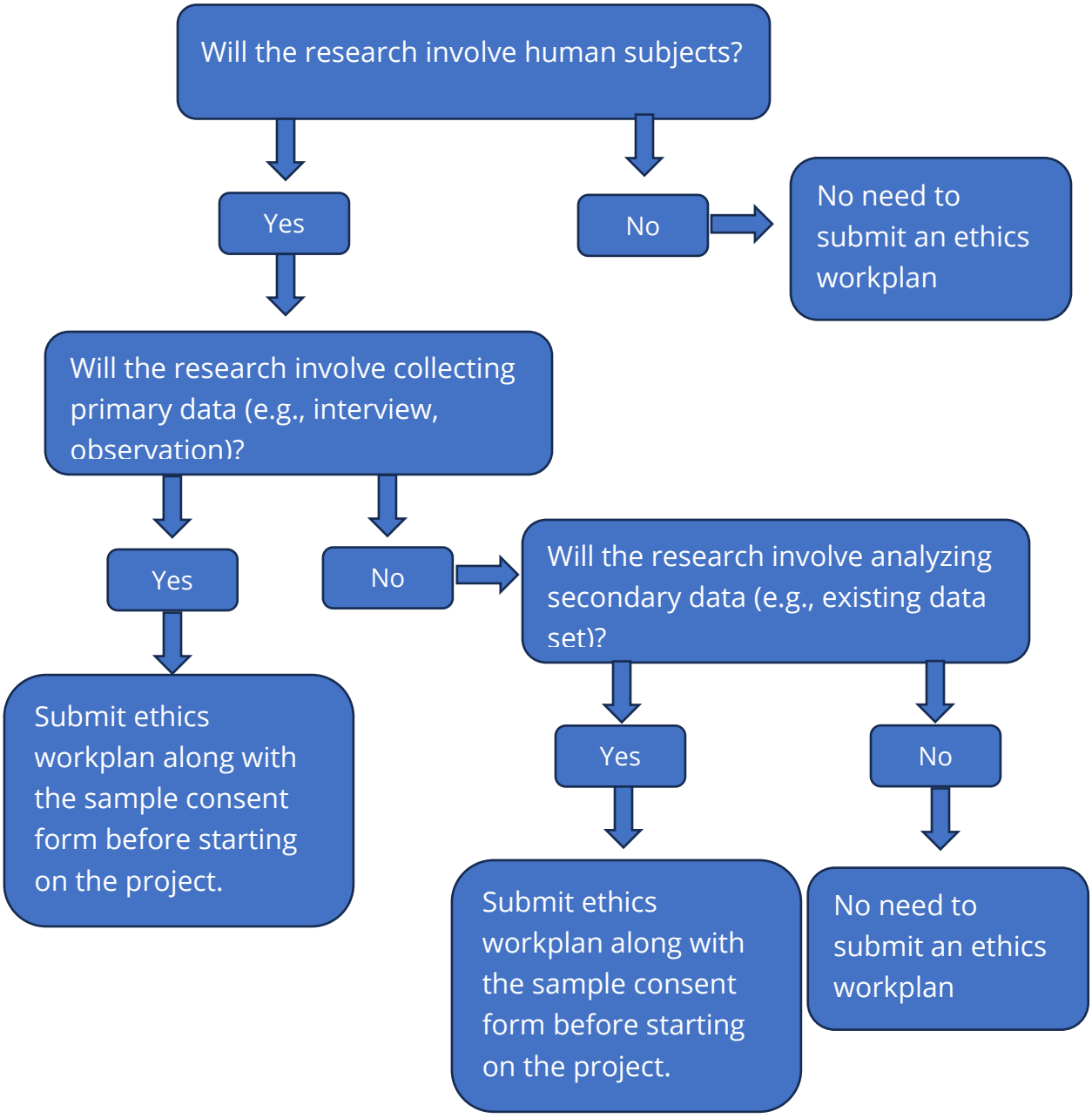
References

Canadian Institutes of Health Research, Natural Sciences and Engineering Research Council of Canada, and Social Sciences and Humanities Research Council of Canada, *Tri-Council Policy Statement: Ethical Conduct for Research Involving Humans*, December 2022.

Appendix A

Ethics Self-Assessment Flow Chart

The purpose of the ethics self-assessment is to help students determine if research ethics approval is needed when conducting research involving human participants. Complete the flow chart below to establish if you must submit your Ethics Workplan to BVC's Research Ethics Board.



Ethics Workplan Template

This plan needs to be submitted in full before you start on the capstone project/assignment. The purpose of this plan is to demonstrate your awareness of the ethical issues involved when you are working on the project/assignment.

1. Describe your research objective in a maximum of 100 words.

2. Describe the categories of the people from whom you will be getting information. Examples of categories are socio-economic status, gender, etc.

3. Describe the setting where you intend to conduct the research.

4. Provide a brief summary of the methods you intend to use. Examples of methods are surveys, focus groups, interviews, observations.

5. How are you going to find the people for your research?

6. Describe any potential risks or harms that you or the participants might encounter. How will you protect against these risks?

7. What are the steps you will take to protect the data you collect and the confidentiality of the participants? Note: Even secondary data will need careful consideration.

8. What is the procedure you will use to make sure that the participants are taking part in the research voluntarily? Attach the consent form you intend to use.

Informed Consent Form Template

This document is a template. The italicized text is instructional. Delete it, including these paragraphs, when writing your consent form.

Supply the information requested under the bolded headings. ***Use plain language, understandable by a layperson (grade 7 level)***. ***Consider reading the informed consent aloud with the participant to ensure understanding of risk.*** *Add details relevant to your study. Be sure the consent form is written in second person. Please check the correctness of your spelling and grammar.*

Name of Researcher, Department, Telephone & Email:

(*Insert your name and title, and those of your co-researchers)*

Supervisor:

(If the researcher is a student, the supervisor's name and department appears here, otherwise delete) **Title of Project:**

(*The title of the project goes here)*

***Sponsor*:**

(*If the project is funded, identify the funding source here)*

This consent form, a copy of which has been given to you, is only part of the process of informed consent. If you want more details about something mentioned here, or information not included here, you should feel free to ask. Please take the time to read this carefully and to understand any accompanying information.

Researcher to Supply the Following (include the headings below in your consent form)

Purpose of the Study:

Describe the purpose of the study and tell the participant how s/he was chosen as a possible participant, if applicable, invite the individual to be a participant.

What Will I Be Asked To Do?

Describe exactly what the participant is expected to do. State (approximately) how much time it will take, include details such as the number of questionnaires or other requirements for their participation. Indicate if there is any follow-up and when.

Indicate that the individual's participation is voluntary, that the individual may refuse to participate altogether, may refuse to participate in parts of the study (if this is acceptable to the research), or may withdraw from the study at any time without penalty or loss of benefits to which s/he is otherwise entitled (for example: assistance received through Agency "X" will not be affected).

What Type of Personal Information Will Be Collected?

If no personal identifying information is to be collected (e.g. names, social insurance numbers, student ID numbers, etc.), and the participant remains anonymous, use the following statement:

"No personal identifying information will be collected in this study, and all participants shall remain anonymous."

If information such as gender, age, ethnicity, educational level, etc., is collected, provide a description of the type of information you will be collecting. For example, "Should you agree to participate, you will be asked to provide your gender, age and academic major."
If applicable to the research, describe options available to the participant. To do so, it may be useful to create "check boxes" to help enumerate a participant's choices. For example, you might instruct the participant:

"There are several options for you to consider if you decide to take part in this research. You can choose all, some or none of them. Please put a check mark on the corresponding line(s) that grants me your permission to:"

I grant permission to be audio taped: *Yes: ___ No: ___*
I grant permission to be videotaped: *Yes: ___ No: ___*
I grant permission to have my company's name used: *Yes: ___ No: ___*
I wish to remain anonymous: *Yes: ___ No: ___*
I wish to remain anonymous, but you may refer to me by a pseudonym: *Yes: ___ No: ___*
The pseudonym I choose for myself is:
_____
You may quote me and use my name: *Yes: ___ No: ___*

Are there Risks or Benefits if I Participate?

List reasonably foreseeable risks, harms, or inconveniences to the participant. If the research necessitates the provision of rescue mechanisms, advise the participant what these are, how to access the support, and whether there is any cost to the individual.

If the research has the potential to reveal information that is required by law to be revealed to a law enforcement or other agency (e.g.: child abuse, suspected danger to self or others), inform your participant of your legal obligations.

If the person will be paid to take part, describe that payment. If they will incur any costs, describe these.

What Happens to the Information I Provide?

Explain who will have access to the information collected.
State how the participant's contribution will be treated. For example, will pseudonyms or some other means of ensuring anonymity be used? Explain any limitations to the anonymity / confidentiality that you can offer. Tell the participant what will happen to their information if s/he decides to withdraw.

Confidentiality vs. Anonymity

Confidentiality

Maintaining confidentiality of information collected from research participants means that only the investigator(s) or individuals of the research team can identify the responses of individual subjects; however, the researchers must make every effort to prevent anyone outside of the project from connecting individual subjects with their responses.

Anonymity

Providing anonymity of information collected from research participants means that either the project does not collect identifying information of individual subjects (e.g., name, address, Email address, etc.), or the project cannot link individual responses with participants' identities. A study should not collect identifying information of research participants unless it is essential to the study protocol.

For example

"Participation is completely voluntary, anonymous and confidential. You are free to discontinue participation at any time during the study. No one except the researcher and her supervisor will be allowed to see or hear any of the answers to the questionnaire or the interview tape. There are no names on the questionnaire. Only group information will be summarized for any presentation or publication of results. The questionnaires are kept in a locked cabinet only accessible by the researcher and her supervisor. The anonymous data will be stored for five years on a computer disk, at which time, it will be permanently erased."

Signatures (written consent)

Your signature on this form indicates that you 1) understand to your satisfaction the information provided to you about your participation in this research project, and 2) agree to participate as a research subject.

In no way does this waive your legal rights nor release the investigators, sponsors, or involved institutions from their legal and professional responsibilities. You are free to withdraw from this research project at any time. You should feel free to ask for clarification or new information throughout your participation.

Participant's Name: (please print) _____

Participant's Signature_____ Date: _____

Researcher's Name: (please print) _____

Researcher's Signature: _____ Date: _____

Questions/Concerns

If you have any further questions or want clarification regarding this research and/or your participation, please contact:

Dr./Ms./Mr. (Insert name of principal researcher(s),

Department of XXXXXXX
Telephone, email
And (supervisor's name, department telephone number, and email if applicable)

If you have any concerns about the way you have been treated as a participant, please contact the Bow Valley College Research Ethics Board email at researchethics@bowvalleycollege.ca.

A copy of this consent form has been given to you to keep for your records and reference. The investigator has kept a copy of the consent form.

Appendix B

Matrix to Assess Risk Level of Data

	Low Risk	Medium Risk	High Risk	Extreme Risk
Risk level definitions	Publicly available data where there is no reasonable expectation of privacy, regardless of sensitivity or identifiability. Data collected with no information that could reasonably identify individuals or groups. Data contains no confidential, private, or sensitive information. Data subjects are not vulnerable in the context of the research and would not be harmed if a breach were to occur.	All identifiers collected have been stripped so that data to be deposited has no information that could reasonably identify individuals or groups. Data may contain information originally collected as confidential, private, or sensitive. Data subjects are not vulnerable in the context of the research and would not be harmed if a breach were to occur.	Identifiers remain and/or (re)-identification is possible or probable. Data contains confidential, private or sensitive information. Data subjects may be vulnerable in the context of the research and may be harmed if a breach were to occur.	Data acquired through an agreement (formal or informal) with a custodian, barring further use or retention. Identifiers remain and/or (re)-identification is possible or probable. Data contains confidential, private or sensitive information. Data subjects are vulnerable in the context of the research and would be harmed if a breach were to occur.

Source: Digital Research Alliance of Canada (October, 2020). Sensitive Data Toolkit for Researchers Part 2: Human Participant Research Data Risk Matrix. DOI 10.5281/zenodo.4060448 Sensitive Data Toolkit for Researchers Part 2: Human Participant Research Data Risk Matrix (zenodo.org)