

EDU5206 Full Project Plan

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Step 1: Identifying Sources of Ideas and Needs for Education and Training Programs (5 marks)

Describe briefly the education or training program that you are currently planning.

- I am planning an online synchronous environmental education program that would discuss aspects of local biodiversity, conservation issues that it faces, and what program participants can do to address these issues. This program would hypothetically be under the conservation organization (Stanley Park Ecology Society [SPES] in Vancouver, British Columbia) that I am currently interning with.

Outline what sources of ideas you are using for the program you described above. Be as specific as possible in naming those sources (e.g., names of individuals and groups; specific life problems and opportunities; political, economic, or social climate), and indicate where the sources are located. (See Exhibit 6.A in Needs Analysis Course Pack)

- People: Former participants of other education programs previously organized by SPES, current SPES staff (specifically educators, ecologists, and managing executives), ecologists at other local conservation organizations (e.g. Nature Trust of British Columbia), ecologists at local academic institutions (e.g. University of British Columbia, Simon Fraser University), educators at other conservation organizations (e.g. Vancouver Aquarium, Vancouver Zoo)
- Responsibilities and tasks of adult life: Being a volunteer, socializing with like-minded people, being in tune with nature, caring about the planet
- Communities and society: International ecological issues (e.g. climate change, sea level rise, widespread species extinctions), provincial ecological issues (e.g. over-logging, endangered species that are not in the Vancouver area), local ecological issues (e.g. coyotes biting people, bears foraging in neighbourhoods, invasive plants that can take over local ecosystems)

Based on the material you outlined in response to the previous question, make a list of those sources you are using. Are there any you would not choose to use at this time?

Ideally, all of the listed sources would be used, but this would not be feasible. At this time, I would not use:

- Educators and ecologists at other local conservation organizations and local academic institutions: Any correspondence with them may take a while to get back or become lost completely (e.g. they ignore emails being sent to them because they think it is spam), so any needs analysis step that relies on them may delay the progression of program planning.
- Certain ecological issues: I included international/provincial/local ecological issues as a source despite how vague/undefined they are because there are so many issues that I am still unsure of which ones would be corroborated as something that should be discussed by the other sources of ideas/needs. Ideally, it would be best to talk about all of them, but there are so many that it would stretch the program out to the point of infeasibility. However, I do know that I would rather the program not focus on issues that participants are unable to make an impact on (e.g. there isn't really much participants could do to stop the Northern White Rhino [only two females exist] from going extinct aside from becoming full-blown geneticists that can somehow perfectly clone the animals). After all, the little time that the program has would be better spent teaching participants how to actually make a difference for biodiversity rather than giving them knowledge that they would most likely never have the chance to use.

Step 2: Choosing Techniques for Generating Ideas and Needs for Education and Training Programs (5 marks)

Using the same program as above, suggest different techniques this group or organization could use to generate ideas for specific education or training program and indicate why these might be useful. For example Questionnaires, Observations, Interviews, etc. (see Exhibit 6.1 in textbook):

- Send questionnaires to former participants about what they liked about the programs they attended, what they disliked, and what they would have liked to learn. This would allow us to have a better idea on what audiences may want future programs to be and how they could be run.
 - Alternatively, interviews with these participants could be conducted for a more in-depth look that gives participants the freedom to provide any information that the questionnaires may not have asked about.
- Hold informal interactions with SPES' educators, ecologists, and managing executives.
 - SPES educators have direct contact with and can observe program participants (e.g. participants may have casually talked with the educators). Accordingly, the educators may know what is engaging and what is not engaging participants (e.g. educators observe the body language of participants, notice a lot of glazed expressions, and realize the program is boring). Additionally, participants may also have directly told educators about their needs/concerns, hoping such feedback is incorporated into future programs.
 - In addition to knowing what the issues facing local biodiversity are, SPES ecologists also run into members of the public while doing field work in the park SPES is based in. As these people tend to start casual conversations and ask questions, SPES ecologists may have an idea on what the community wants to learn more about (e.g. What species live in the park? What can they [the public] do to help conserve them?).
 - I've included managing executives because they may have their own ideas of what they want the program to be about, and as a lowly intern I am definitely beholden to their wishes.
- Documents and Artifacts:
 - Keep track of environment-related news articles/videos (e.g. from larger news publications like the CBC to local news sites like the Daily Hive) that mention ecological issues relevant to the local community.
 - This would allow us to identify ecology-related needs/concerns that the local community (which would, based off of the demographic data I have

for past programs, probably comprise most [if not the entirety] of our audience) would have.

- Keep track of ecology-related academic journal publications (especially those that concern themselves with Vancouver, British Columbia, or the Pacific Northwest) that present pressing conservation issues that the program could discuss.
 - This would also allow us to identify ecology-related needs/concerns that audiences may have, although these needs/concerns would go beyond the local level and may not be completely relevant to Stanley Park.
- Keep track of education-related academic journal publications that bring up pressing conservation issues environmental educators should discuss as well as new educational techniques (e.g. maybe certain images or stylistic choices should be used, maybe there are specific resources like fact-sheets that should be given away to supplement the program) that could be employed in programs.
 - As a note of caution, the environmental issues being described may not be relevant to Stanley Park.

Might there be any contextual factors (people, organizational, or environmental factors) that might influence why certain techniques are chosen?

- On an organizational level, SPES' mission statement is to "[promote] awareness of and respect for the natural world through collaborative leadership in environmental education, research, and conservation in Stanley Park." With this emphasis on collaboration and Stanley Park, it seems that the needs-identifying techniques that should be prioritized would be those that target the intersection between "collaboration" and "Stanley Park": i.e. asking the local community for input.
- Additionally, SPES' status as a non-profit charity necessitates strict budgeting and financial accountability. Accordingly, it may be best to choose techniques that do not require much money or time to implement.
- SPES' friendly, collaborative, and open staff culture also enables the feasibility of holding informal interactions with SPES educators, ecologists, and managing executives. After all, it is easier to talk to someone that is approachable rather than someone who is more hostile.

Of those techniques you listed in response to the previous question, which ones do you prefer to use, and why?

- I would prefer sending questionnaires to former participants; holding informal interactions with SPES educators, ecologists, and managing executives; and keeping track of environment-related news as these are all low-cost tasks that do not require much investment (monetary or time-wise) compared to interviewing (which requires the creation and testing of interview questions, the actual interviewing with participants, and the analysis of interview responses) or keeping track of academic publications (which requires paying subscription fees as well as having the time to parse through the often-confusing language of journal articles in order to figure out how it can be applied to SPES' programs). To be more specific:
 - Questionnaires are quick and easy to send out (especially as SPES tends to use online forms that they can send to all former participants with the click of a button) and it is relatively easier to analyze collected responses (e.g. SPES' forms all tend to use quantitative Likert scales, and the results from such scales can be easily graphed and summarized compared to qualitative data).
 - Holding informal interactions with SPES staff is also quick and easy, whether it be via instant messages on Microsoft Teams or just popping down to somebody else's desk in SPES' small office.
 - Keeping track of environment-related news is easy as, seeing as there are so many online news-pages nowadays, one can just set up a Google Alert for any new article that contains phrases like "conservation", "Vancouver", or "Stanley Park."

Step 3: Selecting and Developing Program Goals and Objectives (5 marks)

Developing Program Goals

For the program that you are currently developing, construct three clearly written program goals.

Goal Statement One: To build on the local community's knowledge pertaining to the ecosystems and biodiversity of Vancouver, Canada.

Goal Statement Two: To engender in the local community the undertaking of actions and behaviours that can help conserve the ecosystems and biodiversity of Vancouver, Canada.

Goal Statement Three: To build on the local community's support of SPES' conservation work.

Constructing Program Objectives

Construct two to three clearly written program objectives for each of the program goals you developed in the exercise above. As appropriate, include objectives focused on participant learning and program operations.

Goal Statement One: To build on the local community's knowledge pertaining to the ecosystems and biodiversity of Vancouver, Canada.

- Program Objectives:
 - To offer an online environmental education program (with synchronous lectures and group discussions) that can be delivered over the course of six hours to those living in the Vancouver region.
 - As quantified by a passing grade on a SPES-developed proficiency test, all participants will develop the skills to identify members of Stanley Park's biodiversity.
 - As quantified by a passing grade on a SPES-developed proficiency test, all participants will gain an understanding of the ecosystem dynamics (i.e. how plants, animals, and other species interact with one another) present in Stanley Park.

Goal Statement Two: To engender in the local community the undertaking of actions and behaviours that can help conserve the ecosystems and biodiversity of Vancouver, Canada.

- Program Objectives:
 - To offer an online environmental education program (with synchronous lectures and group discussions) that can be delivered over the course of six hours to those living in the Vancouver region.
 - To provide online discussion forums that participants can use to discuss conservation-related matters to one another (and SPES staff) after completing the program.
 - As marked by the completion of conservation-related activities in the program, all participants will gain an understanding of how they can help conserve the ecosystems and biodiversity of Stanley Park.
 - At least 70% of all participants will undertake at least three sustainable actions/behaviours in the future.

Goal Statement Three: To build on the local community's support of SPES' conservation work.

- Program Objectives:
 - At least 50% of participants will join a SPES-organized conservation program (e.g. surveying birds, removing invasive plants that will harm the ecosystem if left unchecked).
 - Within the next year, participants will financially support SPES at least one additional time (e.g. by joining another educational program, by directly donating money).
 - To offer an online environmental education program (with synchronous lectures and group discussions) that can be delivered over the course of six hours to those living in the Vancouver region.
 - To provide online discussion forums that participants can use to learn more about SPES and directly communicate with SPES staff.

Step 4: Creating Instructional Assessment and Instructional Plans (8 marks)

Creating an Instructional Assessment Process

For the project that you created in the needs analysis assignment, describe the major reason or reasons for completing an instructional assessment.

- My rationale for needing to complete an instructional assessment stems from the fact that I have little experience in education, let alone planning an educational program from scratch. As such, there is a non-zero chance that the instructional techniques that I prescribe may be ineffective (i.e. participants do not actually learn anything, learning objectives and associated program objectives/goals go unfulfilled). Accordingly, instructional assessments allow me to determine whether this is actually the case. If so, then I can make the necessary adjustments to improve my instructional techniques and materials in a way that can better meet learner needs.

Select and describe two or more techniques you will use to evaluate this instructional session.

Technique: Objective Tests

- To determine whether they have retained the environmental knowledge that was taught during the course, participants will need to answer multiple-choice questions that test them on topics surrounding local ecology (e.g. identity of various species, ecological concepts such as a food web). Multiple sets of these questions (each pertaining to a different aspect of environmental knowledge that the program discusses) will be administered to them before and after the program, with increased scores for all aspects denoting effective instruction. Aspects with negligible change (or even decreases) would need to be prioritized for re-tooling (e.g. change instructional techniques).

Technique: Product Reviews

- Participants will be required to create a personal plan of conservation action that they can incorporate into their daily lives based on the information about conservation and the environment that was presented to them during the program. These plans will be reviewed by both program instructors and staff (e.g. ecologists, other environmental educators) associated with the conservation organization hosting my program (Stanley Park Ecology Society/SPES). Should program instruction be effective, participants will have learned how to develop plans deemed (by the reviewers) as sufficient for enhancing their lifestyles' sustainability.

Describe how you will ensure that the assessment process exhibits at least the following qualities (see Exhibit 8.K in Chapter 8 of the Course Pack):

- Clear
 - Test questions will use as little ecology-related jargon as possible to ensure that they are simple enough to be understood by participants.
 - To guide the creation of personal conservation action plans (especially as it may seem like an intimidating, complex, and long-winded task at first), example plans will be provided for participants, and they are welcome to follow a similar format or create one of their own.
- Specific and Constructive
 - At the beginning of the program, participants will be informed exactly what they will need to do (i.e. complete tests, the personal conservation action plan, and other forms of instructional assessment). Furthermore, they will be encouraged to ask for help from instructors should they run into any issues while completing such assessments and need more clarity on what instructors want.
- Timely
 - Upon their submission, tests will be marked and personal conservation action plans will be reviewed as quickly as possible so that participants can get feedback in a timely fashion.
- Useful
 - Feedback from instructors will not be full of incomprehensible jargon. Instead, they will be concise, clear, and relevant to what was discussed in the program so that learners will understand what they did well and what they may need to work on, subsequently adjusting their learning accordingly.
- Ongoing and Frequent
 - During the program, various tests will be administered to participants, with each test relating to a different aspect of environmental knowledge. With each test, they will have constant updates on their learning progress.
- Accessible
 - Participants will be invited to keep in contact with instructors and other SPES staff should they have more questions about the results of their instructional assessments (or any conservation-related topic in general) after the program ends.
- Affirming
 - Instructors will always be friendly and never act condescending towards participants even if they do not know much about ecology/conservation and/or end up making conservation action plans that are not as sustainable as other ones. After all, everybody starts small!

- Changeable
 - Participants will be encouraged to discuss the results of their assessments with instructors so that they can obtain more details and ask more questions about what they need to work on and change. Doing so would allow them to get the assistance they need to actually take something away from the course.
- Justifiable
 - At the start of the session, participants will be made aware of the program goals, program objectives, and learning objectives. When instructional assessments are conducted, feedback will be explicitly linked to these goals and objectives.
- Personal and Differential
 - While test scores may be standardized due to their objective nature, other instructional assessments like the personal conservation action plan are an opportunity for instructors to hold organic and unique discussions with each participant when providing feedback.
- Stated with Care and Concern
 - Throughout the entire program, instructors will be friendly and respectful of participants. As previously mentioned, there will be no condescension.

Preparing Instructional Plans

Using the material from above as well as your preliminary learning objectives from the needs analysis, develop an instructional plan, using either Exhibits 8.L or Exhibit 8.M (from Chapter 8 of the Course Pack) as a guide, for a session in which you will serve as instructor.

Title: Learn How to Help Your Local Environment!

Presenters: Official SPES instructors

Data and Time: Saturday or Sunday 9:00 AM to 3:15 PM (with a 1-hour break)

Instructional resources and equipment needed...

- For Instructors:
 - Computer connected to the Internet
 - PowerPoint
 - Zoom
 - Visual props (e.g. specimens like skulls lying around SPES' storage)
- For Participants:
 - Computer connected to the Internet

Room Arrangement needed: None needed as it is an online program

Learning Objectives	Content Heading(s)	Key Point(s) to Emphasize	Instructional Technique	Estimated Time
<p>Recognize the identity of common Stanley Park species based on their appearance and/or vocalizations (e.g. bird calls)</p> <p>AND</p> <p>List the names of common Stanley Park species.</p>	<p>What are common...</p> <ul style="list-style-type: none"> • Birds, • Mammals, • Reptiles, • Amphibians, • Fish, • Invertebrates, and • Plants? 	<p>Stanley Park is home to hundreds of species from all over the animal and plant kingdoms.</p>	<p>Online Synchronous Lecture</p>	<p>1 Hour</p>
<p>Define ecological roles</p> <p>AND</p> <p>Recognize the ecological roles of common Stanley Park species</p>	<p>Stanley Park's...</p> <ul style="list-style-type: none"> • Producers, Consumers, and Decomposers; • Predators vs. Prey; • Native vs. Invasive Species; and • Keystone Species 	<p>Each of Stanley Park's plants and animals have their own unique combination of ecological roles.</p>	<p>Online Synchronous Lecture</p>	<p>1 Hour</p>
<p>Create a web of ecological interactions in the Stanley Park ecosystem</p> <p>AND</p> <p>Illustrate the ecological effects of removing a species from Stanley Park</p>	<ul style="list-style-type: none"> • Species interactions in water ecosystems • Species interactions in land ecosystems • How do ecosystems interact with one another? • What would happen if you removed a random species? 	<p>There are too many interactions to figure out how losing a species would affect an ecosystem, so would it not make sense to preserve them and prevent any unexpected consequences from harming society?</p>	<p>Problem-based Learning with Online Synchronous Class Discussion and Drawing</p>	<p>30 Minutes</p>
<p><i>Lunch Break...Schedule continued on next page</i></p>				<p>1 Hour</p>

List and describe the environmental issues impacting the ecosystems and biodiversity of Stanley Park	<p>Environmental issues affecting the park's...</p> <ul style="list-style-type: none"> • climate & atmosphere, • freshwater ecosystems, • intertidal ecosystems, and • terrestrial ecosystems. 	<p>Environmental issues include:</p> <ul style="list-style-type: none"> • climate change, • sea level rise, • water & air pollution, • invasive species, and • park visitors disturbing habitats. 	Online Synchronous Lecture	1 Hour
List the actions and behaviours people can do to reduce the impact of environmental issues affecting Stanley Park	<p>What you can do to help the park:</p> <ul style="list-style-type: none"> • at home, • at work/school, and • when you're relaxing/playing. 	<p>There is a wide range of sustainable behaviours you can incorporate into all of the different parts of your daily life.</p>	Online Synchronous Lecture	1 Hour
<p>Assess the feasibility of implementing the aforementioned actions and behaviours into their daily lives</p> <p>AND</p> <p>Create a personal plan of action to help conserve Stanley Park's ecosystems and biodiversity</p>	<ul style="list-style-type: none"> • What are some of the barriers in your life that stop you from living more sustainably? • What can you do to help the environment? • What will you do to help the environment? 	<ul style="list-style-type: none"> • There is a wide range of sustainable behaviours you can incorporate into all of the different parts of your daily life. • You cannot do everything that's recommended, and that is okay! • Recognize what works for you and your circumstances! 	Personal Action Plans	30 Minutes
<p>Remember where to find information about upcoming conservation programs that SPES organizes</p> <p>AND</p> <p>Remember where to find information on how to financially support SPES (e.g. the schedule of other programs they can sign up for)</p>	<p>What are...</p> <ul style="list-style-type: none"> • other SPES educational Programs you can attend, • SPES conservation programs you can volunteer with, and • ways you can financially support SPES? 	<p>There are many ways to help SPES ranging from something as easy as donating money to activities as involved as removing invasive species from the park.</p>	Online Synchronous Lecture	15 Minutes

Step 5: Devising Transfer of Learning Plans (7 Marks)

Identifying Elements That Enhance or Inhibit Transfer of Learning

Using the following chart, first list specific things (related to one or more of the six factors from Figure 9.A that can enhance or inhibit the learning transfer; see Chapter 9 of the Course Pack). Next, indicate what span of decision-making control you have for each enhancer or inhibitor you listed. Finally, for those items for which you have indicated only some or little or no influence, list who could assist you in the transfer process.

The chart will be on the next three pages.

Factor	Things that Enhanced or Inhibited	Span of Decision-Making Control	People who can Assist in Transfer
Program Participants	<p>Enhancers - If participants have prior knowledge of some of the species that are discussed, they will have a conceptual foundation to build on. Furthermore, the program's discussion components would allow participants to collaborate with one another and assist each other in understanding the program's topics.</p> <p>Barriers - A major objective of this program is to ensure that participants come away knowing how they can help conserve local biodiversity. However, such knowledge does not matter if they are ultimately not motivated enough to make any changes.</p>	<p>Enhancers - Planners would not have any control over how much prior knowledge participants hold. However, they would have control in getting participants to collaborate with one another by (as mentioned previously) having participants discuss with one another in certain parts of the program.</p> <p>Barriers - Planners have some control over participants' post-program feelings of motivation. The whole point of requiring participants to develop a personal conservation action plan instead of just giving them pre-set ones was so that participants would put in what they can do. If they only have enough motivation to perform smaller-scale conservation actions, that is not a problem. Doing something small is better than doing nothing at all.</p>	<p>The people with the most control of participants' prior knowledge would be their actual teachers. After all, environmental education programs are really just optional supplements to the schools that people are mandated to attend.</p>
<i>Continued on next page</i>			

Program Design and Execution	<p>Enhancers - Active learning components such as group discussions or the parts of the programs where participants apply what they learn to familiar real-life scenarios (e.g. making conservation action plans, drawing Stanley Park's web of ecological interactions) let participants practice their ability to transfer what they learn to personally relevant contexts.</p> <p>Barriers - Passive learning components (i.e. lectures) may be too unengaging for participants to retain any information and/or may contain information that is not directly relevant to participants' contexts.</p>	<p>Enhancers - Planners have complete control over the amount of active learning components in a program.</p> <p>Barriers - Planners have complete control over the amount of passive learning components in a program as well as how it is taught (i.e. instructors need to be more engaging/interesting and need to make sure that they discuss as much information as possible/reasonable that is relevant to participants).</p>	
Program Content	<p>Enhancers - The focus of the program's content is on applying relevant, useful, and practical environmental/conservation knowledge into participants' daily lives via their personal conservation action plans.</p>	<p>Enhancers - Planners have control over this and can continue having control over this by constantly seeking feedback from participants (via processes like needs assessments) to ensure that what is taught is actually relevant, useful, practical, and applicable.</p>	
Changes Required to Apply Learning	<p>Enhancers - The rationale behind having participants develop their own personal conservation action plans instead of just giving them pre-set ones is that participants are the ones who would know best what conservation actions are doable, realistic, and do not require too much time to implement into their daily lives.</p>	<p>Enhancers - Planners can have control over this if they instruct instructors to communicate with participants and ensure that what is added to conservation action plans is what actually works for participants (e.g. instructors check with participants that they are not adding in unrealistic, large-scale actions to the plan).</p>	
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Organizational Context	This program's target audience is just members of the public. Accordingly, establishing organizational changes is not a goal for this program because it does not involve working with organizations to begin with.		
Community and Societal Forces	Enhancers - One factor that would assist participants with applying the conservation knowledge that they gained to their lives is the political climate of the city that they live in (i.e. progressive Vancouver, Canada). Accordingly, they would not have support from just SPES but the government itself (e.g. for participants who add "composting" to their action plans, Vancouver has several compost depots for public use).	This factor is out of planners' control.	The people with the most power to affect the city's political climate would be the voterbase that elects them.

Choosing Strategies and Techniques to Use in Transfer of Learning

Describe three or four transfer strategies that you did use or could use for each group listed in the chart below (refer to Exhibit 9.2 in Chapter 9 of the Text).

The chart will be on the next page.

People Involved	Strategy for Before Program	Strategy for During Program	Strategy for After Program
Program Planners	Make sure that all materials (e.g. promotional blurbs) that describe the program clearly state what participants will learn and do (i.e. learning objectives).	Involve people like instructors, SPES' ecologists, SPES' IT staff, and anyone else who can provide support in implementing the program and its learning transfer process.	Reflect on new participant needs that may have emerged over the course of the program and start developing new learning transfer techniques that would address them for the next edition of the program.
Instructors or Facilitators	Talk to participants about their interests, needs, and contexts where they want to apply what they learn, subsequently obtaining a better idea of how to make instruction more useful/relevant for them.	Ensure that participants engage with the active learning components of the program so that they can enhance their ability to transfer what they learn to their own contexts.	Provide follow-up assistance to participants (e.g. by communicating with them via email or the online discussion forum that will be set up for this program).
Learners	Discuss with instructors and planners about how they (i.e. learners) expect to apply what they learn to their daily lives.	Actively participate in the learning activities and try to think of how they (i.e. learners) can apply what they learn to their daily lives.	Implement the personal conservation action plans that they (i.e. learners) developed and seek assistance from instructors, planners, or SPES if needed.
Work Supervisors	Work supervisors are not relevant as this program is not interested in engendering change at any organization/company/workplace in particular.		
SPES	Advise planners and instructors on the key conservation information and skills that they (i.e. SPES) feel participants must take away from the program.	Provide staff support to planners, instructors, and participants (e.g. bring in ecologists who can help instructors answer questions, have IT staff on stand-by in case of technical issues).	Provide planners the resources required to develop an online discussion forum that participants can use to obtain help from instructors, SPES, and other participants in implementing conservation action plans.

Using Exhibit 9.A in Chapter 9 of the Course Pack, outline in the following chart what transfer techniques will be incorporated into your program. Provide a justification for why each technique was or could be useful in enhancing the applications process of a current program you are planning.

Technique 1: Individual Action Plans

- As mentioned previously, participants are the ones who know themselves and their circumstances best. As such, this is my rationale for having them develop personal conservation action plans to apply what they learn in the program to their daily lives. After all, if instructors gave them a one-size-fits-all pre-set action plan, participants may find its information irrelevant to them and thus useless. Getting them to determine for themselves exactly what knowledge/behaviours do work for them would improve the chances that they can transfer what they learn to their own contexts.

Technique 2: Supportive Group Environment

- During the program, I would try to foster a supportive group environment where program instructors, planners such as myself, and any other SPES staff involved are friendly, encouraging, and respectful. This would allow participants to feel comfortable about asking questions and sharing feedback to instructors/planners/SPES staff about whether the content being taught is actually relevant or applicable to their circumstances. If it is not, there is still time for planners to modify the program plan and have instructors discuss new topics that are useful for participants.
- Another benefit of fostering a supportive group environment would be that participants would also feel comfortable talking amongst themselves and collaboratively discussing the program to ensure collective understanding. Hopefully this sense of collaboration would extend into their participation in the third transfer of learning technique, a post-program discussion forum.

Technique 3: Web-based Connections

- After the program, I would try to create an online learning community by developing an online discussion forum (hosted on SPES' existing website) that participants can use to discuss their attempts to transfer what they learned out of the program and into their daily lives. Essentially, if they are having a hard time sticking to their conservation action plans and need some advice on how to make it better fit their lives and contexts, they can just turn to this forum and see if other participants, program instructors, and SPES staff can give some assistance.

Step 6: Formulating Program Evaluation Plans (10 Marks)

Planning a Systematic Program Evaluation

Apply the twelve-element model (see Exhibit 10.A in Chapter 10 of the Course Pack) to analyse the evaluation process you are currently planning. For each of the twelve elements below, list how you will address them in your evaluation plan. Draw on Exhibits 10.4, 10.5 from the Text and 10.A (see web site) as guides for completing this exercise.

Elements

Secure support for the evaluation effort from those who have a stake in the results of the evaluation.

- Considering how this program will be using their resources, I would be obligated to conduct an evaluation for SPES as such a document would help them decide whether they can justify their investment and subsequently either continue or discontinue it. Accordingly, before the evaluation process begins, I would check in with SPES' managers/executives and let them know that I am planning on conducting it, hopefully obtaining their support for it in response.

Identify the individuals to be involved in planning and overseeing the evaluation process.

- As determining what worked/can be improved is a major part of program planning, responsibility for the evaluation process would be placed on the program planners. However, I would also communicate with SPES managers/executives to see if they would like to add any liaisons to the evaluation team and ensure that SPES' concerns/needs are addressed.

Define precisely the purpose of the evaluation and how the results are to be used.

- One purpose of evaluation is to determine if the program was able to achieve its stated goals and objectives (i.e. increase participants' environmental knowledge, capability for conservation action, and support for SPES). If goals and objectives were not met (i.e. the program is not successful), planners will need to modify the program to ensure that its future editions do fulfil them.
- Another purpose is to figure out if participants actually enjoyed the program. If they did not, then they may not sign up for other SPES programs because they may believe these other programs to be boring. Seeing as one program objective entailed encouraging participants to provide further financial support to SPES (e.g. by paying to join other educational programs), this needs to be remedied by modifying the program into something that is more enjoyable.

Specify what is judged and formulate the evaluation questions.

- The major areas to be judged are the participants' changes in environmental knowledge, the program's enjoyability, and the program's outcomes (specifically whether transfer of learning occurred). Evaluation questions would include:
 - Did participants increase their knowledge of Stanley Park's ecology and biodiversity?
 - Did participants increase their knowledge of environmental issues in Stanley Park?
 - Did participants enjoy attending the program?
 - Did participants apply what they learned in the program to their daily lives (via the personal conservation action plans)?

Determine who supplies the needed evidence, or whether some of that evidence is already available.

- Considering the fact that the evaluation questions are participant-centred, evidence for determining the program's success (or lack thereof) would be gathered primarily from participants. However, instructors and other SPES staff can also provide evidence via insights that come about from their interactions with participants over the course of the program.

Delineate the evaluation type.

- Considering how the evaluation purpose and questions reflect the program's objectives, the approach being used is objectives-based.

Choose the data collection techniques to use, when the data will be collected, or how already available data can be put into usable forms.

- Pre- and post-tests administered before and after each of the program's lecture components will be used to judge the participants' changes in environmental knowledge.
- Post-program surveys and interviews will be used to determine whether participants enjoyed the program and incorporated what they learned into their daily lives.

Indicate the analysis procedure(s).

- Pre- and post-tests will generate quantitative data in the form of test scores. On top of calculating the proportion of answers/responses that were correct, another way to analyse the data would be to compare the post-test scores to the pre-test ones and see if there were any changes.
- Surveys will also be another source of quantitative data. To be more specific, planners can calculate the proportion of respondents that select a particular answer to a multiple-choice question (e.g. How many people said they enjoyed/were neutral about/did not enjoy the program?).
- Surveys will also be a source of qualitative data as the multiple-choice questions will be paired with open-ended ones that invite respondents to provide more details on why they answered how they answered. In tandem with the qualitative data that interviews will generate, analysis would entail identifying themes in the data and comparing their relative frequencies to one another.

Stipulate what criteria to use in making judgments about the program or what process to apply in determining the criteria.

- Success in increasing participant knowledge will be denoted by two criteria:
 - Higher post-test scores compared to the pre-test ones.
 - At least 70% of answers/responses on the post-test are correctly answered.
- Success in crafting an enjoyable program experience will be denoted by at least 80% of survey respondents agreeing that they enjoyed the program.
- Success in achieving transfer of learning will be denoted by at least 80% of survey respondents stating that they were able to fully follow their action plans.

Determine the specific timeline, budget, and other necessary resources.

- 1: Pre-tests will be administered before every lecture component and will be immediately marked upon their completion so that a knowledge baseline can be established and inform instructors (as well as participants) what they may need to focus on (e.g. instructors should provide more details about it, participants should take extra notes about it) before the component actually starts.
- 2: Post-tests will be administered after every lecture component and will be immediately marked upon their completion so that participants can receive timely feedback.
- 3: Upon program completion, planners will quantify the changes in pre- and post-test scores that participants experienced.
- 4: Six months after they complete the program (which should give enough time for participants to transfer what they learned to their daily lives), participants will be emailed surveys asking them if they enjoyed the program and stuck to their action plans.

- 5: Respondents who answered affirmatively to a survey question inviting them to be interviewed if they wanted to expand on what they wrote down will be immediately emailed back to schedule an interview after survey submissions are closed.
- 6: After a one-month grace period, the survey will close, and its results will be analysed for any common themes so that planners can ask interviewees about them.
- 7: Interviews will be conducted, with their data being analysed after all interviews are concluded.
- All tests, surveys, and interviews will be conducted via online platforms (e.g. Google Forms, Zoom). Furthermore, all data analyses will be conducted in-house by program planners (with the support of other SPES staff if any extra hands are required to get through all of the data in a timely manner). Accordingly, the overall financial cost of evaluation would just be the salaries of planners and any supporting SPES staff.

Monitor and complete the evaluation, make judgments about the value and worth of the program, and think through ways the evaluation data can be effectively used.

- Upon completion of the seven steps detailed in the previous element, planners (and any supporting SPES staff) will group all analysis results together and make an overall conclusion/judgement of the program's success. These conclusions will be discussed with SPES executives/managers to determine if they wish to continue investing resources into the program.
- Action plans will also be made that describe what modifications need to be made to the program to enhance its capability for successfully achieving its goals and objectives.

Informal and Unplanned Evaluation Opportunities

List at least three ways that you have used an informal or unplanned evaluation approach in evaluating education and training programs. Indicate next to each whether what you did was helpful and describe briefly why or why not.

1. Planners can check in on the program and observe participants at various points of the program. While the program may be online, planners can still look at each participants' webcam and check their body language. This is helpful as planners can subsequently gauge whether or not participants are enjoying the program based on this informal method. For example, if participants are slumped, yawning, and/or have a glazed look in their eyes, perhaps the program is a bit too boring.
2. Planners can check in on informal inter-participant interactions in the post-program online discussion forum and see if participants are saying anything (e.g. what they liked, what they hated) about the program. The helpfulness of what they are saying depends on the number of details that participants add to their messages. For example, "I disliked the part of the program where A because X, Y, and Z" is more constructive/provides more information that can better inform/increase the comprehensiveness of evaluation

compared to a simple “B sucked”. The latter would still be somewhat useful though in gauging the general value judgements that participants hold towards the program.

3. Planners can hold casual conversations with program instructors (e.g. they run into them at the SPES break room sometime after the program is over). This is helpful because instructors would have spent the most amount of time talking with participants during the program. Accordingly, instructors may have some extra insights (e.g. maybe they noticed subtle participant reactions, maybe participants told them something) into the implementation of the program, and these insights can be incorporated into judgements about program success.

Techniques for Collecting Evaluation Data

Based on information in Exhibit 10.4 in our textbook, identify at least three data collection techniques that you will use to evaluate your program. Give a description of the technique, how it will be implemented in your program, whether it is quantitative or qualitative, what are its success criteria (for example a test score over 80%) and why you think it will yield good data.

Pre- and Post-Tests (Quantitative)

- At the start and end of each lecture component, participants will complete a test on the component’s topic. One test would be a set of multiple-choice questions asking them to identify common species living in Stanley Park based on their appearance and/or vocalizations. Another (also multiple-choice) would ask them to define ecological roles and recognize the ones that Stanley Park’s species have. There will be a third pre-/post-test pair consisting of a single open-ended activity that asks them to list and describe at least three environmental issues facing Stanley Park. All test scores will be quantified by the proportion of correct responses — i.e. the proportion of correct choices in the former two pair of tests, the proportion of accurate descriptions of environmental issues out of the three (or more) that participants write about in the third pair of tests.
- Success in increasing participant knowledge will be denoted by two criteria:
 - Higher post-test scores compared to the pre-test ones.
 - At least 70% of answers/responses on the post-test being correctly answered.
- The results will allow planners to determine if the program’s instruction can actually increase participant’s environmental knowledge. In essence, if the two criteria are not met, then modifications will need to be made to the program’s instruction (e.g. reduce the amount of passive learning/lecture components?).

Surveys (Mixed Data)

- Six months after the program, participants will be emailed an online survey on whether they enjoyed the program and if they stuck to their action plans. Questions will be both quantitative (i.e. Yes, No, and a median answer) and qualitative (i.e. open-ended), with the latter allowing respondents to expand on their rationale behind their choices for the former.
- Program success will be denoted by three criteria:
 - Over 80% of respondents agreed that they enjoyed the program.
 - Over 80% of respondents stated that they were able to fully follow their action plans.
- The results will allow planners to determine if the program actually has benefits for the local community, whether by being a source of fun or by increasing its sustainability by fostering conservation action. With the qualitative sections of the surveys, planners will be able to receive some direction from participants themselves on what planners need to address (i.e. the barriers that led respondents to not enjoy the program and/or not follow action plans) to make sure the criteria can be fulfilled in future editions of the program.

Interviews (Qualitative)

- Interested survey respondents will be interviewed so that they can provide more detail about the thought processes behind what they wrote down. However, before the start of the interviews, all survey data will need to be analysed to identify themes that appeared the most frequently. Doing so would allow planners to ask interviewees about them during the interviewing, allowing planners to have a more comprehensive/detailed idea of the themes and how we could address them. Being the most common ones, it makes sense to prioritize them. For example, perhaps most participants are unable to follow their conservation action plans because of a specific barrier. If that happens, planners will need to add in some extra course content that talks about ways to get past that barrier or else future participants are going to run into the same problem. Planners can ensure that this content is useful by focusing on aspects about the barrier that interviewees highlight.
- Program success will be denoted by two criteria:
 - Most interviewees agreed that they enjoyed the program.
 - Most interviewees were able to fully follow their action plans.
- However, it should be noted that these interviews are not a good mark of program success as not all participants will be interviewed. Furthermore, even if all participants agreed to an interview, there is the possibility that it may not even be feasible as planners would require large amounts of time/resources to conduct all interviews and analyse resultant data. Accordingly, only a subset of participants will be interviewed, and their views may not be generalizable to the rest of the participants. Accordingly, the main use of interviews is to build on survey responses/results and explore the rationales behind them.

Data Collection Tools

Pre- and Post-Tests

This is an example of one of the three types of pre-/post-tests that will be used (i.e. one about species identification, one about ecology, one about environmental issues).

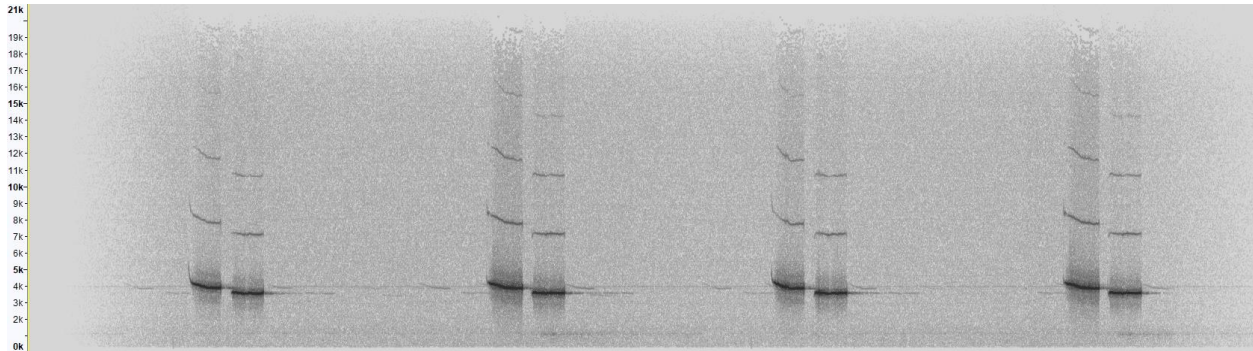
While only two questions are presented here, the rest of the test — consisting of 20 multiple-choice questions in total — will follow a similar format (i.e. 14 questions of visual identification, 6 questions of audio identification).

1. Visual Identification: What species is this?



- (a) Bald Eagle (*Haliaeetus leucocephalus*)
- (b) Wood Duck (*Aix sponsa*)
- (c) Coyote (*Canis latrans*)
- (d) Mallard (*Anas platyrhynchos*)**
- (e) Salal (*Gaultheria shallon*)

2. Audio Identification: What species is making this sound?



A visualization of this bird's song. Black marks represent sound being made, with higher marks being higher-pitched sounds.

[Click on this link to listen to the audio!](#)

- (a) **Black-capped Chickadee (*Poecile atricapillus*)**
- (b) Bald Eagle (*Haliaeetus leucocephalus*)
- (c) Spotted Owl (*Strix occidentalis*)
- (d) Douglas Squirrel (*Tamiasciurus douglasii*)

Survey

1. Did you enjoy the program?
 - a. Yes
 - b. Neutral
 - c. No
2. What were the reasons why you felt that way? (*open-ended question*)
3. Have you stuck to following your personal conservation action plan?
 - a. Yes (fully)
 - b. Yes (somewhat)
 - c. No
4. What contributed to your ability to stick to/not stick to your plan? (*open-ended question*)
5. Would you be open to an interview to further discuss your thoughts on the program?
 - a. Yes
 - b. No

Interview

Interview questions are subject to change depending on whether the responses that are received when the interview is piloted are comprehensive enough. Perhaps the current questions are too vague or too incomprehensible. Perhaps more questions will need to be added.

Questions 4 and 9 concern the common themes that were frequently discussed in survey responses (i.e. they were mentioned by more than half of the survey respondents). The name of each theme will fill in the blank, and the questions will be repeated for every single common theme. However, if there are so many questions that the interview goes on for too long (i.e. the pilot interviews run for over an hour), questions about the more uncommon themes will need to be cut.

1. Did you find the program enjoyable overall?
2. What were the most enjoyable parts of the program for you?
3. What were the least enjoyable parts of the program for you?
4. How did _____ affect how much or how little you enjoyed the program (if it did at all)?
5. How could the program be changed to make it more enjoyable for you?
6. Did you end up being able to fully stick to your personal conservation action plan?
7. Was there anything that made it easier for you to stick to your personal conservation action plan?
8. Was there anything that made it harder for you to stick to your personal conservation action plan?
9. How did _____ affect your ability to stick to your personal conservation action plan (if it did at all)?
10. What can instructors do to make it easier for you to stick to your personal conservation action plan?

Data Collection and Program Revisions

Assume that one of the three tools outlined above resulted in negative feedback for your program. Outline what that negative feedback could be, and how you will revise the program as a result of the data. If you are using quantitative data, please refer to Exhibit 10.E in Chapter 10 of the Course Pack for guidance on revisions based on Participant's Learning, Program Operations, Organizational Issues or Societal Issues. You may use these same criteria if you are using qualitative data – just explain how your revisions deal with one of these factors.

One example of negative feedback that can occur in regard to focusing on participants' learning would be survey results showing less than 80% of respondents stating that they were able to fully follow their personal conservation action plans — i.e. failing to reach the 80% threshold that had been previously decided as the goal for this program. Accordingly, this would denote shortfalls in the program's ability to support participants in transferring what was taught into actual conservation action. As such, planners will need to identify participants' barriers to following their action plans and to determine what can be done on the program's end to reduce these barriers. To do this, planners can just go straight to the people who would be the most familiar with what is not working — i.e. they can interview the participants themselves. Interview questions will explicitly ask participants to identify barriers that planners will need to account for (e.g. figure out how to discuss solutions for getting over them) when creating a new edition of the program. Furthermore, interviewees will be asked to provide explicit recommendations that should be incorporated into the program (i.e. How else can instructors, planners, SPES, and the program itself help them?) to improve their ability to follow their action plan.