

PENNSSTATE



INSYS 415A
Fall 2014



Taking Underwater Pictures with a GoPro Hero 2

Design Documents

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Learning Module

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Project 1: Topic Content

In a culture obsessed with selfies, I am going to do a lesson on how to take an underwater selfie, and lots of them! My module will revolve around the GoPro Hero 2 action camera, which is sometimes referred to as the “selfie camera”. My audience will be very broad, as this module will cover using the GoPro to take both pictures and video; however, I will focus on setting up the GoPro to continuously take photos underwater at a specific time interval. This will allow the user to focus on “having fun” while the GoPro is snapping a photo every 5, 10, 30, or 60 seconds. This setting we will be using is also referred to as time-lapse.

Since my module involves taking pictures underwater, I will also be covering a few necessary accessories that one will need to successfully operate the GoPro camera underwater. This will include differences between wet (waterproof) and dry (not waterproof) cases, as well as a few mounts.

Project 2: Needs Assessment

The GoPro camera has recently begun to make strides in popularity, although I believe there is a widespread belief that it is only for extreme sports or extreme athletes. This is not the case. This camera could and should be used for everyday uses.

The creators of GoPro wanted to make a camera that was simple and intuitive enough for just about anyone, so it only has two buttons: the power and the shutter. This means these two buttons serve multiple purposes and if someone is not familiar with photography concepts, even something as simple as two buttons could become overly complicated.

I would conduct a needs assessment by interviewing multiple skill levels of GoPro camera users (advanced, intermediate, beginners) the same questions. I would then use this data to find the desired and actual state, resulting in any ‘gap’.

Instructional Goal

Anyone interested in taking underwater photographs will be able to navigate the GoPro camera menu and capture high-quality, underwater photos of themselves and their adventures by effectively utilizing the GoPro Hero 2 camera and waterproof housing.

Project 3: Goal Analysis

Domain of Learning: Intellectual Skill

Major Steps:

1. Set up and turn on GoPro camera
 - 1.1. Insert a memory card.
 - 1.2. Hold the power button until camera beeps.
 - 1.3. Did GoPro turn on? If yes, proceed to 2. If no, proceed to 1.4.
 - 1.4. Charge the battery.
2. Choose the desired time interval and select the time-lapse setting.
 - 2.1. Navigate to settings menu and select.
 - 2.2. Navigate to time-lapse settings and select.
 - 2.3. Choose desired time option and exit settings.
 - 2.4. Navigate to time-lapse photo option.
3. Secure the GoPro camera in the waterproof wrist housing.
4. Initiate the camera to began taking pictures.
5. Jump in the water!

I chose these five steps due to the simplistic and adventurous nature of GoPro. They are a young company with a unique approach on business and life. This is why I included the fifth step, jump in the water. GoPro's founder and CEO, Nick Woodman, is all about staying true to who you are. [In an interview with 60 Minutes last month \(August 2014\), he used the word "stoked" about "5 million times".](#) Minus the fifth step, I believe I have simplified the instructional goal into four major steps that are basic enough to accomplish the goal.

This arrangement was carefully chosen. I tinkered with switching steps two and three. It doesn't matter which order these are done. Some prefer step three, then step two; and others prefer step two, then three. I decided to arrange the sequence as is because from my experiences with GoPro, it is a lot easier to set the camera's settings before it is inside the waterproof housing. Although it is possible to change the settings while the camera is in the housing, I strongly encourage beginners to set the settings before the housing.

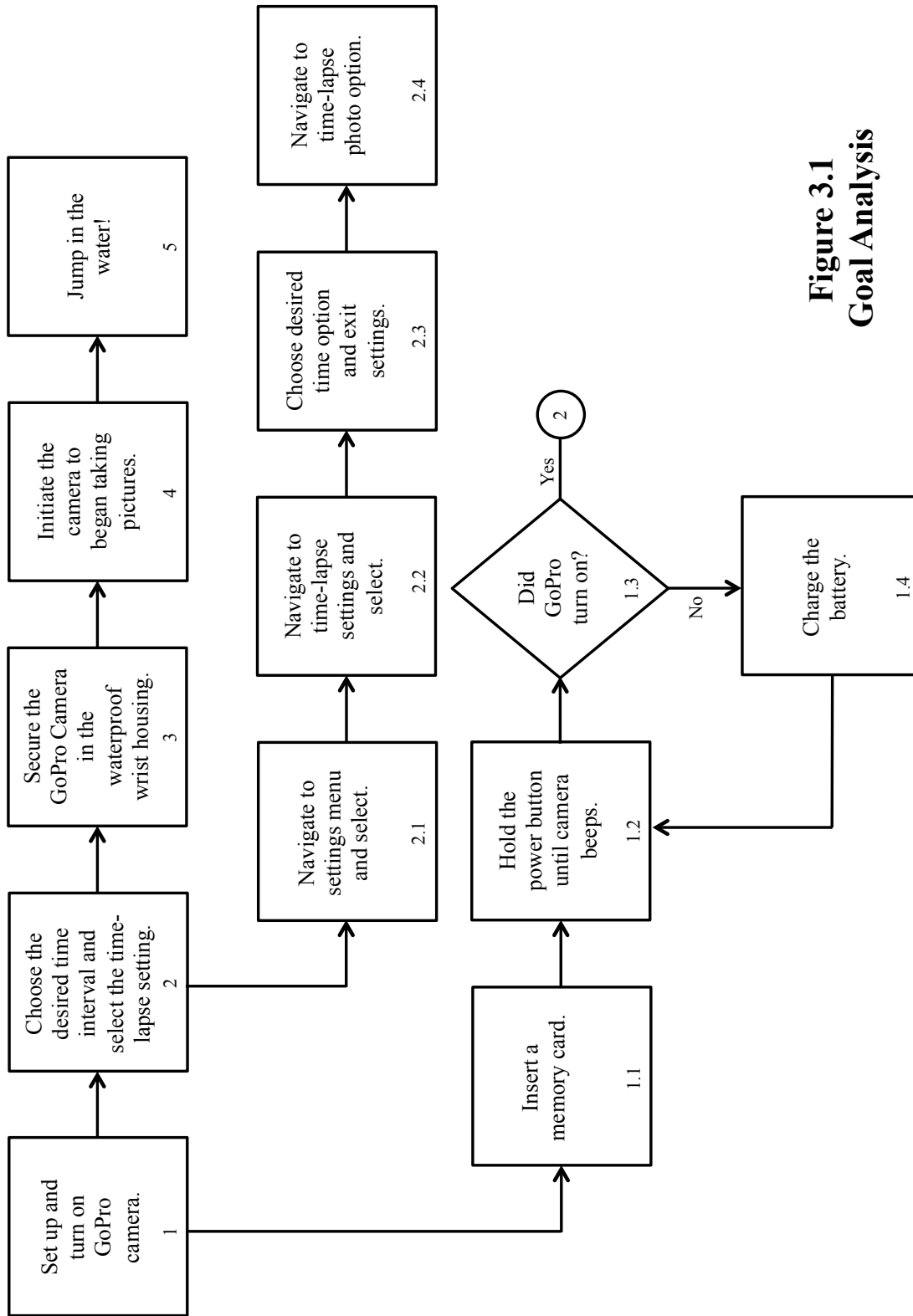


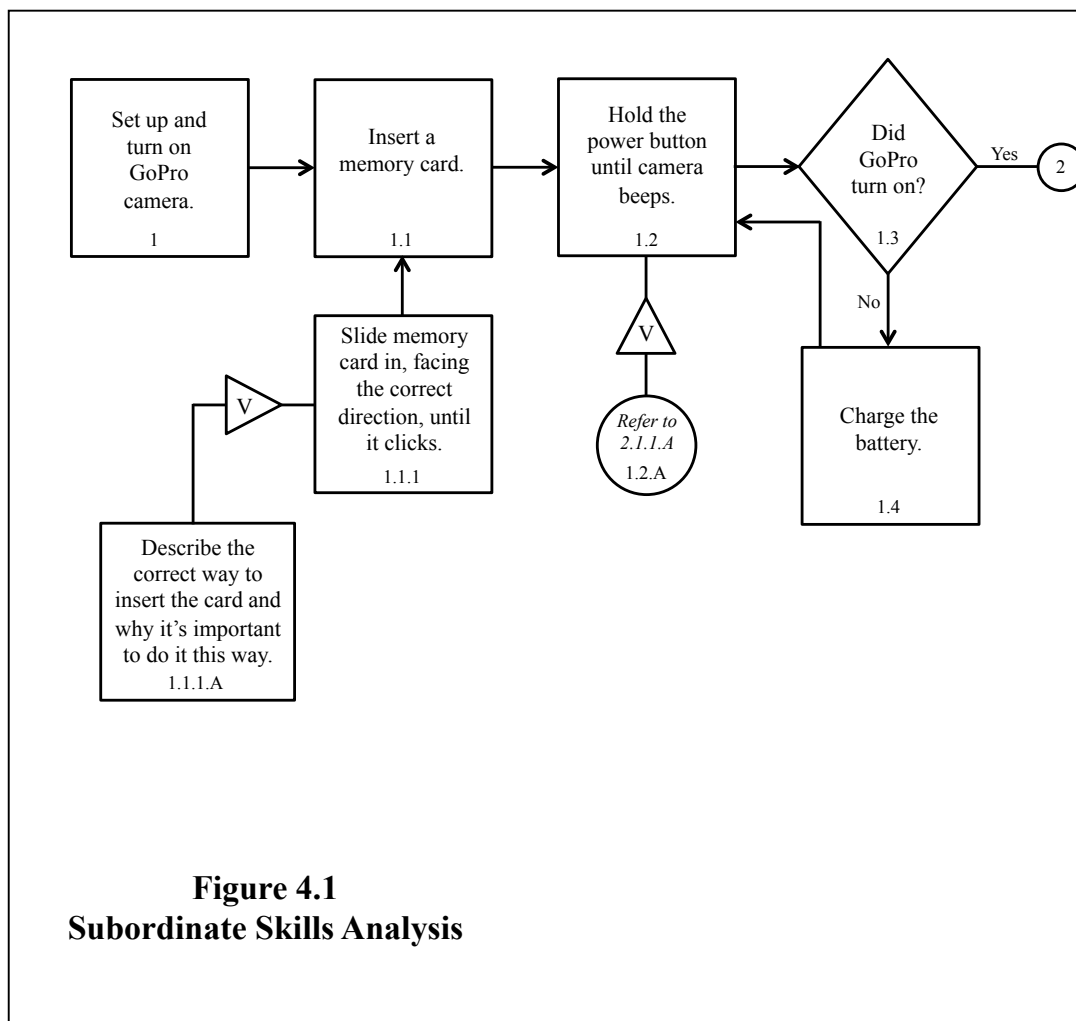
Figure 3.1
Goal Analysis

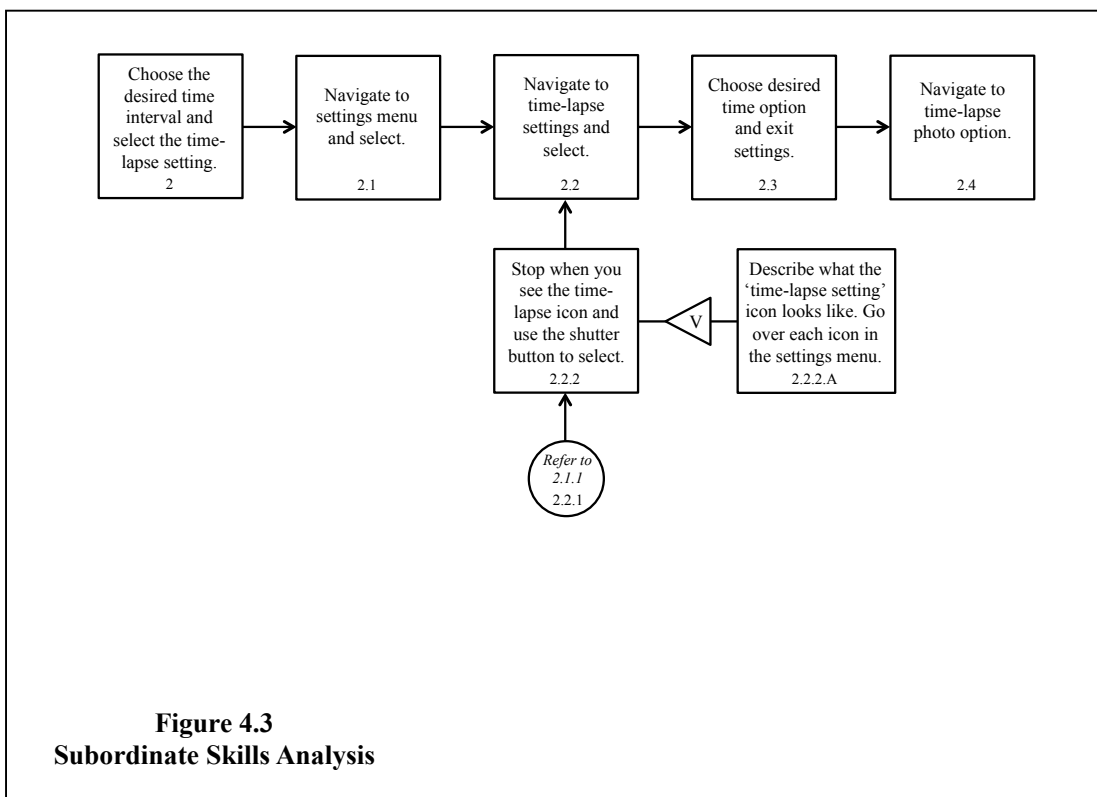
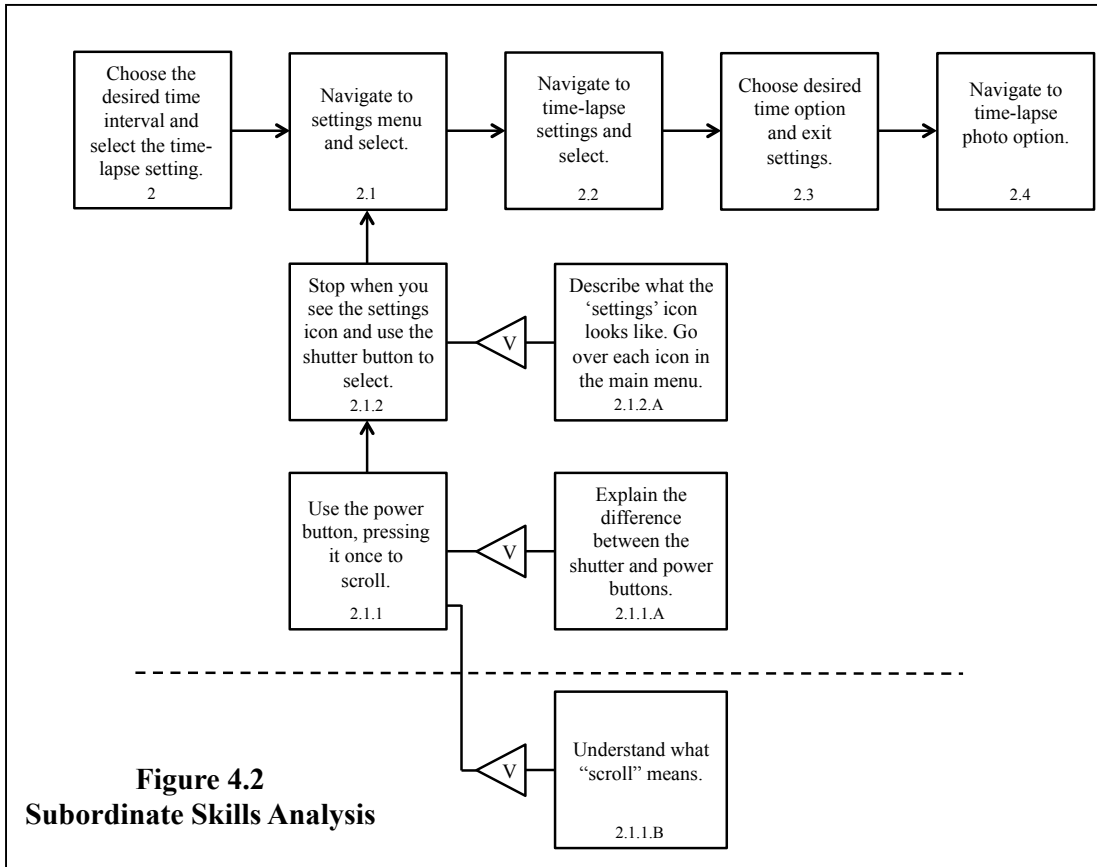
Project 4: Subordinate Skills Analysis

This was a difficult analysis to do. I think a reason why this was so difficult was because I was trying to analyze a task that I am so advanced at, it was challenging to break it down into sub-skills. However, I decided to go by the book (literally) and ask myself these two questions over and over, at each major step and also for each sub-skill:

1. "What is it that the student must already know how to do, the absence of which would make it impossible to learn this subordinate skill?"
2. "What mistakes might students make if they were learning this particular skill?"

Doing this proved to be extremely helpful. I found it easier to figure out what the learner must know to perform the task at hand. I chose to do a procedural analysis, as Dick and Carey recommended. I also decided to break apart the goal analysis on separate pages for easier viewing and reading. Step 1's subordinate skill analysis can be seen at **Figure 4.1**. Step 2 is displayed on three separate slides because the major step is broken down further into four sub-steps (of a superordinate skill). They can be seen at **Figure 4.2**, **Figure 4.3**, and **Figure 4.4**. And lastly, Step 3 and four are combined in **Figure 4.5**.





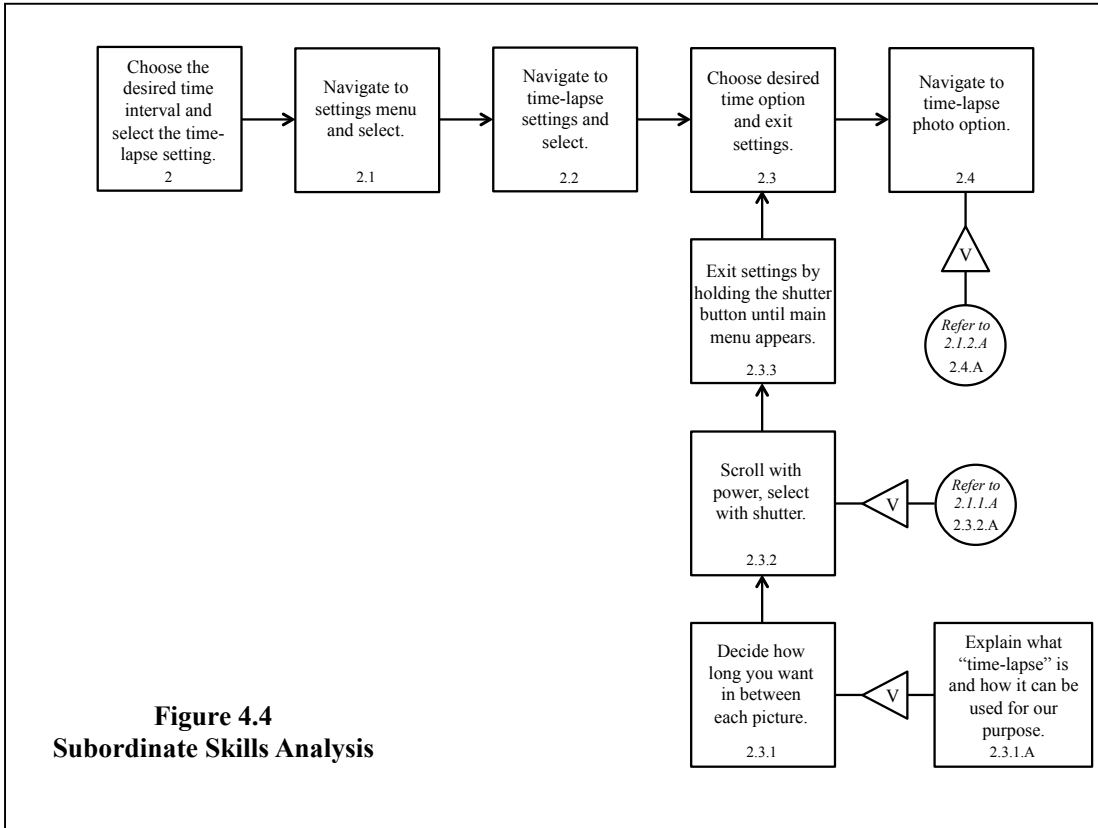


Figure 4.4
Subordinate Skills Analysis

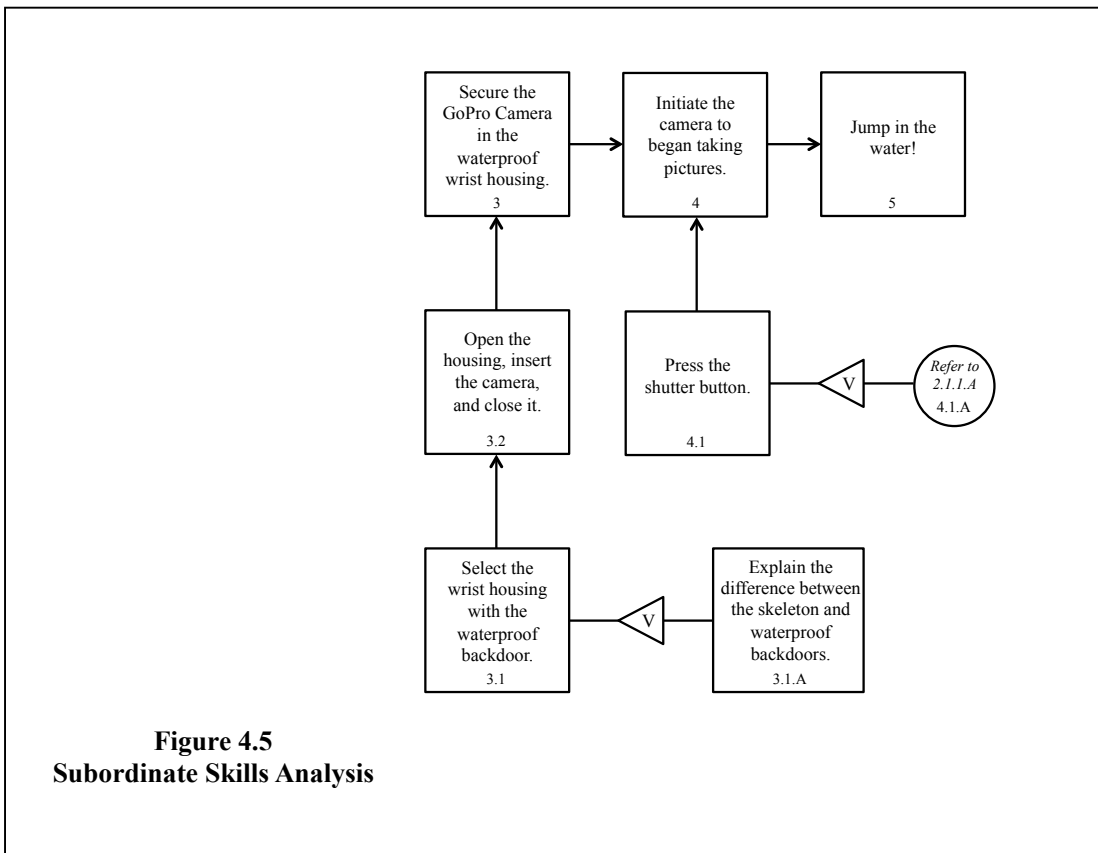


Figure 4.5
Subordinate Skills Analysis

Project 5: Context Analysis and Learner Characteristics

Learner Analysis

1. What are the general characteristics of your target population?

The general characteristics of my target population would include anyone that is physically capable of operating a small electronic device and knowing how to swim. They will have an interest in taking pictures of themselves. My 'focus' population will be "tweens" and young adults, anywhere from 11 years old to 35 years old; however, younger and older people will be targeted.

2. Are there any entry behaviors that are not specific to your goal, and yet you feel are required for your intended learners to possess? (Entry Behaviors)

I do not have any entry behaviors that would warrant a specific mention here.

3. Do the learners already know something about the topic? (Prior Knowledge)

Yes, the majority of learners will already have an idea of taking a "selfie". Most learners will have already done this on a smart phone or on a point-and-shoot camera. Also, there may be some learners that are familiar with the GoPro brand, as it has been gaining popularity among mainstream camera users.

4. Do they have a positive attitude towards the content and the delivery system? (Attitudes Toward Content and Potential Delivery System)

Learners interested in this module will come in with a positive attitude, ready to learn how to take an "underwater selfie". This module is centering around one of the coolest fads of this generation: selfies. It's also using the "best selling camera in the world" according to [60 Minutes](#). If the potential delivery system is decided to be video, I believe the learners will welcome it with open arms. If not, it will be paper based and will still be welcomed with positive attitudes as it will be simple and to the point.

5. Is it reasonable to expect them to want to learn what needs to be learned? Is the topic likely to interest them? (Academic Motivation)

Yes, we have the "wow" factor. As I mentioned in the previous question, GoPro is the best selling camera in the world. Who isn't interested in learning how to take high-quality pictures underwater? It's just cool. They will want to learn.

6. Is it reasonable to expect that they can learn what needs to be learned? (Educational and Ability Levels)

Learners should have no problem with the content in this module.

7. Do they have any general learning preferences? (General Learning Preferences)

Our entire target population does not have any general learning preferences. However, I believe my 'focus' population will generally prefer "instant". What this means is that they will want this learning to be instantaneous, almost like streaming from Netflix.

8. Do they have a positive attitude regarding the organization providing the instruction? (Attitudes Toward Training Organization)

In this module, we will say the organization providing this instruction is Penn State. And yes, these learners have a positive attitude.

9. Are there any important group characteristics? How similar or diverse are they? (Group Characteristics)

Because my target population is so broad, I will have a very diverse group of learners. The main group characteristic that I will have to focus on is "simplicity". I will need to keep the module simple enough for a 10-year-old, but also not too simple for a 25-year-old.

10. How did you obtain this information regarding the learner characteristics?

For this project, I simply answered the questions based on my personal SME knowledge of the subject. Normally, I would survey potential learners and distribute questionnaires at stores that sell GoPro cameras (if allowed).

Performance (Workplace) Context Analysis

1. What type of organizational support can learners expect to receive when they use their new skills? (Managerial Support)

Most learners will be using this new skill for their personal use, therefore I am projecting no organizational support.

2. Will the use of their new skills depend on certain equipment, facilities, tools, or other resources? (Physical Aspects of the Site)

The use of this new skill will require a GoPro Hero 2 camera or newer, waterproof housing accessories (usually bought and sold together), and a body of water. The body of water could be as small as a swimming pool, or as large as the ocean!

3. Will they work alone or in a team? Will they work independently in the field or as a supervisor? (Social Aspects of the Site)

This skill will most likely be used alone. However, it can be used to take group selfies. If this is the case, the learners will still be operating the camera by themselves to take a picture of an entire group.

4. How relevant are the new skills to the actual workplace? Will the new skills actually be used in the performance setting? Are there any physical, social, or motivational constraints to the use of the new skills? (Relevance of Skills to Workplace)

This skill will most likely never be used in a “work environment”.

5. How did you obtain this information regarding the performance context?

For this project, I simply answered the questions based on my personal SME knowledge of the subject. Normally, I would visit bodies of water and observe people using GoPro cameras in this environment. I would also interview SME to gain a better understanding of where exactly and under what circumstances learners will be utilizing a GoPro camera.

Training Context Analysis

1. How many sites are there, and what are the characteristics of the sites? What equipment and resources are available? (Number and Nature of Sites)

For this module, there will only be one site. There will be a GoPro Hero 2 camera and the necessary housings available. If the learner chooses to test out the camera in water, the learner can use a bathtub if it's during the colder months, or if they're brave, jump in a river.

2. Does the site include any tools or other items that are necessary for the learning of the goal? Are there any personnel or time constraints that you can identify? (Compatibility of the Site With the Instructional Requirements)

There are no personnel or time constraints. The only "site" constraints I can foresee is the lack of a body of water, but this is not essential to completing the module. The learner can simply submerge the camera in a bowl of water.

3. Are the sites convenient to the learners, are there necessary conveniences available, and is there adequate space and equipment for the expected number of learners? (Compatibility of the Site With the Learner Needs)

Yes, the sites are very flexible. There does not have to be a body of water present. Mentioned previously, the learner could experiment with a bowl of water. The learning module could be taken anywhere.

4. Does the learning environment adequately simulate the eventual work environment? Is there anything that can be done to make it more like the work environment? (Feasibility for Simulating the Workplace)

If there were a body of water present, then the learning environment would be just like the work environment. The only thing that could be done would be to move the learning environment to a swimming pool area or a lake/ocean.

5. How did you obtain this information regarding the learning context?

For this project, I simply answered the questions based on my personal SME knowledge of the subject. Normally, I would visit bodies of water and observe people using GoPro cameras in this environment. I would also interview SME to gain a better understanding of where exactly and under what circumstances learners will be utilizing a GoPro camera.

Project 6 and 7: Design Evaluation Chart

Performance Objectives & Criterion-Referenced Test Items

Goal Step, Substep, Subordinate Skill, or Verbal Information	Critical	Difficult	Dangerous	Performance Objective	Test Items
<p>Instructional Goal: Anyone interested in taking underwater photographs will be able to navigate the GoPro camera menu and capture high-quality, underwater photos of themselves and their adventures by effectively utilizing the GoPro Hero 2 camera and waterproof housing.</p>	5	3	4	Given a GoPro Hero 2 camera, a memory card, and waterproof wrist housing, successfully set up, secure, and select the optimal settings for taking timed, underwater photos with the camera. This will be done without damaging the camera or camera card underwater. The learner will also be able to complete this entire process within five (5) to ten (10) minutes without referring to a user guide or having to ask for help.	See "Test Item Checklist", Figure 7.1
1.0 Set up and turn on GoPro camera.	5	2	1	Given a GoPro Hero 2 camera and memory card, the learner will set up and turn on the camera without referring to the user guide or without hesitation.	See "Test Item Checklist", Figure 7.1
1.1 Insert a memory card.	2	1	1	Given a memory card and the camera, insert the card the correct way, without damaging the card or camera.	See "Test Item Checklist", Figure 7.1
1.1.1 Slide memory card in, facing the correct direction, until it clicks.	3	1	1	Given a memory card and the camera, insert the card the correct way, without damaging the card or camera.	See "Test Item Checklist", Figure 7.1

Goal Step, Substep, Subordinate Skill, or Verbal Information	Critical	Difficult	Dangerous	Performance Objective	Test Items
1.1.1.A Describe the correct way to insert the card and why it's important to do it this way.	3	1	1	Given an open-ended question, "Describe the correct way to insert a memory card into a GoPro camera in a few sentences and give one reason why it's important to do it this way."	See "Pencil/Paper Test", Figure 7.2
1.2 Hold the power button until camera beeps.	5	1	1	With a powered off GoPro camera, successfully turn on the camera.	See "Test Item Checklist", Figure 7.1
1.2.A (Refer to 2.1.1.A)	5	1	1	Given an image of a GoPro camera, correctly identify and fill-in-the-blank where the power and shutter buttons are located.	See "Pencil/Paper Test", Figure 7.2
1.3 Did GoPro turn on?	3	1	1	After attempting to turn on the GoPro camera, the learner will recognize that the camera powered on by hearing a beep.	See "Test Item Checklist", Figure 7.1
1.4 (No) Charge the battery.	3	1	2	After a GoPro camera failed to turn on due to a dead battery, charge the battery. The learner will know how to use the charging cable to plug in the camera and charge the battery.	See "Test Item Checklist", Figure 7.1

Goal Step, Substep, Subordinate Skill, or Verbal Information	Critical	Difficult	Dangerous	Performance Objective	Test Items
2.0 Choose the desired time interval and select the time-lapse setting.	1	3	1	With a powered on GoPro camera, choose the desired time interval and set the camera to time-lapse mode. The learner will be able to navigate the main menu and settings menu, and understand and recognize each icon. With being able to seamlessly navigate menus, this step should take no longer than two (2) minutes.	See "Test Item Checklist", Figure 7.1
2.1 Navigate to settings menu and select.	1	2	1	With a powered on GoPro camera, select the settings menu. The learner will <i>quickly</i> navigate to, identify, and select this menu option.	See "Test Item Checklist", Figure 7.1
2.1.1 Use the power button, pressing it once to scroll.	1	1	1	With a powered on GoPro camera, identify and use the power button to scroll through the menu. This should be done without thought, almost on instinct.	See "Test Item Checklist", Figure 7.1
2.1.1.A Explain the difference between the shutter and power buttons.	5	1	1	Given an image of a GoPro camera, correctly identify and fill-in-the-blank where the power and shutter buttons are located.	See "Pencil/Paper Test", Figure 7.2
2.1.2 Stop when you see the settings icon and use the shutter button to select.	1	1	1	While scrolling through the menu options on a GoPro camera, identify the settings icon and select it using the shutter button. The learner will know what the settings icon is and be able to identify this icon out of a "lineup of GoPro icons" without hesitation.	See "Test Item Checklist", Figure 7.1

Goal Step, Substep, Subordinate Skill, or Verbal Information	Critical	Difficult	Dangerous	Performance Objective	Test Items
2.1.2.A. Describe what the 'settings' icon looks like. Go over each icon in the main menu.	2	1	1	Given a list of images of each icon in one column and icon names in another column, correctly match up every icon with its name.	See "Pencil/Paper Test", Figure 7.2
2.2 Navigate to time-lapse settings and select.	3	2	1	With a powered on GoPro camera, select the time-lapse settings. The learner will <i>quickly</i> navigate to, identify, and select this option.	See "Test Item Checklist", Figure 7.1
2.2.1 (Refer to 2.1.1)	2	1	1	With a powered on GoPro camera, identify and use the power button to scroll through the menu. This should be done without thought, almost on instinct.	See "Test Item Checklist", Figure 7.1
2.2.2 Stop when you see the time-lapse icon and use the shutter button to select.	1	1	1	While scrolling through the settings on a GoPro camera, identify the 'time-lapse settings' icon and select it using the shutter button. The learner will know what this icon is and be able to identify this icon out of a "lineup of GoPro icons" without hesitation.	See "Test Item Checklist", Figure 7.1
2.2.2.A Describe what the 'time-lapse setting' icon looks like. Go over each icon in the settings menu.	2	1	1	Given a list of images of each icon in one column and icon names in another column, correctly match up every icon with its name.	See "Pencil/Paper Test", Figure 7.2

Goal Step, Substep, Subordinate Skill, or Verbal Information	Critical	Difficult	Dangerous	Performance Objective	Test Items
2.3 Choose desired time option and exit settings.	1	2	1	Given a GoPro camera that is within the time-lapse settings (in the settings menu), choose the desired time option and exit the settings back to the main menu. Once navigation and the icons are well recognized, this will take no more than two (2) minutes.	See "Test Item Checklist", Figure 7.1
2.3.1 Decide how long you want in between each picture.	1	1	1	While in the time-lapse settings on the GoPro, make a decision on how long you want in between each picture. The learner will know that there are seven (7) time options: 0.5, 1, 2, 5, 10, 30, and 60 seconds. This will not surprise the learner. The learner will know which option they want and quickly select it using the shutter button.	See "Test Item Checklist", Figure 7.1
2.3.1.A Explain what "time-lapse" is and how it can be used for our purpose.	1	3	1	Given an open-ended question, "Describe what time-lapse is in a few sentences", the learner will briefly and concisely explain what time-lapse is.	See "Pencil/Paper Test", Figure 7.2
2.3.2 Scroll with power, select with shutter.	1	1	1	While in the settings menu on a GoPro, scroll with the power button and select with the shutter button. This should be done without thought, on instinct.	See "Test Item Checklist", Figure 7.1

Goal Step, Substep, Subordinate Skill, or Verbal Information	Critical	Difficult	Dangerous	Performance Objective	Test Items
2.3.2.A (Refer to 2.1.1.A)	1	1	1	Given an image of a GoPro camera, correctly identify and fill-in-the-blank where the power and shutter buttons are located.	See "Pencil/Paper Test", Figure 7.2
2.3.3 Exit settings by holding the shutter button until main menu appears.	3	1	1	Given a GoPro camera in the settings mode, hold the shutter button to exit back to the main menu. The learner will be able to return to the main menu from anywhere in the settings by knowing to hold down the shutter button.	See "Test Item Checklist", Figure 7.1
2.4 Navigate to time-lapse photo option.	3	2	1	With a powered on GoPro camera, navigate to the time-lapse mode on the main menu. The learner will <i>quickly</i> navigate to the time-lapse icon, but not select it.	See "Test Item Checklist", Figure 7.1
2.4.A (Refer to 2.1.2.A)	2	1	1	Given a list of images of each icon in one column and icon names in another column, correctly match up every icon with its name.	See "Pencil/Paper Test", Figure 7.2
3.0 Secure the GoPro camera in the waterproof housing.	5	2	1	Given an already set up and powered on GoPro camera and waterproof housing, secure the camera inside the housing. The camera should be able to be submerged in water without damaging the camera. This should also be done quickly, within 90 seconds.	See "Test Item Checklist", Figure 7.1

Goal Step, Substep, Subordinate Skill, or Verbal Information	Critical	Difficult	Dangerous	Performance Objective	Test Items
3.1 Select the wrist housing with the waterproof backdoor.	5	1	1	With multiple GoPro mounts, housings, and backdoors available, the learner will identify and select the wrist housing and waterproof backdoor. This should be a quick decision, within five (5) seconds.	See "Test Item Checklist", Figure 7.1
3.1.A Explain the difference between the skeleton and waterproof backdoors	3	1	1	Given two images of two different GoPro housing backdoors, correctly identify and fill-in-the-blank for each backdoor.	See "Pencil/Paper Test", Figure 7.2
3.2 Open the housing, insert the camera, and close it.	5	2	2	With the GoPro camera and waterproof housing, open the housing, insert the camera, and close it. This should take the learner no more than 90 seconds to complete. It should also be done seamlessly without fumbling with the housing.	See "Test Item Checklist", Figure 7.1
4.0 Initiate the camera to begin taking pictures.	5	1	1	Given a GoPro camera already in the waterproof housing and settings already selected, initiate the camera to begin taking pictures. The camera should successfully begin taking pictures immediately when the user/learner presses the shutter button.	See "Test Item Checklist", Figure 7.1

Goal Step, Substep, Subordinate Skill, or Verbal Information	Critical	Difficult	Dangerous	Performance Objective	Test Items
4.1 Press the shutter button.	3	1	1	Given a GoPro camera already in the waterproof housing and settings already selected, press the shutter button. The learner's finger should automatically go to the shutter button, and not toward the power button.	See "Test Item Checklist", Figure 7.1
4.1.A (Refer to 2.1.1.A)	5	1	1	Given an image of a GoPro camera, correctly identify and fill-in-the-blank where the power and shutter buttons are located.	See "Pencil/Paper Test", Figure 7.2
5.0 Jump in the water!	2	2	3	With a GoPro camera in waterproof housing taking time-lapse pictures strapped to your wrist, jump in the water. The learner should be having fun!	See "Test Item Checklist", Figure 7.1

Reflection

Writing a performance objective (PO) for each box proved to be more tedious than difficult. I started to notice a lot of repetition and redundancy. I used the same performance objective for verbal information (1.1.1.A), subordinate skill (1.1.1), and substep (1.1). This seemed wrong to me, but as I tried to write a different PO, nothing seemed to fit quite right. I also decided to leave out my only entry behavior because I found it irrelevant to have a PO for. It was also difficult to create a PO for the entry behavior without using the same parent PO.

For the test items, I created two assessment documents: a test item checklist and a 20-question paper test. I figured the checklist was sufficient enough to measure the learner's ability to be successful in this module. I used the pencil and paper test to measure the learner's mastery of the verbal information. I included open-ended, fill-in-the-bank, and matching questions. This seemed to be the most logical way to assess the learner during and after the module.

Figure 7.1: Test Item Checklist

GoPro Test Item Checklist	Yes	No	Questions and/or Comments
Instructional Goal: Learner was successful in completing every item on this checklist (besides main step 5.0) under 10 (ten) minutes.			
1.0 Learner was successful in initial setup and powering on the GoPro camera.			
1.1/1.1.1 Learner successfully inserted a memory card without damaging the camera or card.			
1.2 Learner successfully powered on the camera by holding the power button in.			
1.3 Learner was successful in determining if camera turned on or if it needed charged.			
1.4 Learner successfully charged the camera battery with the correct cable. If the learner did not need to charge the battery, check Yes.			
2.0 Learner successfully selected the desired time interval option and navigated to the time-lapse setting on the main menu.			
2.1/2.1.1/2.1.2 Learner successfully navigated to the settings menu using the power button and selected it with the shutter button.			
2.2/2.2.1/2.2.2 Learner successfully navigated to and identified the time-lapse setting using the power button and selected it with the shutter button.			
2.3/2.3.1/2.3.2/2.3.3 Learner successfully selected desired time option and exited the settings by holding the shutter button.			
2.4 Learner successfully navigated to and identified the time-lapse option in the main menu, but did not press any button to select.			
3.0/3.2 Learner successfully secured the GoPro camera in the waterproof housing within 90 seconds.			
3.1 Learner successfully identified the wrist housing and the waterproof backdoor on a table full of GoPro mounts and accessories.			
4.0/4.1 Learner successfully initiated the camera by pressing the shutter button.			
5.0 Learner jumped in the water!			

Preinstructional, Assessment, and Follow-Through Activities

PREINSTRUCTIONAL ACTIVITIES
<p>Motivation: I will refer to John Keller’s ARCS model for developing the motivational strategy for my lesson module. Below, I will cover each letter of ARCS: Attention, Relevance, Confidence, and Satisfaction.</p> <p>Attention: In order to gain the learners attention, I will begin the module with an underwater video filmed with a GoPro camera. I will also include an underwater picture taken with a GoPro every page of the instructional materials. This will serve as a reminder to what the learners will be able to do once they learn how to use a GoPro. I will also be using already created GoPro tip videos throughout the instruction as an alternate to paper-based reading. I will also include a quote from GoPro CEO, Nick Woodman, on his philosophy of life (and GoPro), which he said during a 60 Minutes interview.</p> <p>Relevance: The module will be relevant to anyone who is taking it because only those who are interested in learning this topic will take this module. It will be posted to the public for anyone to download and use.</p> <p>Confidence: Confidence will be established early on by stating that this is a simple, short, and to the point module that is easily accomplished by following a step-by-step process.</p> <p>Satisfaction: Self-esteem gained from successfully completing the course and learning new skills will serve as the satisfying element in motivating the learners.</p> <p>Broad Objectives: All of the objectives will be stated in the beginning of the instruction. Also, each lesson will include the overall arching objective that will be covered in that section.</p> <p>Student Groupings and Media Selection: No student groupings; paper-based and video.</p>
ASSESSMENT
<p>Pretest: There is no pretest for this module.</p> <p>Practice Tests: There will also be no practice tests. The learner will be able to practice along the way using a GoPro camera.</p> <p>Posttest: There will be a written posttest administered at the end, but it will not be graded. This is more of a review for the learner. A checklist will also be administered to the learner to track their progress.</p> <p>Student Groupings and Media Selection: No student groupings; paper-based, self-check test.</p>
FOLLOW-THROUGH ACTIVITIES
<p>Memory Aids: There will be two memory aids: one for the main menu icons and one for the setting icons. This could be combined into one memory aid depending on space.</p> <p>Transfer: None.</p> <p>Student Groupings and Media Selection: No student groupings; paper-based checklist.</p>

Content Presentation and Student Participation

OBJECTIVE: Learn how to set up and operate a GoPro camera.	1
CONTENT PRESENTATION	
Content:	
<ul style="list-style-type: none"> • Overview and brief history of GoPro (two YouTube videos) • Explanation of correct way to insert a memory card and why it's important • Overview of how to turn on camera • Explanation of the two buttons and their functions; power/shutter (mode/select) • Explanation of how to charge camera if needed 	
Examples:	
<ul style="list-style-type: none"> • "GoPro: Dubstep Baby – Super Bowl Commercial 2013" YouTube video https://www.youtube.com/watch?v=3luc-03ZjuU • "The HD Hero 2" YouTube video https://www.youtube.com/watch?v=GUEZCxBcM78 • Graphics on paper showing how to insert memory card • Graphics on paper showing button locations and names • Brief description of charging workflow 	
<u>Student Groupings and Media Selection:</u> No student groupings; paper-based, video.	
STUDENT PARTICIPATION	
<u>Practice Items:</u> Learners will practice as-needed with a GoPro camera.	
<u>Feedback:</u> Learners will have paper-based checklist to guide them.	
<u>Student Groupings and Media Selection:</u> No student groupings; paper-based checklist.	
OBJECTIVE: Learn the main menu and setting menu icons.	2
CONTENT PRESENTATION	
Content:	
<ul style="list-style-type: none"> • Main menu icons and descriptions • Setting menu icons and descriptions 	
Examples:	
<ul style="list-style-type: none"> • Each set of icons will have a memory aid for the learner's reference 	
<u>Student Groupings and Media Selection:</u> No student groupings; paper-based.	
STUDENT PARTICIPATION	
<u>Practice Items:</u> A practice test similar to the posttest matching section will be provided.	
<u>Feedback:</u> Answers to the practice test will be given, or simply found from referring to their memory aids.	
<u>Student Groupings and Media Selection:</u> No student groupings; paper-based memory aids.	
OBJECTIVE: Learn waterproof housing, mounts, and required accessories.	3
CONTENT PRESENTATION	
Content:	
<ul style="list-style-type: none"> • Explanation of differences between waterproof and skeleton backdoors • Overview of different GoPro mounts and housings 	

Examples:
<ul style="list-style-type: none"> • Images of backdoors, mounts, and housings
Student Groupings and Media Selection: No student groupings; paper-based.
STUDENT PARTICIPATION
Practice Items: No practice items.
Feedback: None.
Student Groupings and Media Selection: No student groupings; paper-based.

OBJECTIVE: Learn what time-lapse photography is and how it will be used for our purposes.	4
CONTENT PRESENTATION	
Content:	
<ul style="list-style-type: none"> • Explanation of time-lapse photography • Explanation of how time-lapse will be used for this module 	
Examples:	
<ul style="list-style-type: none"> • “How to Set Up Photo Time Lapse – GoPro Tip #321” YouTube video https://www.youtube.com/watch?v=RlufjgTtnbA 	
Student Groupings and Media Selection: No student groupings; paper-based and video.	
STUDENT PARTICIPATION	
Practice Items: No practice items.	
Feedback: None.	
Student Groupings and Media Selection: No student groupings; paper-based.	

Reflection

The instructional strategy proved more difficult than I thought. I tend to work backwards on most projects of this nature. So naturally, I would have started creating the instructional materials and shifted and edited on the fly.

My chunking turned out to be a little off of my goal analysis. I chose to do it this way because it made sense to me, as a SME. One would learn the camera and how to operate it. Then they would learn the icons of each menu, and then the accessories. And I chose to put time-lapse at the end because it doesn't really affect the user using the camera, and theoretically the user could manage to complete this module without lesson four. So if they chose to stop early, most would still be able to function just fine.

As for my media, I chose to have a hybrid of paper-based materials and a select amount of YouTube videos for reinforcement. I figured the videos would help retain attention, as well as provide solid information. This also will cut down on the cost because there are materials out there that can serve our needs.

Project 9: Instructional Materials

See attached document titled, "Taking Underwater Pictures with a GoPro Hero 2" for completed learning module.

Reflection

I wouldn't say any step was more challenging than the other. But what I found most challenging, tedious, and overwhelming was the constant changes and revisions that were demanded. I'm a student who always started with the finished product and worked backwards. Some call that cheating the system, others call it laziness, I always called it being efficient. I can remember all the way back to high school when I was taking the "honors" curriculum. I signed myself out of the honors curriculum my 11th grade year because I did not see any purpose in staying on that track. The "honors" kids aren't really any smarter than the other labels that schools place on kids nowadays. They do do one thing really well, though, and that is not working. They are great at finding ways to do the same amount of work in a shorter amount of time. But basically, that is where I come from. All through my undergraduate studies, too. For example, in my English courses, I would start with my final paper and work backwards creating the rough drafts. This class was the first real time where I began from the bottom and worked to the top. Back to my most challenging aspect of this course: the revisions. I would find myself in Project 4, changing something, and then having to go back to Project 3 to update it. Then in Project 5, I changed something again. And then in Project 6, and 7, and 8. And every time I would have to trace my steps back through each previous project making the adjustments and updates. That was the most troublesome part for me. And more often than not, I would miss something or forget to update something, which would throw off my future projects; leaving me to trace back every detail again to make sure it matched.

As where I stand as an instructional designer, I feel like I just packed my knapsack, tied it to a long stick, threw it over my shoulder, and started off down a long railroad track of a journey! This class built a solid foundation in instructional design for me, using a systematic approach. I remember having a discussion in the beginning of this class about senior instructional designers not using this exact approach in the field. They've been doing it for so long that they combine steps, skip steps, or flat out avoid steps. But without building a firm foundation, a house will surely collapse. And I feel that is what this class did for me. It built a solid foundation for me. It gave me a recipe for instructional design. And now I get to take this recipe and make it my own by adding a pinch of Zach Lonsinger here and maybe a dash of myself over there.

Project 10 and 11: Formative Evaluation

Formative Evaluation Materials

	Strongly Disagree (No)	Disagree	Agree	Strongly Agree (Yes)
Before this module, I knew how to use a GoPro camera to take underwater pictures.				
After this module, I now know how to use a GoPro to take underwater pictures.				
This module was clear, concise, and easy to follow.				
I printed and cut out the red "Tip" cutouts.				
I found these cutouts useful.				
I was able to follow on with the provided checklist in setting up my GoPro.				
I was able to answer each question or set of questions for each unit.				
Mark "agree" for data purposes.				
I lost concentration before completing this module.				
This module was too long.				
This module was too short.				
This module was just right.				
I used the resources and outside links to better understand the content.				
I enjoyed this learning module.				

If there was anything you didn't understand, what was it? Why didn't you understand?

What was your favorite part of this module?

What was your least favorite part of this module?

Do you have any suggestions or recommendations for this module?

Formative Evaluation

This module is designed for:

- Any age if the...
 - Learner has an interest to take underwater pictures
 - Learner can swim, or is comfortable in waist-deep water
 - Learner has an interest to learn more about how a GoPro camera operates
- Any education level
 - No high-school graduation required
 - No college degree required
 - No previous experience required
- Male or female
- Really anyone who wants to play with a GoPro camera!

For this course, I tested my module with the following specific learner:

- Female
- Early 20's
- No prior experience operating a GoPro
- College senior (well-educated)
- Middle-level interest in GoPro
 - Not against using GoPro in the future, but not an advocate

This test was done in a familiar environment to the learner. A GoPro camera and all necessary equipment were provided (memory card, charged battery, skeleton backdoor, waterproof backdoor, and waterproof housing). The learner spent about 45 minutes on the entire module, with the most time being spent in Unit 2. This unit proved to be tedious because of the large number of menu names and functions to remember. This was also the learner's least favorite unit because of the large amounts of information. The learner was permitted to complete the posttest as they progressed through the module, an open book model. There was no pretest.

The learner completed the full module, a posttest, and an evaluation form designed to solicit feedback from the learner. ***Please see the attached documents for marked up learner documents.***

Revision

The revisions I would make would consist mainly of more visual explanations and less words. The learner made several comments on the module and verbally to me that I should include more pictures when explaining certain images and processes. The learner was also quick to point out my many spelling and grammatical errors. Since this is a rough draft of the final module, I did not spend enough time in proofreading for errors like this. I have since made a few of the corrections for spelling and grammar. I would also cut down on the number of settings I included. For this module, the learner only really needs to concentrate on the time interval settings. If the learner wishes, they may explore further settings after finishing this module.

My project has proved itself to get the job done. I predict that learners will be able to effectively operate a GoPro camera after this module, and also feel comfortable submerging it in water. After completing this module, my learner informed me that she now knew how to use a GoPro and felt that this module did an effective job of presenting the material.

Reflection

I thoroughly enjoyed this project and the class as a whole. At first, I will admit I was a bit overwhelmed. I looked at all of the projects and everything involved, and never thought I would see the finished project. As the class progressed, I realized that it wouldn't be that bad if I kept up-to-date with the projects. I did project one, then two, then three, and four. I thought the class was well-designed, breaking up one large project into 11 smaller projects. This makes the workload a lot easier to handle, instead of doing everything all at once.

That being said, I am super pumped to hold my completed module in my hands. I'm already working on adding my design documents and completed module to my online digital portfolio. It feels good to have a solid, well-designed, instructional piece to add to my "multimedia" heavy portfolio. To this date, I haven't had too many instructional pieces to add to my portfolio. But finishing this makes me realize that I am slowly working toward a new career, a career that I already enjoy!

If I had to retake this class, I probably would choose the same topic; however, I would select a different path. I chose to focus on taking underwater pictures with the GoPro. If I had to redo, I would spend more time on analyzing the GoPro and all of its uses. I do like the topic I chose, but I might have changed it to "Getting Started with your GoPro" instead of focusing on special use. Nonetheless, I am pleased with my project and really enjoyed this class!

GoPro Hero 2: Understanding the Camera

Section 1: Open Ended

1. Write a few sentences that describe the correct way to insert a memory card into a GoPro camera and give one reason why it's important to do it this way.

camera facing you
memory card with writing
facing you press it till
it clicks.

could damage camera if
done improper

2. Write a short paragraph that briefly describes what time-lapse is.

one frame per second
sped up to be 30 frames
per second → example a
sunrise

Section II: Fill-in-the-Blanks

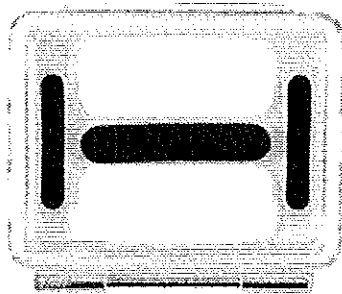
On the image below, identify where the power and shutter buttons.

3. Shutter
button

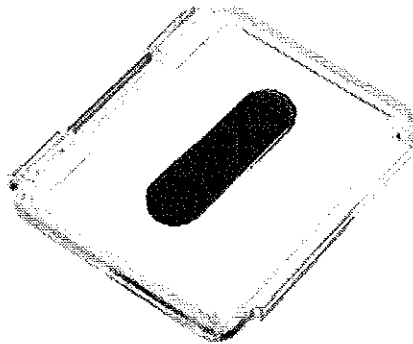
4. power button



Write the name of each backdoor.








5. Skeleton
backdoor



6. Waterproof
backdoor







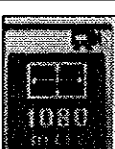
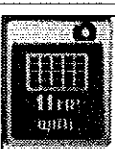

Section III: Matching 1 of 2

Match the names of the main menu icons with the corresponding icon. Write the correct letter of the icon next the name of the icon below.

Main Menu Icons		
Answer	Name	Icon
<u>c</u>	7. Video	A. 
<u>d</u>	8. Photo	B. 
<u>e</u>	9. Burst	C. 
<u>a</u>	10. Time-lapse	D. 
<u>b</u>	11. Settings	E. 

Section IV: Matching 2 of 2

Match the names of the settings icons with the corresponding icon image. Write the correct letter of the icon next the name of the icon below.

Settings Icons					
Answer	Name	Icon	Answer	Name	Icon
<u>d</u>	12. Default Mode at Power Up	A. 	<u>g</u>	19. Spot Meter Settings	H. 
<u>e</u>	13. Video Resolution Modes	B. 	<u>C</u>	20. Upside Down Video/Image Modes	I. 
<u>h</u>	14. Field of View Modes	C. 			
<u>f</u>	15. Photo Resolution Modes	D. 			
<u>i</u>	16. Time Lapse Modes	E. 			
<u>a</u>	17. One Button Mode	F. 			
<u>b</u>	18. More Menu Settings	G. 			

Underwater Pictures with a GoPro - Module Evaluation

	Strongly Disagree (No)	Disagree	Agree	Strongly Agree (Yes)
Before this module, I knew how to use a GoPro camera to take underwater pictures.		X		
After this module, I now know how to use a GoPro to take underwater pictures.				X
This module was clear, concise, and easy to follow.				X
I printed and cut out the red "Tip" cutouts.			X	
I found these cutouts useful.			X	
I was able to follow on with the provided checklist in setting up my GoPro.			X	
I was able to answer each question or set of questions for each unit.				X
Mark "agree" for data purposes.			X	
I lost concentration before completing this module.		X		
This module was too long.		X		
This module was too short.		X		
This module was just right.			X	
I used the resources and outside links to better understand the content.				X
I enjoyed this learning module.				X

If there was anything you didn't understand, what was it? Why didn't you understand?

the one button mode
where it resets the camera

What was your favorite part of this module?

time-lapse

What was your least favorite part of this module?

All the pictures
of the different settings

Do you have any suggestions or recommendations for this module?

add color