

# Journaling: An Assessment Tool for Student Engagement Experiences

A workbook




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## Introduction

In 2016, the Energy and Sustainability Policy degree program faculty assessed the following program learning objective: graduates should be able to bridge the gap between theory and practice by applying the knowledge acquired through formal learning to real-world settings.

In order to evaluate that objective, three program courses that include engagement (out of the classroom) components were examined. A common assignment across the courses was assessed: journaling. Student journal entries were reviewed and scored based on their progression through Kolb's Experiential Learning cycle (see Figure 1 diagram below).

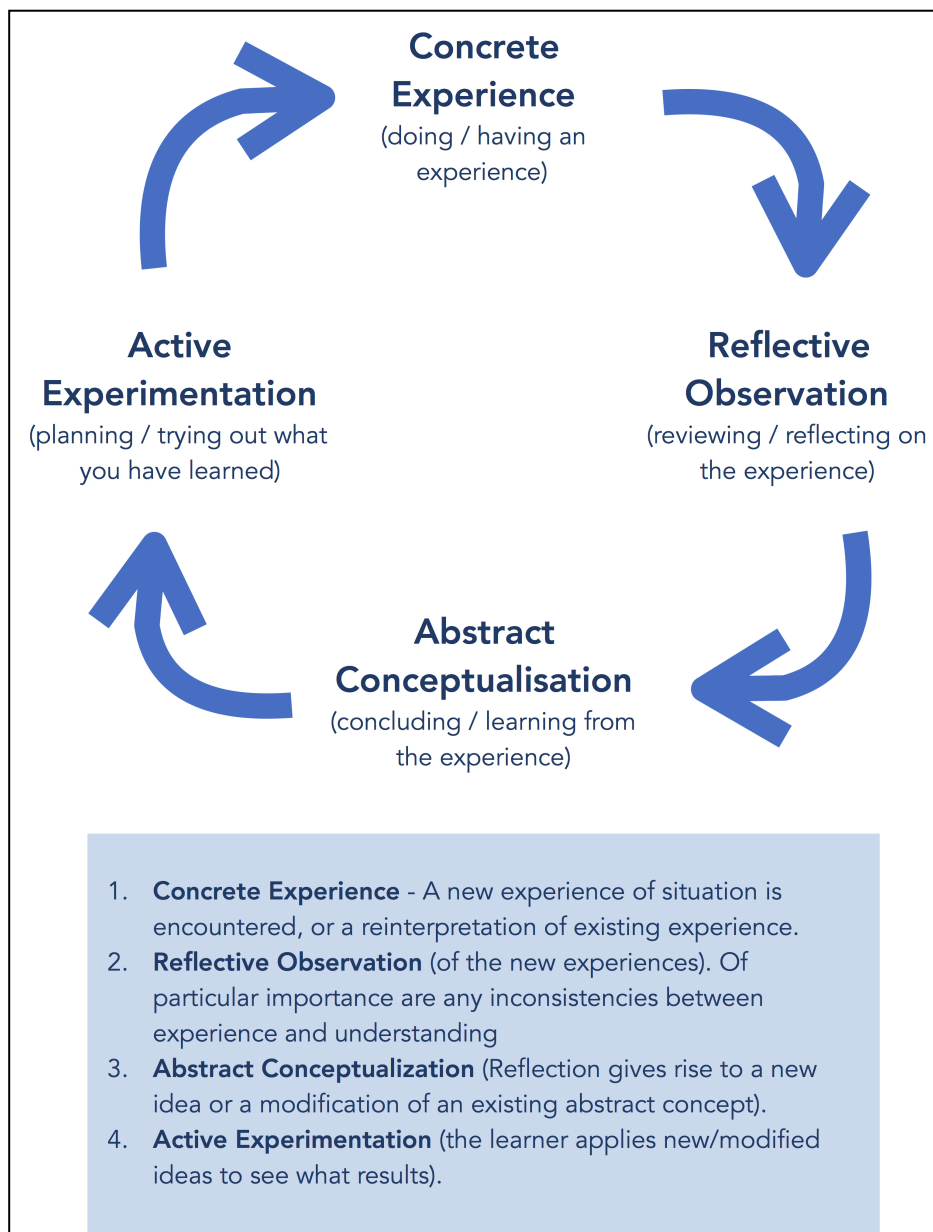


Figure 1: The 4 phases of Kolb's experiential Learning Cycle  
Retrieved from Simply Psychology (McLeod, 2017)

Students whose writing demonstrated use of higher-order thinking skills such as conceptualization and experimentation to make connections between their real-world experiences and coursework scored higher than those students who simply reported their findings and reflected lightly on their experiences.

In general, we discovered that our students weren't relaying the depth of their experiential learning proficiently. In response, we revised our questions to be more direct, specifically asking students to connect their coursework to their engagement experiences, expecting that the result would be improved journal entries, clearly demonstrating their learning. However, the changes may have contributed to an opposite effect. While our revised prompts were more

*"It is not enough just to have an experience.*

*Reflection directs that experience to learning and deeper insights"*

Stevens and Cooper, 2009

direct, it became clear that they fell short in many ways. The assignment prompts weren't necessarily drafted to support a larger learning effort; while specific, they didn't scaffold in ways that would lead students to effectively discuss the desired outcomes. In addition, students were provided very little guidance regarding journaling and journal entry expectations.

This workbook has been written in response to the lessons learned from these program assessment exercises – that experiential learning, coupled with guided reflection, can deliver excellent results. Carefully crafted journal prompts, designed with inquiry-based learning in mind, can make all the difference in helping students invest in and produce reflective and analytical work.

Authors Stevens and Cooper write, "It is not enough just to have an experience. Reflection directs that experience to learning and deeper insights"(2009). Carefully crafted journal prompts, communication of clear expectations, and guidance can provide a platform for journaling to be utilized as a valid learning assessment, especially in instances related to engaged scholarship. This also helps guarantee that students are demonstrating that they have met the program's curriculum objectives. The ultimate goal of this project is to provide an avenue with which to demonstrate the exceptional learning that is born through engagement experiences and to use the evidence to support engagement opportunities for every student.

## Inquiry-Based Learning (IBL)

IBL is grounded in the idea that students learn better when they're active participants (Meehan, 2018). IBL focuses on processing information and allowing for students to examine information logically. "Inquiry-based learning helps students to:

- Develop skills in problem-solving and critical thinking;
- Learn through involvement with the material, rather than by memorizing a set of facts;
- Recognize patterns and apply knowledge to a wide variety of situations instead of just how it pertains to the current lesson, and
- Make independent decisions based on their knowledge of a subject."

[Retrieved from Inquiry-Based Learning In The Classroom, 2016]

Inquiry-based learning is often represented vertically, such as in Figure 2.

*The benefits of inquiry-based learning are many, including, "... deeper learning and engagement, [and] development of higher-level thinking."*

Meehan, 2018

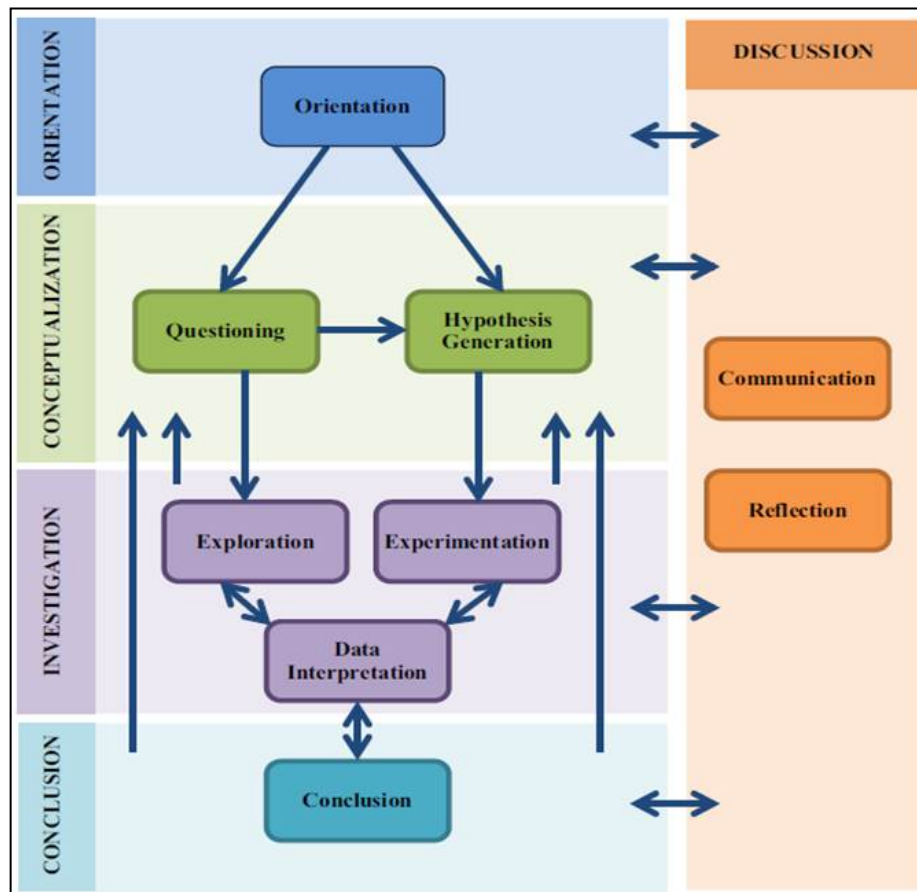


Figure 2: Typical representation of inquiry-based learning (Wikimedia.org, cc 4.0, 2016)

Because the IBL process can be so iterative and cyclical, we felt it was more appropriate to create a diagram that represents the stages in a less hierarchical manner. In Figure 3, you can see the IBL process begins on the left, with phases building on one another. Notice that the learning process isn't linear. Students often revisit earlier phases as they continue to progress. While every stage is important in the learning process, deeper learning can happen by progressing through all four phases of the process.

Phase 1 represents the Orientation and Exploration of a topic or experience. In this phase, students are expected to be learning the basics: gathering facts, understanding ideas, and increasing their vocabulary. In Phase 2, the Investigation and Clarification phase, students should be looking to analyze, learn more, ask questions, generate ideas, and consider different perspectives. Phase 3 represents Conclusion and Refinement efforts, characterized by synthesis of ideas and information. Phase 4, the Discussion and Reflection phase, focuses on the students' abilities to evaluate the process, discuss or debate the information and the processes, and apply knowledge to new patterns and relationships.

Again, this process is not intended to simply advance in a linear fashion. If effective, students will eventually move to phase 4; however, it is expected that students will regularly return to previous phases as they encounter new information or experiences.

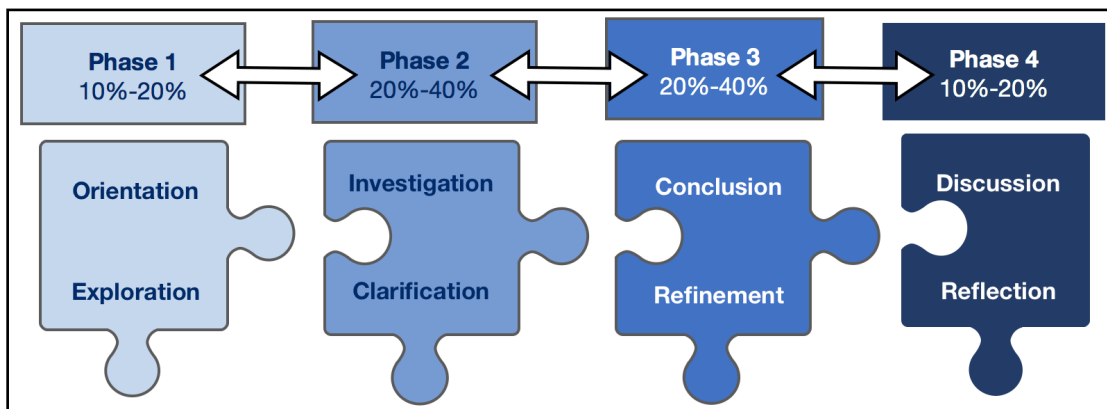


Figure 3: Faculty/Mentor Guide of Student Narrative Progression (Sutterlin, 2019)

## Student Engagement in Higher Ed

Engagement experiences support IBL principles by taking students out of the classroom in order to practice what they have learned, thus adapting their knowledge in new ways.

Engagement experiences can include a wide array of activities, including:

- Professional experiences
- Organizational experiences
- Creative accomplishments
- Study away/study abroad experiences
- Volunteer endeavors
- Out-of-classroom course components
- Undergraduate research
- Peer mentoring
- Self-directed student engagement
- Community-based learning

[Retrieved from Student Engagement Network, 2019]

The Penn State Student Engagement Network (SEN), promotes the ideas that student engagement:

- connects and empowers students, as well as
- enhances education, the institution and scholarship, and
- has the potential to impact and improve communities.

Students participating in experiences that take them beyond the classroom, such as studying abroad, may gain a broadened view of the world and the people in it as well as an expanded view of their own roles as global citizens. These experiences or activities may advance their professional development, increase learning about real-world operations, help them gain new perspectives toward civic responsibility, and bolster their self-confidence. These encounters are enriched by reflection, but without dedicated time to process meaningful learning experiences, many students struggle to communicate the significance of the outcomes of their experiences or to convey their importance in affecting their life choices, or even in shaping their life's course.

There is a real need to characterize the learning that students experience and the challenges related to capturing it in a meaningful way. This dovetails with the Student Engagement Network's five identified growth areas, which categorize the learning that typically takes place in student engagement scenarios (see Appendix A for a more thorough explanation of all):

- Multicultural awareness
- Civic responsibility
- Ethical behavior
- Systems thinking
- Professional development

Although the evidence suggests many benefits, there is a multitude of challenges associated with instituting engagement practices in higher ed. For example, justifying the extra



resources needed to implement engaged scholarship experiences can be difficult. Administrators and donors want to know that the resources are making a difference, that the efforts to send students abroad, support internships, and facilitate research is worthwhile. In short, they want proof. Because engagement experiences are highly variable in length, depth, and approach, and because the learning can be so personal, measuring outcomes of engagement experiences can be more difficult than collecting the results from typical classroom-oriented assessments.

This workbook focuses on the application of journaling as an assessment tool for engagement experiences. The workbook can be used to create journal prompts and formulate rubrics. While this guide is intended for use in certain engagement scenarios, it can be used at any level. When adapted, it can guide students through an experience that does not have an official assessment attached.

*“The findings from 20 years of research on undergraduate education have been unequivocal: The more actively engaged students are — with college faculty and staff, with other students, and with the subject matter they study — the more likely they are to learn, to stick with their studies, and to attain their academic goals.”*

McClenney, Marti, & Adkins, 2012

## Journaling

Journaling assignments lend themselves particularly well to engagement experiences. Journaling can be used as an assessment tool to help capture the outcomes of engagement experiences and justify the creation or continuation of engaged scholarship opportunities. Journal assignment prompts can be formulated based on learning objectives, such as those for a typical lesson or activity. Addressing specific journaling prompts, versus free-writing, will help students communicate their learning related to the desired learning objectives. In addition, rubrics can be developed to provide data that can help demonstrate to donors and administrators the outcomes of engaged scholarship efforts.

*“Reflective learning itself is significant in formal education, but it plays an important role in most experiential learning.”*

Moon, 2004

The word journaling often conjures the idea of a personal notebook that includes private thoughts and reflections, a diary of sorts. However, for the purposes of this guide, journaling is discussed within the realm of idea development and metacognition. Many have suggested renaming the assignments to be called “reflective discussion” or “critical reflection” instead of “journaling.” While other terminology is acceptable, and may lend validity or may help students understand the legitimacy of the assignment, for the purposes of discussing the exercises in this guide, we use the term journaling.

This workbook is built around the idea that IBL and engagement experiences go hand in hand. By guiding students through the IBL process and prompting them to reflect as they work through an experience, instructors can set the stage for student growth in academic, professional, and personal ways. The practice of combining journaling and IBL-focused assignment prompts helps students connect the dots during their experiences. This combination encourages examination of the metacognitive learning that is taking place, and the deeper learning that results enhances students’ engagement experiences.

In recent years, the act of journaling has become integrated with an array of scenarios for success. Leadership journals are included in the toolkit for effective leadership (Inam, 2017), the health benefits of journaling have been widely advertised (Purcell, 2018), and “journal writing as an instructional or learning tool in adult education has gained cogency during the past three decades” (Hiemstra, 2001).

However, unguided journaling assignments can yield less constructive results. Guiding students through the IBL process by providing them with quality prompts enables the students to deepen the learning from their engagement experience.

*“Mediation can involve manipulation of the situation in order to increase the challenge to the learner and guide her into useful learning about her learning processes.”*

Moon, 2004

## How to use this workbook

This workbook is intended primarily for use by instructors who wish to utilize journaling as an assessment tool. It is envisioned to be a guide for those who want to create their own approach. Journaling as an assessment can be applicable in most engagement experience scenarios; however, the following experiences are particularly well suited to applying journaling as an assessment:

- Internships
- Study away/study abroad experiences
- Credit-bearing courses with an out of classroom component
- Undergraduate research

This workbook section is designed to usher users through the guided-inquiry process and assist in formulating prompts to guide students from their initial phases of learning through the culmination of their engagement experience. While prompts specific to each engagement experience will have to be created by instructors, the foundation of those prompts is provided, and workbook users should tailor these ideas to their specific needs.

In addition to providing guidance for journaling prompts, a generic rubric is provided in Appendix D.

### *How will you get started?*

Tailoring the material in this workbook to your particular needs is important for success. As you prepare, ask yourself the following questions:

- What do I want students to take from this journaling project? What do I want them to learn?
- What is the timeframe I'm working with?
- Do the Faculty and Student Guides of Narrative Progression fit my needs? How might I adapt them?
- How will I adapt the learning objectives, prompts, and rubrics for each lesson plan?

*Note: This workbook can be used by students who are involved in a self-directed engagement experience and would like to keep a journal to deepen their learning and record their progress over time.*

## Faculty/Mentor Guide of Student Narrative Progression

Figure 4 (expanded version of Figure 3) was developed as a guide for instructors building journaling assignments within the IBL framework. The bulleted items represent the type of information instructors should look for in students' journal submissions. For instance, in Phase 1, journal entries should demonstrate that students are gathering background information on their situation or research project. In theory, students should spend only about 10-20% of their total time in the engaged scholarship experience in Phase 1 before Phase 2 elements begin to appear. While students will experience Phase 1 activities throughout Phases 2-4, in order for students to achieve and demonstrate deeper learning, the provided journal prompts should move students beyond this initial orientation and basic understanding stage fairly quickly.

*“Reflective thinking impels to inquiry” -*

*Dewey, 1933*

In Figure 4, the percent of time that should be spent in each stage is indicated under the Phase title. This number is not absolute; rather, it provides some context in the larger picture of the process. The bulk of students' time will be spent cycling around in Phases 2 and 3. There is a lot of work to be done in these phases of investigation, testing, and experimentation.

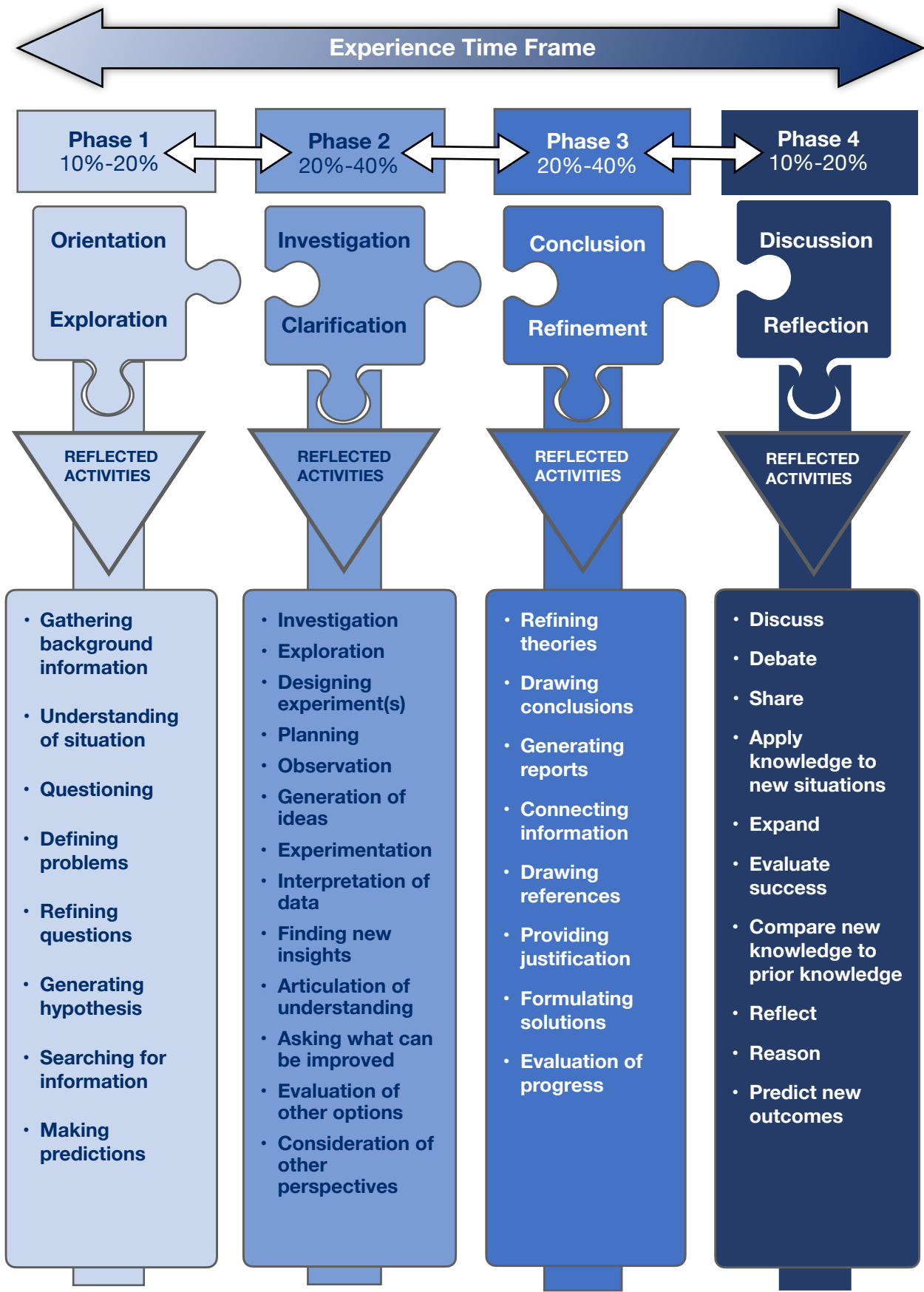


Figure 4: Faculty/Mentor Guide of Student Narrative Progression with Activities (Sutterlin, 2019)

*Left intentionally blank for notes*



## Lesson Plans

The next section provides a lesson plan for each phase outlined in Figure 4. The lesson plans are intended to provide a framework for instructors as they build journaling assignments associated with an engagement experience. In the lesson plans, you will find overlap between the phases outlined in Figure 4; the phases do not develop independent of one another. As stated earlier, the student's experience will be iterative and cyclical. Some findings in later phases may force students to return to Phase 1 to work through new ideas, experiences, etc.

As you move through this process with the students, consider notifying students of their progress in reference to each phase. If a student is stalling in one phase, explain the intended evolution and guide them forward by encouraging them to utilize the Student Guide of Narrative Progression (see Figure 5). The Student Guide of Narrative Progression is organized very similarly to the Faculty/Mentor Guide; however, it lists the types of questions students should be asking themselves and answering as they move through the experience. It is meant to compliment the journal prompts provided by the instructor and offers a visual representation of the narrative progression so that students can understand the IBL process.

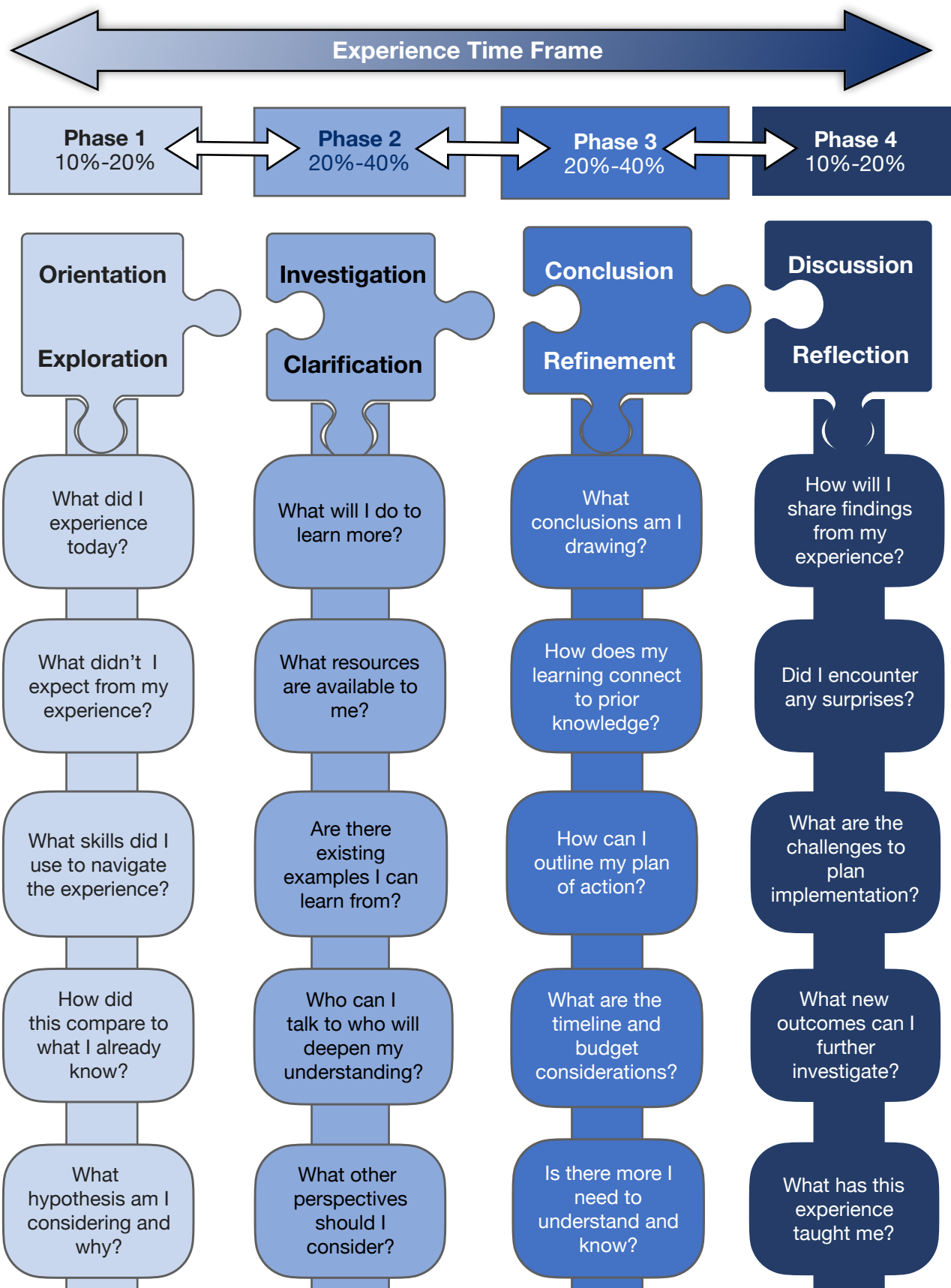


Figure 5: Student Guide of Student Narrative Progression (Sutterlin, 2019)



## Introductory Lesson Plan

For this lesson, students should be introduced to the ideas of inquiry-based learning and the five growth areas (or program objectives, etc.) provided by the Student Engagement Network (or your Department/College/Institution. See Appendix A). These items will be used to build a foundation for the experience and the journaling prompts. Students will be asked to keep the growth areas in mind throughout the experience and will be reminded to reflect on how their personal thoughts/feelings are changing or developing in relation to these ideas.

**Goal:** Students will evaluate their current and anticipated future relationship to growth area statements by rating themselves and reflecting upon how often they identify with the “I statements” presented.

### **Objectives:**

By the end of the introductory lesson, students will:

- complete an assessment to raise their awareness of the learning objectives
- identify two growth areas they expect to encounter more intensely during their experiences
- identify growth areas in which they are deficient
- reflect on growth potential/goals in comparison to the results of the assessment, through journaling
- identify their motivations for experience participation.

Depending on your institution, program, and/or focus area, you may include program-specific objectives such as an understanding the UN Sustainability Development Goals or other overarching concepts or themes that are essential to the program and that you intend to incorporate into the journal assignments.

### **Materials/Considerations:**

- Foundational knowledge related to inquiry-based learning.
- The pre-program survey, possibly like the SEN growth area survey (see Appendix B), to help students think about their readiness for their program.
- Examples of journal entries (see Appendix G for examples)
- Information to help students engage with “bigger picture” goals or concerns, like the UN Sustainability Development Goals.
- Due dates for the survey and related journal entry.

### **Preparation:**

- Create and provide an assessment (e.g. a survey) related to growth areas (or program learning objectives, etc.). See Appendix B for an example.
- Create journal prompts for the Intro Lesson. See Appendix E for examples.
- Create a rubric. See Appendices D and F for examples.
- Draft/gather journal entries to use as examples.

**Instruction/Procedure:**

- Provide students with basic information related to inquiry-based learning and explain why it's related to engagement experiences.
- Share the Student Guide of Narrative Progression with students for their reference (reproducible on pg. 14)
- Provide students with the learning objectives of the program (or the five growth areas).
- Distribute the surveys/assessments.
- Distribute the journal rubric and define expectations.
- Distribute and discuss journal examples' strengths and weaknesses.

**Assessment:**

- Use the rubric to assess the journal entry.
- Scores for the example assessment in Appendix B are based on self-rating. Students rate themselves from 1-10 on each "I statement" regarding how often they can identify with that statement. 1 is representative of the student answer that the statement provided is "never true" for them. The 10 indicates that the "I statement" is "always true" for the student.

**Follow up**

The assessment tool or survey used to gauge a student's relationship with the growth areas or learning objectives should be administered again at the end of the experience. This will provide students with the ability to compare results and see more clearly the learning that has taken place, as well as the areas where growth occurred.

## Phase 1 Lesson Plan: Orientation and Exploration

For Phase 1, Orientation and Exploration, we want students to get their bearings. We want to hear from them about who they are, why they're here, and how they're feeling. As the program begins, we also want students to investigate their surroundings, gain a better understanding of their situation, and identify any pre-conceived ideas or beliefs. During this phase, students will gain understanding, pinpoint potential problems and define them, identify and refine their questions, and make initial predictions.

**Goal:** Students will write initial journal entries to introduce themselves and their situations, to analyze and discuss their motivations, excitement, and apprehensions, and begin to define the main work they'll be doing during their experience.

### **Objectives:**

By the end of Phase 1, students will:

- explain their situations via introductory writing (what did I experience today?)
- discuss their expectations for the program (what did/didn't I expect to see/hear/experience?)
- identify skills and strengths they possess, and areas for growth (what skills did I use to navigate the experience?)
- relate their new experiences to prior experiences (how did this compare to what I already know?)
- begin to define the main work they'll be doing for their program (what hypothesis is being considered and why?)
- utilize standard syntax and grammar to communicate in writing, video, or other media
- produce the required number of journal entries for this phase

Depending on your goals for students during Phase 1, you may include objectives surrounding the ideas of formulating questions, defining problems, generating hypotheses, thinking about possible experiments, etc.

### **Materials/Considerations:**

- Guidance on effective journaling (see example in Appendix C).
- Relevant information for students surrounding journal submission – link to a drop box, plan for paper submission, etc.
- A schedule of journal assignments and due dates.

### **Preparation:**

- Create journal prompts for Phase 1. See Appendix E for examples.
- Create journal entry rubric(s). See Appendices D and F for examples.

### **Instruction/Procedure:**

- Provide students with instruction on journaling.
- Distribute journal prompts to students.

- Allow students time to produce journal entries according to the schedule you have determined.
- Share rubric with students to provide grading context and to set expectations.
- Provide examples of journal submissions with explanations regarding what's done well or not done well.
- Re-state expectations regarding the type and quality of information to be submitted.

**Assessment:**

- Use rubrics to assess finished journal entries.
- Share completed/graded rubric with student.

**Follow-up:**

It is important to give feedback on journaling early in the engagement experience, especially in the cases of short-term experiences. It is recommended that the first journal submission be reviewed immediately and returned to the student to set expectations and provide guidance before the student continues with the journaling assignments.

## Phase 2 Lesson Plan: Investigation and Clarification

For Phase 2, Investigation and Clarification, we want students to start digging in. This is when they identify their potential focus area(s) and learn more about how they want to concentrate their time and energies during the experience. Students should be gaining confidence with their situation and surroundings, gathering ideas of how to investigate further, and gaining an understanding of existing resources and various viewpoints. We want students to question what they are seeing and doing and to center that questioning in the relevant information they have begun to collect. During this phase, students will search for information, formulate questions, define problems, refine their questions, generate hypotheses, and make predictions.

**Goal:** Students will write journal entries to identify their comfort-level and their familiarity with the situation, and to discuss preexisting skills, knowledge, or prior, applicable experience that helped them navigate their situation(s). Journal entries should reflect students' thoughts regarding the focus area and should discuss ideas, questions, investigations and interpretation as well as any new insights they've gained as a result of gathering information. They should begin interpreting and questioning information they've gained and begin examining potential outcomes or takeaways.

### **Objectives:**

By the end of Phase 2, students will:

- further define the main work/focus area/topic they'll be working with during their experience
- identify resources that can help them learn more (what resources are available to me? Are there examples I can learn from? Who can I talk to? What other perspectives should I consider?)
- utilize the resources to investigate their topic (what questions should I be asking?)
- identify applicable examples related to their topic (are there examples of similar projects or experiences that I can draw upon?)
- further define the main work they'll be doing for their program
- utilize standard syntax and grammar to communicate in writing, video, or other media
- produce required number of journal entries for this phase

Depending on your goals for students during Phase 2, you may include objectives surrounding the ideas of researching a particular topic, gathering (or utilizing) resources for researching, developing (or following) approaches to research, ethics, etc. Or you could focus on growth areas and ask students to discuss one in depth, identifying current levels of understanding and predicting future levels based on the experience.

### **Materials/Considerations:**

- A list of potential related resources (books, professional people (or field professionals?), websites, etc.).
- A schedule of journal assignments and due dates.

**Preparation:**

- Create journal prompts for Phase 2 (see Appendix E for examples).
- Create rubrics if you've chosen to create a unique rubric for each phase.

**Instruction/Procedure:**

- Supply students with journal prompts for Phase 2 (after receiving feedback on their entries from Phase 1).
- Allow students time to produce journal entries according to the schedule you have determined.
- Share rubric with students to provide grading context and to set expectations.
- Re-state expectations regarding the type and quality of information to be submitted.

**Assessment:**

- Use rubrics to assess finished journal entries.
- Share completed/graded rubric with student.

**Follow-up:**

Provide feedback. If a student is having difficulty identifying the purpose of the experience and/or a focus area, work with that individual to capture the student's interest area or identify the focus area of the experience.

## Phase 3 Lesson Plan: Conclusion and Refinement

For Phase 3, Conclusion and Refinement, we should see students moving into the mastery stage of their experience. The information gathered and the planning that occurred in prior phases should be implemented in this stage with analysis, exploration, experimentation, and refinement making up the bulk of the journal content. Students should be fine tuning and testing their theories and applications, drawing references, and connecting information. During this phase, students will formulate conclusions and connect classroom learning and prior research with the experience.

**Goal:** Students will write journal entries to discuss the experiments and theories encountered and tested during the experience. Using the information they've gathered in prior phases and in the classroom, we want students to connect the dots, applying their prior knowledge and experience to the engagement scenario. Journal entries should cover conclusions, connections, potential revisions to the project or experience, and an outline of how to move forward. Progress evaluations, personal growth measures, and/or general check-ins are valuable at this stage.

### **Objectives:**

By the end of Phase 3, students will:

- create refined theories (how is what I've learned different or more focused than when I began?)
- draw conclusions about what they're experiencing or their research area (what are my results and why?)
- consider how their learning for this project connects with their prior knowledge (how does my learning connect to prior knowledge?)
- evaluate their learning to consider what more they could pursue (is there more I need to understand and know?)
- discuss timeline and budget considerations and concerns when applicable (what are the timeline and budget considerations?)
- evaluate personal growth measures
- utilize standard syntax and grammar to communicate in writing, video, or other media
- produce the required number of journal entries for this phase

Depending on your goals for students during Phase 3, you may include objectives surrounding the ideas of outcomes, justifications, conclusions, progress evaluation, etc.

### **Materials/Considerations:**

- A schedule of journal assignments and due dates.

### **Preparation:**

- Create journal prompts for Phase 3.
- Create a rubric if you've chosen to use a unique rubric for each phase.

**Instruction/Procedure:**

- Provide students with examples of appropriate conclusions, plans of action, and entries where students have successfully communicated the connection between classroom knowledge and the engagement experience.
- Supply students with journal prompts for Phase 3 (after receiving feedback on their entries from Phase 2).
- Allow students time to produce journal entries according to the schedule you have determined.
- Share rubric with students to provide grading context and to set expectations.
- Re-state expectations regarding the type and quality of information to be submitted.

**Assessment:**

- Use rubrics to assess finished journal entries.
- Share completed/graded rubric with student.

**Follow-up:**

- Provide feedback.
- Encourage students to re-visit any of the prior phases, if needed.



## Phase 4 Lesson Plan: Discussion and Reflection

Phase 4, Discussion and Reflection, should be the “ah-ha!” phase. This is the time in which students think holistically about their experience, challenges faced, lessons learned, the connection to their prior coursework, and where they need to go next. We want students to think about how they will communicate, discuss, and share what they’ve experienced and learned, what the real take-home lessons of the experience are, and to “deep dive” into the reflection in order to process the experience and elevate their learning.

**Goal:** Students will write journal entries to reflect on their experiences, convey future ideas, and discuss metacognitive learning. Journal entries should evaluate their successes and challenges, and predict new outcomes. Students should evaluate themselves on personal growth measures and discuss lessons from the overall experiences as well as the usefulness of journaling during the experience.

### **Objectives:**

By the end of Phase 4, students will:

- identify their successes and challenges (what did I need to learn to be successful?)
- discuss how they addressed those challenges
- reflect on lessons learned
- evaluate their learning to consider what more they could pursue in this area (is there more I need to understand and know?)
- evaluate personal growth in relation to the learning objectives provided
- communicate any metacognitive reflections (It looks like my thinking about x topic/area has changed/shifted/not changed)
- predict future application of new knowledge in reference to personal, academic, or professional pursuits
- utilize standard syntax and grammar to communicate in writing, video, or other media
- produce the required number of journal entries for this phase

Depending on your goals for students during Phase 4, you may include objectives surrounding the ideas of personal growth, predictions, evaluation of experience, plans to apply new knowledge, etc.

### **Materials/Considerations:**

- A schedule of journal assignments and due dates.
- The post-program survey, which is a re-administration of the initial survey (see Appendix B).

### **Preparation:**

- Create journal prompts for Phase 4.
- Create a rubric if you’ve chosen to create a unique rubric for each phase.

**Instruction/Procedure:**

- Review engagement experience growth areas (see Appendix A) and encourage students to think metacognitively about their growth in at least two of those areas. Ask students to communicate their learning, whether they grew or didn't grow, and why.
- Provide journal prompts for Phase 4 to students (after receiving feedback on their entries from Phase 3).
- Allow students time to produce journal entries according to the schedule you have determined.
- Share rubric with students to provide grading context and to set expectations.
- Re-state expectations regarding the type and quality of information to be submitted.

Provide students with examples of appropriate conclusions, plans of action, and entries where students have successfully communicated the connection between classroom knowledge and the engagement experience.

**Assessment:**

- Use rubric to assess finished journal entries.
- Share completed/graded rubric with student.

**Follow-up:**

- Provide feedback.
- Encourage students to re-visit any of the prior stages, if needed.

## Journal Entries

### Prompts

Journal assignment frequency is largely dependent upon the experience itself. For short-term scenarios, daily journaling may be necessary to capture the learning from introduction through experimentation and conclusion. For semester-long experiences, one journal entry per week may be more appropriate. At minimum, requirements should include a sufficient time frame for students to move through the phases of IBL effectively. Figure 4 shows the suggested percentage of time for each phase of IBL.

Both the Faculty/Mentor guide of Student Narrative progression (Figure 4) and the Student Guide (Figure 5) can be used to help formulate journal prompts for specific experiences. Some familiarity with the engagement experience is helpful in creating prompts that will effectively guide students through the IBL process. In creating the prompts, it is first helpful to identify the learning outcomes that should be demonstrated in the exercise so that prompts can be effective.

The length of the experience should be taken into consideration when developing the assignment prompts, so prompt depth and the subject scaffolding can be appropriately accounted for. For example, in a short-term experience scenario, 2 weeks in length, 14 journal entries may be required. Journal entries will overlap and phases may be combined, but all will build upon one another. In the early assignments (journal entries 1-3), students will be asked to discuss the experience generally, identify some questions or inconsistencies, and discuss how what they're experiencing is different from what they already know, if at all. In the next 8-10 days (journal entries 2-12), students will be given prompts that ask what they want to learn more about (perhaps what their research project is about, or something that they saw in the foreign country that they haven't encountered before), how they intend to learn more, and what resources they can utilize. They will also be asked to discuss their progression in their quest for information, to present some potential solutions, and to justify those thoughts. During the last days, (journal entries 10-14), students will be asked to further discuss their new-found knowledge regarding how it can be applied in new or different scenarios, how they plan to share the new information, and to reflect on the process and its perceived successes/shortcomings, etc.

### Formats

The most common format for journal assignments is a written piece. However, there are other options, including audio or video recordings. Today's technologies make digital options more accessible for all, and students may find completing assignments more enjoyable when offered choices. For the purpose of this guide, the assignments are assumed to be written; however, the prompts could easily be deployed for other scenarios.

For text-based journals, students should be encouraged to include additional media in support of the information presented. Media might include images, video, artifacts created during the experience, etc. In addition to bolstering the content, these accompaniments can

also enhance the visual appearance of the journal entries, particularly if the journal will be available to potential employers and the general public.

## Other potential products

The addition of a poster or infographic assignment as a culminating project is an impactful way for students to synthesize and share their learning to a broader audience. A poster or infographic can be used to demonstrate the importance of engagement experiences to donors and administrators. See Figure 6, below, of a student's infographic summarizing her study abroad in Iceland.



Figure 6: Student infographic submission summarizing her study abroad experience (used with permission)

## Sharing

Journal submissions can be shared in a variety of ways -- privately with instructors through direct submission or through the LMS, or publicly via a blog or other online format. Because many students view engaged scholarship experiences as resume builders, potentially providing an advantage in the job market, the use of a public space has its benefits. For one, students can use the journal as part of "a professional portfolio as a means of demonstrating to current or prospective employers their ability to reflect on issues critically" (Hiemstra, 2001), or to showcase their abilities to write and communicate effectively.

Additionally, students can submit these alternative products to expositions, poster competitions, research fairs, etc.

Note that many students are not comfortable sharing their journal entries publicly, due to the sensitive nature of the work they're completing or for personal, privacy reasons. In those instances, accommodations to submit in an alternative medium, such as the LMS, are provided.

## Feedback

In order to ensure that students move through all 4 phases of IBL, it is imperative to provide feedback early and often. Especially in short-term engagement experiences in which students will be journaling daily, the first journal submission needs to be reviewed immediately and returned to the student to set expectations and provide guidance before the student continues with the journaling assignments.

Noting the student's progression in relation to each phase can help provide context for the student. If a student is stagnant in one phase, provide feedback and suggestions to guide them forward. In an attempt to help guide students through the IBL process, we have developed the "Student Guide of Narrative Progression" (see Figure 5).

## Rubrics

Because engagement experiences and assessment criteria can vary so widely, a general rubric has been provided in Appendix E. It outlines the best case scenario; if the parameters included have been met, the student earns full credit for the assignment. Fully developed analytic rubrics, though recommended, are not included, here, because they need to be developed specifically for the situations in which they will be used.

### **Suggestion for grading implementation:**

*Issue grade as complete or incomplete for individual journal submissions to encourage growth without penalty. A final rubric that accounts for all entries can be provided with a grade at the conclusion of the experience.*

Rubrics can be used collectively as a working document throughout the experience; instructors may choose to complete one rubric for each journal submission, or they can be used for culminating feedback as well. For reference, we have indicated which criteria should be present for each phase of our inquiry-based learning cycle.

## Conclusion

There is a tremendous amount of potential in inquiry-based learning, engaged scholarship, and journaling. Demonstrating the outcomes is challenging, but not impossible. With the tools provided in this workbook, we hope you are able to create effective assessments that not only capture the learning that has taken place, but also better prepare students to communicate the outcomes.

Please contact Haley Sankey with your feedback regarding this guide at [haley@psu.edu](mailto:haley@psu.edu).



## Appendix

### Appendix A: PSU Student Engagement Network Growth Areas

#### **Penn State Student Engagement Network Growth Areas**

##### **Multicultural Awareness**

The knowledge and cognitive skills that support effective and appropriate interaction in a multitude of cultural contexts.

- Students will demonstrate awareness of, and respect for, human differences and apply diverse perspectives to complex subjects.

##### **Civic Responsibility**

A perceived duty to make a difference in the civic life of our communities and to develop the combination of knowledge, skills, values and motivation to make that difference through community, political, governmental, and/or civic action or involvement.

- Students will be able to identify and describe their personal civic identity and demonstrate an ability to work collaboratively, effectively, and creatively within community contexts and structures to achieve a civic aim.

##### **Ethical Behavior**

Reasoning about right and wrong human conduct. This requires students to be able to assess their own ethical values and the social context of problems, recognize ethical issues in a variety of settings, think about how different ethical perspectives might be applied to ethical dilemmas, and consider the ramifications of alternative actions. Students' ethical self - identity evolves as they practice ethical decision-making skills and learn how to describe and analyze positions on ethical issues.

- Students will develop a sense of integrity and clarify their professional, educational, and/or personal values, and be able to apply knowledge and abilities to address professional and/or societal problems in ethical ways.
- May satisfy Social Responsibility General Education objective.

##### **Systems Thinking**

The cognitive process to understand how a system's constituent parts influence each other, and how the system behaves over time and within the context of larger systems. One with systems thinking is able to "recognize, describe, and model complex aspects of reality as systems, as well as identify important elements of the system and the interdependency between the elements."

- Students will demonstrate the ability to analyze and synthesize ideas, apply theories, and evaluate information to answer questions or solve problems.
- Students will demonstrate competence in the creation and interpretation of works of arts and design.
- May satisfy Integrative Thinking or Creative Thinking General Education objectives.

### **Professional Development**

The ability to clarify career goals while demonstrating the skills necessary to meet professional expectations.

- Students will demonstrate skills aligned with the expectations of their profession and/or today's global workplace, and clarify their career goals.



## Appendix B: Growth Areas Survey

### Penn State Student Engagement Network Growth Areas Pre/Post Engagement Experience Survey (2018)

**Multicultural Awareness:** The knowledge and cognitive skills that support effective and appropriate interaction in a multitude of cultural contexts.

	1	2	3	4	5	6	7	8	9	10
I engage in diversity-related activities and conversation.										
I enjoy expanding my knowledge about other cultural groups.										
It doesn't matter what cultural groups people belong to.										
I reflect on my own cultural biases or stereotypical thoughts.										
I recognize I have biased or stereotypical thoughts about others.										
I understand other cultural perspectives or worldviews.										
I realize that cultural differences influence people's decision-making.										
I can easily overcome cultural barriers in intercultural situations.										
I try to negotiate for shared understanding in intercultural situations.										

**Ethical Reasoning:** Reasoning about right and wrong human conduct. It requires students to be able to assess their own ethical values and the social context of problems, recognize ethical issues in a variety of settings, think about how different ethical perspectives might be applied to ethical dilemmas and consider the ramifications of alternative actions. Students' ethical self-identity evolves as they practice ethical decisions-making skills and learn how to describe and analyze positions on ethical issues.

	1	2	3	4	5	6	7	8	9	10
I take time to reflect before making an ethical decision.										
I contemplate the consequences of my actions when making ethical decisions.										
I try to consider another person's position when I face a conflict situation.										
I am able to cooperate with people who do not share my opinions on what is right and what is wrong.										
I believe that there are multiple sides to every question and try to look at them all.										
I try to consider other people's needs, even in situations when they conflict with my own.										
I recognize my own bias when I take a stand on ethical issues.										
I am able to identify many alternative ways to act when I face ethical problems.										
I would stand up for a just or rightful cause even if it meant negative consequences.										

**Civic Responsibility:** A perceived duty to make a difference in the civic life of our communities, and to develop the combination of knowledge, skills, values and motivation to make that difference.

	1	2	3	4	5	6	7	8	9	10
Working to change society is an important personal goal for me.										
I have a responsibility to help improve my local community.										
Volunteer work will have a significant impact on my career goals.										
I am interested in applying knowledge of my academic studies to solve real-life problems.										
It's important for me to work toward correcting social unfairness.										
I think that people with more social resources should help people in need.										
I think about how I can use what I'm learning in my academic studies to improve other's lives.										
I am interested in working for a company that is socially and morally responsible.										
I encourage others to participate in civic activities.										

**Systems Thinking:** The cognitive process to understand how a system’s constituent parts influence each other, and how the system behaves over time and within the context of larger systems. One with systems thinking is able to “recognize, describe, and model complex aspects of reality as systems, as well as identify important elements of the system and the interdependency between the elements”

	1	2	3	4	5	6	7	8	9	10
When solving problems, I go with the first good idea that comes to mind.										
I challenge my ideas about how the world works.										
When making a decision, I go with my "gut feeling."										
I examine how different parts of a system may influence each other.										
When deciding on a possible solution to a problem, I take time to consider the chances of each alternative being successful.										
When confronted with a problem, I examine the external factors in the environment that may be contributing to the problem.										
I examine whether the relationships among different parts may change over time.										
I am aware that a small shift in one part of a system may produce big changes in the system.										
When evaluating the effectiveness of a solution, I incorporate various viewpoints from relevant people for feedback.										

**Professional Development:** The ability to clarify career goals while demonstrating the skills necessary to meet professional expectations.

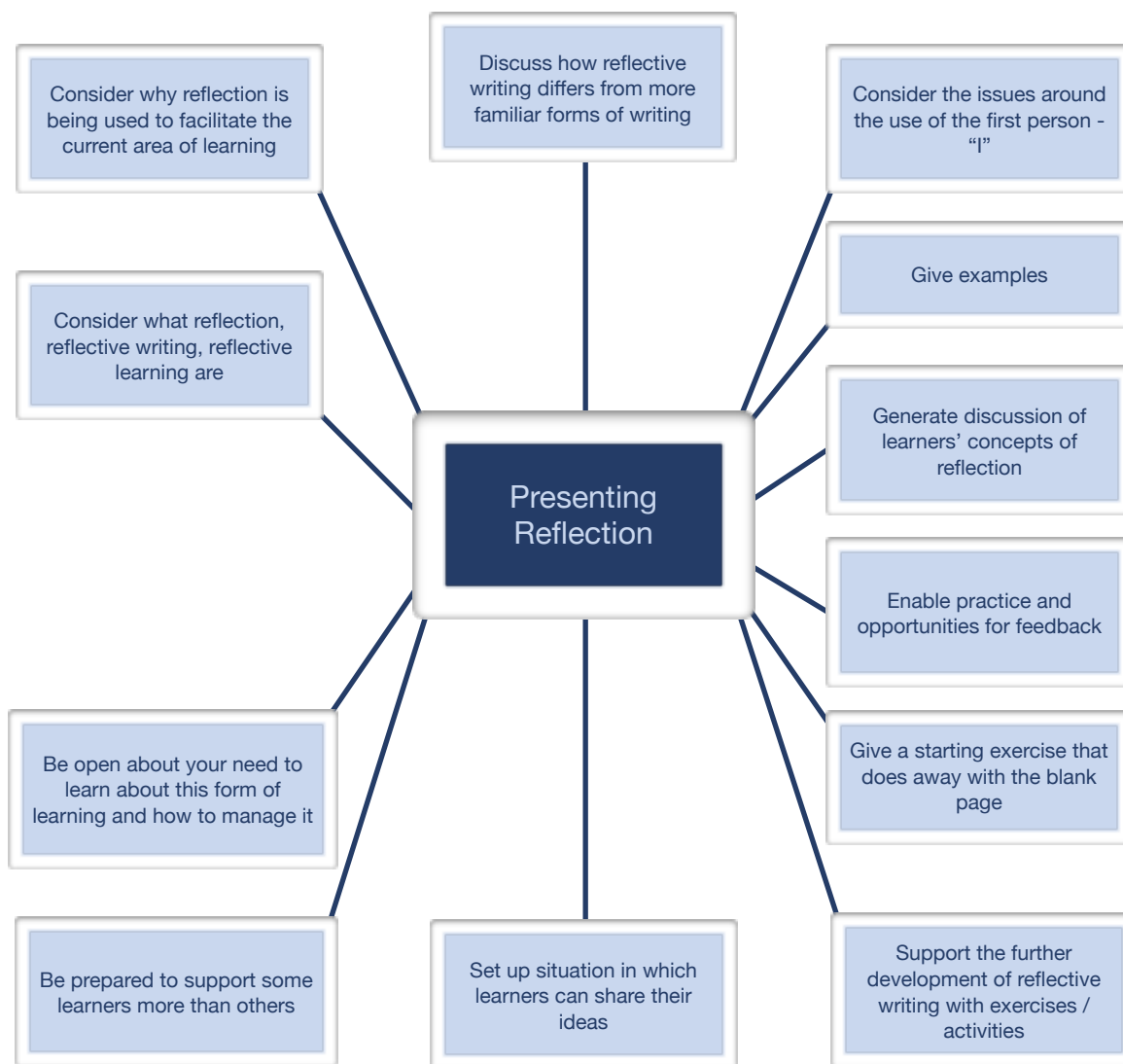
	1	2	3	4	5	6	7	8	9	10
Critical thinking										
Problem solving										
Communication										
Teamwork										
Interpersonal										
Leadership										
Work values										
Personal management										
Adaptability/learning										

## Appendix C: Preparing Students for Reflection

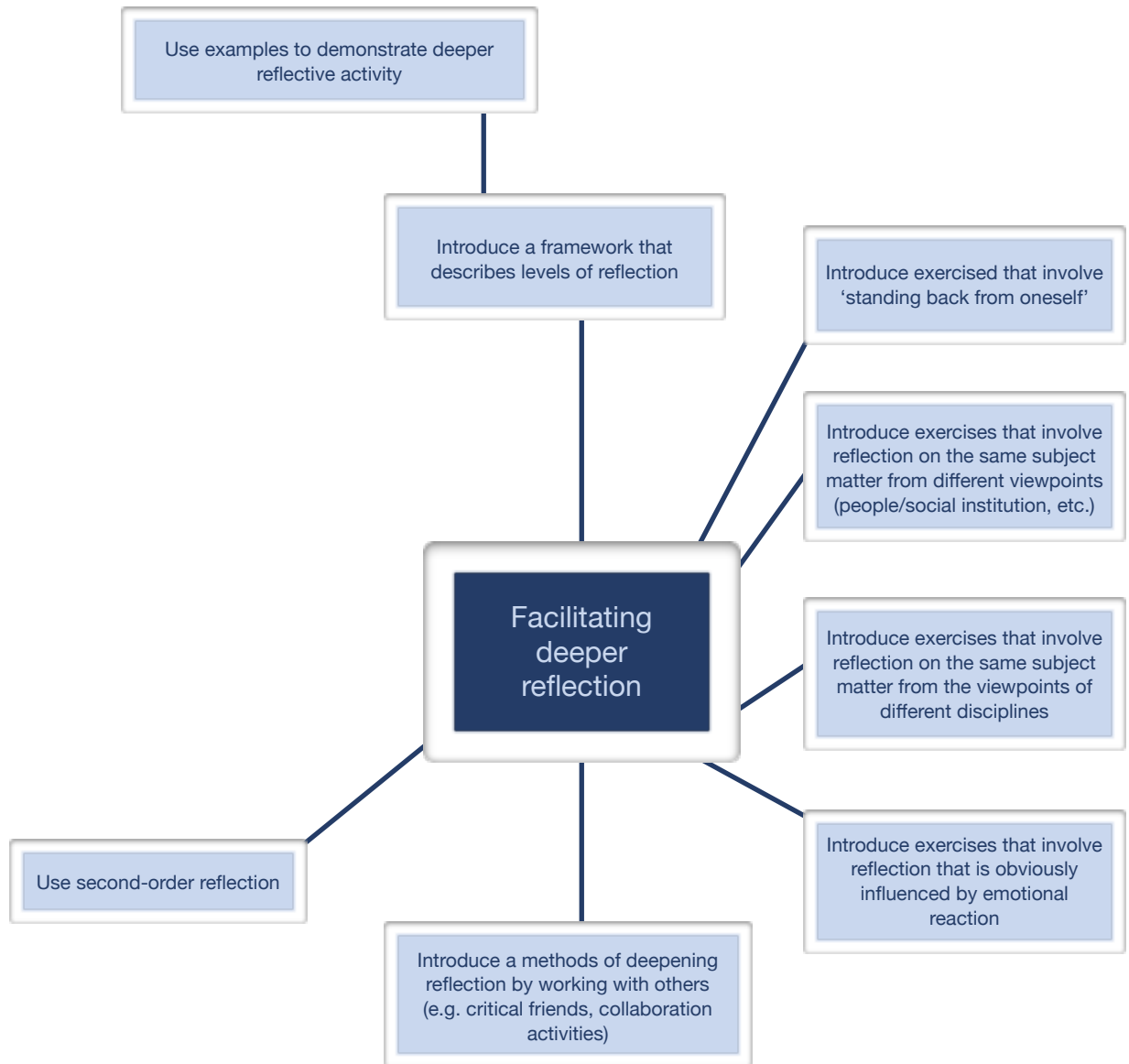
In her book, *A Handbook of Reflective and Experiential Learning: Theory and Practice*, Jennifer Moon presents a section of resources that can be utilized when introducing journaling to students. The resources are presented in two stages, each with a set of recommendations. The stages are represented by the figures below. A full reference for Moon's book is included and is recommended reading for instructors who wish to incorporate journaling.

At a minimum, it is suggested that you discuss the following with students:

- Journaling expectations (it's not a diary!)
- The IBL process; the Student Guide graphic (Figure 5) can be shared.



Stage 1: Presenting reflection (Moon, 2004)



Stage 2: Facilitating deeper reflection (Moon, 2004)

## Appendix D: Basic Rubric Example

Phase	Gold Standard Criteria	Range/Feedback	Score
All 1-4	<p>Goals or expectations of the experience are explained. Reflections and narrative explore:</p> <ul style="list-style-type: none"> <li>- Apprehensions and preparedness and how these affected the experience,</li> <li>- New insights from this experience</li> <li>- How overall student's goals or expectations were met,</li> <li>- How overall experience provided personal meaning to the student</li> <li>- Plans for using experience moving forward</li> </ul>		
1	<p>Summarized daily experiences. Informed stakeholders of what was learned. Reflected on feelings and how experiences were navigated. Identified information to learn more about, and used field experience to gain the most understanding from these topics.</p>		
1	<p>Outlined and discussed new findings and analyzed feelings surrounding preparedness and confidence.</p>		
1	<p>Identified issues and skills needed to navigate experience. Discussed how what you already know can contribute to the experience. Developed a working hypothesis or problem to address.</p>		
2	<p>Reflected on experiences in terms of what resources can help the student to move forward.</p> <ul style="list-style-type: none"> <li>- Identified specific examples: people to approach, existing examples to learn from</li> <li>- Demonstrated critical thinking to identify possible solutions or recognition of need for further study or inquiry</li> <li>- The experience from a variety of stakeholders or perspectives is explored</li> </ul>		
2	<p>Self-reflected on how thinking is changing to solve the problem effectively. Initiation of inquiry that led to deeper understanding is clearly documented</p>		



Phase	Gold Standard Criteria	Range/Feedback	Score
2-3	Observations and interactions with experts with relevant expertise and experience in a variety of situations were explored and analyzed		
3	Applied flexible approach to the experiences or challenges and provided examples and illustrations		
3	Conclusions are identified and a clear connection between experience and classroom learning is justified and validated		
4	Articulated potential challenges to implementation of plan of action, strategies for addressing challenges, and attitude toward feasibility of plan		
4	Demonstration of learning gained from this experience and applicability of student's prior knowledge to the experience		
4	Organization and self-management skills were maximized and demonstrated (team work, problem solving, communications, decision making, and project management)		
All 1-4	<p>Narrative Writing Mechanics include:</p> <p>Daily reflection for each day of experience. Well organized ideas that demonstrate connections between the experience, school and the world are clearly communicated and connected tightly to criteria. Evidence of editing and proofreading are present. Writing is engaging and well-structured with excellent transitions between sentences and paragraphs. Conventions, vocabulary, and terminology related to experience are accurate.</p>		

## Appendix E: Prompt Examples

The prompts provided below are for a short-term (8-10 day) study abroad opportunity in which students are asked to journal daily.

### Journal Entry #1

As you prepare for your study abroad program, contemplate your motivation and expectations for this experience. At this stage, your journal entry should be focused on information related to your study abroad location, addressing your expectations and preparations, and the growth areas you hope to improve upon. Address the prompts below.

#### Introduction

1. Introduce yourself.
2. Introduce where you are going and what you will be doing while there.
3. Discuss why you chose this program.

#### Motivation & Preparation

1. What is your motivation for pursuing this experience?
2. What are you hoping to gain from this experience?
3. What apprehensions do you have?
4. How are you preparing yourself to get the most out of the experience?

#### Growth Areas

1. While traveling with for this experience, what United Nations Sustainability Development goals (<https://www.un.org/sustainabledevelopment/sustainable-development-goals/>) do you anticipate learning more about?
2. Look back at the results of the SEN Competency Survey you completed:
  - Were you surprised by the results?
  - What do you see as your strengths going into this experience?
  - What are some areas in which you think you can grow or improve?
  - In what competency area do you expect to grow the most?

### Journal Entry #2

Because you're just beginning your study abroad experience, you're probably still orienting to your new surroundings and your new companions. At this stage, your journal entries should be recording your observations, addressing your expectations, identifying the knowledge and skill sets you are using to navigate the foreign land, and recording what caught your attention and why. The journal entry should not merely be a description of what you did, but rather a *reflection* on what you did, how you felt about it, and why certain things drew your attention.

Address the prompts below. Examples are provided, but your situation and encounters will dictate your content.

### *General Reflection*

1. Discuss what you've experienced since arriving. What was familiar, what was different? Describe how.

Example: Today we went to a housing settlement to better understand the community's concerns. The environment was very similar to one in which my grandmother lived, so I instantly felt at ease here, even though I was surrounded by strangers. I smelled the familiar smells of outdoor stoves and pungent spices. However, this community had more of a feel of desperation and it was clear that the living situations were dire. Also, they were using some cooking utensils I have never seen before. It's interesting how each culture has developed tools to suit their specific needs and situations.

2. Reflect upon and discuss situations in which you felt uncomfortable, ill-prepared, or out of your element as well as situations in which you felt confident or knowledgeable. Why did you feel that way?

Example: While discussing the community's concerns, it became apparent that the community members have come to think of their situation as an "us vs them" scenario, and they clearly viewed me and my classmates as "them." This made me uncomfortable because the tension in the air at that point was palpable and I felt like I was being blamed for the situation. While I don't live in the community and can't begin to fully understand their frustrations, I can empathize with their situation and want to help. While I have a lot of experience in the sanitation field, because of my internship last summer, I don't have a good understanding of the unique challenges of this geographic region and its people. I am confident we can learn more, but it isn't yet clear on how we can improve the situation.

3. What personal skills, prior experiences and/or knowledge did you rely on to navigate the experiences today?

Example: Today was challenging. I'm still getting to know my peers from other institutions and so I had to use my interpersonal skills make connections. As an introvert, it's difficult for me to make friends, but I am always glad I put myself out there, even when it's exhausting and overwhelming at times. When we visited the settlement, I did my best to respect the residents' homes and farms, and since I am not familiar with their culture or the language, I had to watch for body language that let me know when I might be touching something I shouldn't or maybe being too nosy. I know from my time in India that some actions that seem harmless to me may be deeply offending to others.

### *Growth Areas*

Each day I would like you to write about an experience that in some way relates to the SEN growth areas and how that experience has impacted you. For example, one of the statements under multicultural awareness is “I reflect on my own cultural biases or stereotypical thoughts.”

If this is your first trip abroad, you will likely be greeted with a great many new sights, sounds, smells, people, etc. You will have a reaction to this.

1. Spend some time thinking about your initial reactions and processing them in relation to the statement above. Did your reactions/thoughts surprise you? In good ways or bad ways? This is the type of information you can write about in your journal.

If this “I statement” doesn’t resonate with you today, feel free to refer back to the SEN survey and choose another “I statement” under one of the two growth areas you’ve identified. Please remember that I am expecting you to move beyond simple observation by asking yourself (and others) reflective and meaningful questions about the growth area and your experience.

### **Journal Entry #3**

Hopefully, by now you’ve acclimated to your new surroundings a bit and you’re getting a better understanding of the culture and people of the country. You’re probably also getting a good feel for the major successes and challenges facing its people. At this stage, your journal entries should be recording your observations with a bit more detail than your prior entries, questioning some of the things you’ve encountered, and describing your understanding of the situation.

Address the prompts below.

### *General Reflection*

1. Discuss your experiences since your last journal entry. What was familiar, what was different? Describe how it was familiar or different.
2. Reflect upon and discuss any situations where you felt uncomfortable, ill-prepared, or out of your element, as well as situations in which you felt confident or knowledgeable. Why did you feel that way?
3. What personal skills, prior experiences and/or knowledge did you rely on to navigate the experiences today?

### *Growth Areas*

Each day I would like you to write about an experience that in some way relates to the SEN growth areas and how those experiences have impacted you. For example, one of the statements under ethical reasoning is “I try to consider another person’s position when I face a conflict situation.”

1. As you move through your day, you may have an opportunity to share a meal with a person from your host country or engage in a conversation with a local. If an ethical or controversial subject came up with your peers, what did you do? What do you think of their beliefs, stance, etc.? Were you able to think about it from their perspective, given your new understanding of the host country?

If this “I statement” doesn’t resonate with you today, feel free to refer back to the SEN survey and choose another “I statement.” Alternatively, if you want to revisit and build upon a growth area you discussed in previous journal entries, feel free to do so, but remember that I would like you to move beyond simple observation by asking yourself (and others) reflective and meaningful questions about the statement and your experience.

### *Academic Learning*

1. Of the experiences you’ve had to date, choose a general interest topic related to energy, sustainability, or policy that you are particularly interested in. If your program has a capstone project, consider choosing the same or similar topic. As you consider a topic, use the following questions to help you choose well: What have you seen or heard about so far that piques your interest? What questions do you have about the things you have seen or heard so far? What would you like to learn more about? We will call this your “general interest topic.”
2. Explain why you’re interested in that subject.

NOTE: You will be asked to build on this topic throughout the remaining journal entries, so choose your topic carefully!

*To see more, visit the Journal Entry assignment pages for this course at:  
[www.e-education.psu.edu/egee299](http://www.e-education.psu.edu/egee299)*

## Appendix F: Grading Rubrics

### Rubrics Used to Grade Prompt Examples from Appendix E

Rubric for Journal Entry #1		
Criteria	Comments	Available Points
<p><i>Content:</i></p> <p>Reflection clearly and thoroughly communicates your thinking process and demonstrates your thoughts as you answer the journal prompt. Supporting details are shared, elaborated upon and demonstrate the connections between knowledge and expectations. Potential growth in competency areas is discussed. Examples are provided and your post includes images or other multimedia that support content.</p>		8
<p><i>Writing Mechanics:</i></p> <p>Evidence of editing and proofreading are present. Writing is engaging and well-structured with excellent transitions between sentences and paragraphs. Concepts are integrated in an original manner.</p>		2

Rubric for Journal Entry #2*		
Criteria	Comments	Available Points
<p><i>Journal Entry #2:</i></p> <p>Reflection clearly and thoroughly communicates your thinking process and demonstrates your experience as you answer the journal prompt. Experiences and supporting details are shared, elaborated upon and demonstrate the connections between knowledge and experiences. Growth in competency areas is discussed. Examples are provided and your post includes images or other multimedia that support content. Evidence of editing and proofreading are present. Writing is engaging and well-structured with excellent transitions between sentences and paragraphs. Concepts are integrated in an original manner.</p>		10

\*Rubric used for Journal Entry #2 may be reproduced for Journal Entries 3-8.

## Appendix G: Journal Examples

### Example 1, used with permission

#### Peru: The Adventure Continues

Today. Was. Insane. We went ziplining 100 meters up, across rivers and through the jungle, and we climbed a rock wall and crossed a wooden bridge across a gorge. I've never had any desire to zipline, what with my fear of heights and all, but this was an opportunity of a lifetime. I was terrified, certain I was going to die and leave my parents heartbroken. But I put on a brave face and tried to hype myself and my friends up. They latched me onto the cable. I took a deep breath. Ten seconds of courage. That's all it takes to change your life. Be brave, ridiculously brave, for just ten seconds. I've tried to live that way my entire life, but that was usually when asking guys out or doing a dumb dare. Stepping off a cliff wasn't exactly something I had planned for.

Ten seconds. One step. No going back.

I very ironically turned around, told my friends to tell my parents I loved them, and stepped off the cliff.

And I flew.

I screamed at first, but then cheered as I felt the line catch me and zoomed through the canyon. The river below was crystalline, the sky pure sapphire. For the briefest of seconds, I was a bird, and I was unchained from everything that held me back. No responsibilities, no health conditions, no family or friends. I was alone, and I was free, and I was happy.

My feet touched the landing all too soon.

I was on the verge of tears as my friends pulled me into a hug, celebrating me facing my fears. Had they felt what I felt? Am I overthinking this? I didn't care. I needed more. I needed the exhilaration.



In total, I did six ziplines that day, each one a new step out of my comfort zone and into a skin I hadn't known I had. Everything about this experience was new. I tried likening it to the adrenaline rush of white-water rafting, but this was something different. I could swim, I couldn't fly.

At the end of the day, I was filled with a newfound assurance of myself. I could do

anything I wanted. My soul was alight. I think everyone's was. Spirits were high as we meandered to the hot springs in the evening. The warm water hugged us after a long day. We hugged each other. We trusted one another to joke around and talk about difficult things. Turns out I wasn't the only one struggling, but that's not my story to tell.

The whole day was just so insanely different from anything I had ever experienced. I felt new. Like I had broken out of a shell I hadn't known I had.

### Civic Responsibility the World Over

*I have a responsibility to help improve my local community.*

Today, this idea presented itself in a couple different ways. In a perhaps unexpected way, maybe even unrelated way, I felt responsible to help my peers on the ziplines and rope courses today. Lauren and Courtney were both terrified of the rope bridge; I was too, but I knew I could do it. After all, stepping off a 500-foot cliff seems far scarier than walking across a bridge. In any case, I told Courtney to go in front of me and Lauren to go behind me. I sang High School Musical songs (poorly) to Courtney to distract her and encouraged her, and I would turn around and wait for Lauren, cheering her on. Courtney got comfortable enough to finish on her own, but Lauren was petrified. When I made it to the other side, Courtney and I began chanting for Lauren, and when she finally made it across, I swept her up in my arms. She was absolutely shaking, and her breathing was so unsteady. This may not seem like its related to the "I Statement" above, but I think it is. Part of being a good community member is helping others however you can. We all do better when we all do better. Encouraging my friends to challenge themselves and face their fears helps them to grow. Growth is always improvement, as far as I'm concerned. Maybe in some small way, today's events will inspire Courtney and Lauren to take more risks or be bolder when it comes to their careers or livelihoods back in the US. I believe that one good deed can ripple outwards, and if I can bolster others' confidence and encourage them to take control of their lives, then they'll go back to their communities and feel more sure of their actions and decisions.

If I don't help them, maybe no one will.

### Our Capstone Project

Our group has narrowed our general interest topic down to focus on deforestation from mining and how to ecologically restore it to its pre-industrial era glory by means of phytoremediation. We felt it's best to focus on terrestrial restoration as there is no infrastructure or policy to support an aquatic restoration of any sort in Peru. Plus, this will be more cost-effective. My capstone group and I discussed at length what we wanted to do, and we determined deforestation is a perfect focus, since Peru has a large portion of the rainforest in its territory but has a low population count in that area.

Taking what I've learn about Peruvian culture and combining it with my previous knowledge to design a restoration plan has been challenging but successful thus far. However, as I've mentioned in previous journal entries, phytoremediation can be used nearly anywhere. For instance, the same processes could be used in the Western United States. Different plants would have to be used, but I think it could be wildly successful in the US since there is better infrastructure, funding, and public support for green initiatives. However, I would want to consider the perspectives of Native Americans. Their oral history may be useful in identifying what the area in question originally looked like before it was destroyed, and I would want to make sure I'm being culturally aware while trying to be ecologically aware.





## Example 2, used with permission

### The GREEN Program: Iceland Edition 6



View from climbing Mt. Rjupnafell

With one night of camping done, we started our day with some breakfast and geared up for the adventure ahead. We started our journey by crossing a river. We had to take off our boots and layers of socks and walk across a freezing cold, rocky river. After putting back on our boots we began our seven hour hike. We climbed throughout the Thorsmork area and took small breaks along the way. To be honest, I had a very hard time hiking. I wasn't used to the rocky terrain that consisted of many inclines. I was surprised that I was having such a hard time throughout the hike since I was used to hiking back home. However, Iceland's mountains are much more intense than the mountains in western PA. After a few hours of hiking we reached the base of a mountain called Rjupnafell.

It was the groups decision to climb this very steep mountain all the way to the top. The climb was slow as we began our ascension to the top. We had to be careful climbing since the narrow path was composed of loose rock that would tumble down the mountain to people below. After hugging the side of the mountain, I finally made it to the top! I was proud to have finally have made it this far since my legs were so tired at this point in the hike. I can now official check climbing a mountain off my bucket list. Once down the mountain, we made our way back to our campsite. After reaching our tents, I have never been happier to lay on the ground. That night we cooked hamburgers on the grill which is a popular meal for my family in the summertime so I felt just at home. From there we hung around until it was time to go to bed for our last night camping.

## Growth area

In Iceland, I learned that gender equality is of big importance. Here they have both maternity and paternity leave to ensure that a child is taken care of by both parents. In addition, Iceland has closed the pay gap between women and men by having companies give each gender the same salaries for the same jobs. It was refreshing to see this country taking action to correct social unfairness. After witnessing gender equality in Iceland, I believe this concept could be a reality in the United States. It encouraged me to strive for gender equality in my own country.

## Academic Learning

To focus in on my topic of interest my group and I decided that we would be a company that works as a nonprofit middleman between hydropower companies and impoverished communities, installing micro hydropower plants into local water systems to provide clean energy and water. Based on the hydropower lecture and from researching online, we found that micro hydro power plants are the easiest to maintain, the safest for the environment since they are run of the river, and the most cost effective to install. It would be able to provide up to 100kW of energy which could power a small villages and farms. We decided to add a new aspect to our hydro power plant setup. Since the water passes through a filtration system in the power plant, we thought we would further this filtration and provide an access of clean water. Therefore, our hydro power plant provides energy and clean water. We decided that this plant could be built in an area such as Zimbabwe were there is a lack of energy and many natural water sources. Some problems that might come in the way include droughts and social impacts on the community. We would make sure to address these problems before building a plant in the area. Upon researching about hydropower plants, we discovered that back home in America there is a lot of potential to switch to this form of renewable energy. Due to the number of streams and rivers in America, it would be a smart idea to transition to this energy form.



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