Generating, Deepening, and Documenting Learning in Service-Learning:

The Power of Critical Reflection

Abstract. Reflection is the element of service-learning that helps students avoid “having the experience but missing meaning” and that improves the quality of learning and of service. When understood as critical reflection, intentionally designed in light of learning objectives, and integrated with assessment, it generates, deepens, and documents learning. This interactive, hands-on workshop will guide participants through a process of (1) articulating learning goals and objectives, (2) designing critical reflection accordingly, and (3) integrating critical reflection with formative and summative assessment of learning. Participants will leave the session with examples, research-grounded models, tools to support their own design of reflection assignments and rubrics, and an framework to facilitate their approaching service-learning as scholarship.

Facilitator:

Patti H. Clayton, Ph.D.
PHC Ventures

Senior Scholar, Center for Service and Learning, IUPUI
Visiting Fellow, New England Resource Center for Higher Education

[patti.clayton@curricularengagement.com]
[www.curricularengagement.com]

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~Opening Reflection~

Describe your current approach(es) to reflection concisely as you introduce yourself to a neighbor (1 min each)

What reflection activities do you use?

When in the semester?

Written or oral or both?

Individual or collaborative or both?

How is reflection guided?

Examining your current approaches to reflection:

A. Discuss in pairs (1 min each)

What understanding of reflection is your current approach(es) grounded in?

B. Written spectrum activity, in pairs [Strongly disagree (1) – Strongly agree (10)] (1 min each)

- My students are, on average, good at learning through reflection
  1 2 3 4 5 6 7 8 9 10

- I am satisfied with the student learning achieved through my current approaches to reflection
  1 2 3 4 5 6 7 8 9 10

- I am confident in my ability to design reflection to generate learning
  1 2 3 4 5 6 7 8 9 10

- I am confident in my ability to assess reflection products for learning
  1 2 3 4 5 6 7 8 9 10
C. Individually (1 min), evaluate your current approaches to reflection against the following criteria. On a scale of 1 – 10, with 1 = “not at all” and 10 = extremely, to what extent do your current approaches embody each of these characteristics of strong reflection?

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Score</th>
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<tr>
<td>link experience to learning</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
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<tr>
<td>guided</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
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<tr>
<td>occur regularly</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>involve feedback to the learner to enhance the learning</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>help clarify the learner’s values</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>oriented toward specific learning objectives</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>integrative</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>assessed in terms of critical thinking</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>actionable / include goals for future action</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>generate change in the learner’s life</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
<tr>
<td>occur in a “safe yet critical” context</td>
<td>1 2 3 4 5 6 7 8 9 10</td>
</tr>
</tbody>
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Articulate Learning individually (upshot of this reflection) (3 min)

The strengths of my current approach(es) to reflection are …

What specifically about my current approach (es) to reflection should be enhanced?

What idea or question about critical reflection do I want to think more about as we proceed through this workshop?
Student Reflection Product: Academic Category (Slightly modified from original student product)

[NOTE: Produced as the last step in a reflection process that combined oral and written reflection and refined through two drafts, with feedback from peers and instructor]

One main attribute we have discussed that a servant-leader should have is foresight, or the ability to anticipate what will happen based on patterns observed from the past through a combination of rational thought and intuition. In “The Servant as Leader,” Robert Greenleaf says that foresight is “the ‘lead’ that the leader has” and that without it “he is not leading” because events “force his hand.” However, I have learned that although lack of foresight can indeed limit the choices of a leader, his/her “lead” may not be lost entirely as long as there are options for action; lack of foresight need not entirely “force [one’s] hand,” but to avoid the situation in which it does, it is necessary to think creatively about one’s remaining options and not assume that one no longer has any options.

I learned this when we reflected on the challenges we were experiencing with the “Computer Literacy Project” at the assisted living facilities in a group meeting with my instructor. We talked about how we had not had much foresight regarding the computers we had obtained as donations; when we made our project plan at the beginning of the semester, we did not even consider the possibility that the donated equipment might not be in good working order and so had planned only a little time for computer set-up. At this point, we were discouraged that we were having to spend a lot of time trying to fix technological problems at the assisted living facilities when, if we had anticipated the need, we could have arranged for someone with more technical expertise than we have to get the computers in working order before we took them to the sites; had we done that (and one of my group members even knows someone who would have been happy to help us out, so it wouldn’t have been difficult to find such a person), we would have had working computers much more quickly and could have moved on by now to working on sustainability for the computer literacy project. We felt that, at this point, we would not have enough time to accomplish all of the objectives we had at first set forth for the project; in particular, we realized that we may not be able to firmly establish a permanent “home” program to take on the responsibility of the Computer Literacy Project. We felt that we had no choice but to simply give up this objective—that is, we felt that our lack of foresight had indeed taken away our “lead”—since the pressure we were experiencing from time seemed to be forcing our hand and leaving us no options.

However, my instructor asked us if not being able to completely fulfill an objective meant that we could not progress towards it at all. This question helped us to realize that while we may not be able to fully complete everything we wanted to with this project, we still can make significant progress toward several goals; we have not, therefore, completely lost the ability to provide leadership in this project, as our reading of Greenleaf’s discussion of foresight led us to believe. We can establish preliminary contact with possible “home” programs for the project and compile a report of these options. We can locate a source of technological support, whether within the college of engineering or elsewhere, for future participants in the project - as a step toward dealing with the technological problems that we are not going to be able to fix this semester and toward making this part of the project more sustainable. In short, our choice of actions at this point may be limited by our lack of foresight earlier on in the project (we simply do not have the time at this point to get more than one computer at each site installed and working properly, even with the help of my group member’s friend, for example, and we therefore we will not be able to hold the 10-person classes that we had planned to have running before the end of the semester); but we still have choices, and
we still have options for making progress on this project before our involvement with it ends. Of course, before I can judge my conviction that leadership options are not, in fact, lost by lack of foresight, it will be necessary to undertake some of these actions and ascertain whether or not it really is too late to have an impact on this project; perhaps there is a point in any project in which leadership is lost due to lack of foresight, and it would be interesting to try to determine through this project and others at what stage in a project’s unfolding that point occurs, if in fact it consistently does.

This learning matters because my group and I discovered that we do not agree that lacking foresight causes a leader to “lose [his or her] lead” as Greenleaf states and were able to use this discovery to help us overcome our discouragement and sense of failure. Perhaps our experiences with the consequences of lacking foresight are different from Greenleaf’s ideas of these consequences because we were able to identify this mistake as we were making it. Our overall understanding of the concept of foresight has not only been reinforced by but also revised through the service-learning process of reflection. If we had failed to reflect on our service experiences, we might never have realized we were failing in the area of foresight in connection with our technological problems. Then we would indeed be having our hands forced by events, as we would not have the opportunity that we do now to analyze how we can change our actions to prevent this. Even though our efforts in this service project have been compromised by our lack of foresight, I believe we can utilize other leadership skills to retain our “lead” in this project. We can reassess the highest priority needs of the project, be flexible, and learn to work within the limitations that our lack of foresight has caused. Basically, this learning matters because it has reinforced both to me and to my group members the importance of foresight when trying to achieve goals and also caused us to find alternate ways of working towards those goals when our lack of foresight brings us into situations of limited options.

In light of this learning I will spend some time after our meeting with the facility manager to foresee what situations may come up in the last five weeks of this project, write these ideas down, and share them with my group members. This will be difficult simply because foresight is, in the paradoxical words of Greenleaf, “foresee[ing] the unforeseeable.” Since there are so many challenges and changes that may yet arise in this project, it will be hard to predict them. However, I believe that examining and reflecting on our past experiences with the project will help me to do this. As Greenleaf states, foresight often requires a leader to have a “feel for patterns,” and one important way for me to recognize and sense patterns in the progress of this project is by reflecting on my past experiences and current involvement with this project. Also, I can be thinking of what choices still remain for us as we seek to come as close to completing our objectives for this project as possible, and how we can act upon these choices.

Has this student learned through reflection on SL experience?

Do you have evidence of her having learned?

What evidence would you like to see that you don’t find here?
Student Reflection Product: Personal Growth Category (slightly modified from original)

[NOTE: Produced as the last step in a reflection process that combined oral and written reflection and refined through two drafts, with feedback from peers and instructor]

**I learned that** for the past 20 years I have been developing a pattern of inappropriate dependency in that I easily default to depending on other people, relying on them to help me accomplish my objectives even if I do not really know them well enough to trust them. However when I get backed into a corner because of this dependency, I have the capability to handle it because of my resourcefulness, or my ability to find alternate ways to accomplish my objectives when situations are not conducive to meeting those objectives.

**I learned this when** I compared the dependency problem that I faced in the Dominican Republic with the situation at the assisted living facility last week when I depended on the Activity Coordinator's presence and she was not there. When I volunteered at an orphanage in the Dominican Republic I took a large step of independence by going without knowing anyone else and hoping that I could establish a support system once I was down there. When this support did not develop I became very homesick and relied on my parents to arrange a way for me to come home early. I did not try to use my own abilities to survive for the rest of the trip, or even to get me home, but depended on my parents to work out the situation, as has always been our pattern as a family (my parents have always been overprotective and have stepped in and “rescued” my brother and I on many occasions). Last week at the assisted living facility I encountered another example of my tendency to be too dependent on others when I counted on the Activity Coordinator to be at the site to introduce my group to the residents and wasted a lot of time waiting around for her rather than going to a “Plan B” quickly. Even though I defaulted into dependency, however, I was able to be resourceful to overcome the problem created by my dependency, by eventually locating someone else who was able to introduce us like I had hoped the Activity Coordinator would do.

**This learning matters because** now that I am in college, I am at a point in my life when I need to become independent in order to be able to function on my own, and though I am now better able to use my resources to pull myself out of a problem created by dependency, it would be more sustainable if I could prevent myself from defaulting into dependency by bolstering my independence. Whereas in the past (in the Dominican Republic) I depended on my parents to “rescue me” from a difficult situation, this time I was able to rescue myself. Granted, my situation at the assisted living facility was much less stressful than being in another country and not knowing anyone, and I was not risking much by depending on myself rather than someone else to find a way to begin my interaction with the residents. However it is important for me to realize through this example of my resourcefulness at the assisted living facility that the reason I default to dependency is not because I cannot handle the problem or situation myself, it’s that my lifelong reliance on my parents as rescuers has led me to believe that I am independent and strong enough to do it. It is this underlying belief that I will need to work on if I am to become a more independent adult.

**In light of this learning I will** set small goals for myself to become more independent. I think that my decision to go to the Dominican Republic by myself was a step of independence that was too large for me to take so I will find ways to push myself towards independence, realizing that it’s a process
that begins with small steps. For example, in the past I have been dependent on my brother to get
gas in my car, but in light of this learning I will resolve to get my own gas. Also, I have been
financially dependent on my parents and have come to depend on them to give me money every week
to buy necessary items for the week. Because I want to become more independent, I will talk to my
mother and work out a system where she gives me a set amount of money for the rest of the
semester and I will have to budget it out for myself on a week by week basis. I know that there are
many other smaller steps I could be taking, so I plan to reflect on this idea of dependence in my
journal during Spring Break and try to recognize the areas in my life where I am dependent so that
later on I will not become backed into a corner so easily because of my dependency on someone else;
I will establish at least two additional goals by the end of Spring Break, for a total of four to work
on the next six months. It will be challenging to identify and then act on becoming less dependent in
these areas of my life because I feel comfortable knowing that I have a safety net, however since I
will not be able to depend on safety nets forever, this process of personal growth will be beneficial
to me when those safety nets give out. Another more fundamental challenge will be to back away
from these safety nets, such as my parents giving my money and my brother getting my gas, while
not backing away from the individuals who care enough about me to be safety nets. I do want to
back away from my dependence on my parents and brother, for example, but I must be careful not
to back away from my parents and brother in the process. I think that by talking to them and
explaining my desire to become more independent, I can let them know that I sincerely appreciate
their support but at the same time need to learn to rely more upon myself. To ensure that I really
do make progress in terms of these goals in the next six months, I will put a notebook in my car and
record who gets gas each time my car needs to be filled, and I will ask my roommate to ask me on
the first of each month where I stand with this and with my mother on the budgeting situation; if I
am successful in changing this dependency – rescuer pattern that I have with my parents, then it
should show up concretely in these two specific behaviors.

Has this student learned through reflection on SL experience?

Do you have evidence of her having learned?

What evidence would you like to see that you don’t find here?
Worksheet: “Reclaiming Reflection”

“Reflection”  “Critical reflection”

Mark with an X how YOU think of reflection
Mark with an O how YOUR STUDENTS think of reflection

If they are not the same, why might this matter and what might you do about it?
What is Critical Reflection?

“Experience is the best teacher – Or is it?”
(Conrad and Hedin)

“active, persistent and careful consideration of any belief or supposed form of knowledge in the light of the grounds that support it, and the further conclusions to which it tends”
Dewey, J. (1910). *How we think*

“a continual interweaving of thinking and doing”

to “integrate the understanding gained into one’s experience in order to enable better choices or actions in the future as well as enhance one’s overall effectiveness”

“We had the experience but missed the meaning”
Eliot, T.S (1943) *The Four Quartets*

_____________________________________
_____________________________________

Critical Reflection

1) Generates
2) Deepens
3) Documents

Learning
What Learning Are We After?

Consensus on the essential elements of S-L:

- integration of learning goals and service goals
- academic learning goals supplemented with at least civic learning goals and maybe other categories of learning as well (e.g., personal, professional, diversity-related)
- organized, structured process
- reciprocal collaboration among students, faculty/staff, community members, and institution that fulfills shared objectives and builds capacity among all partners
- structured reflection
- duration and intensity sufficient to produce meaningful learning and service outcomes

Components of S-L

Categories of Learning (critical thinking in all)

Partners in S-L
Service-learning (S-L) is a collaborative teaching and learning strategy designed to promote academic enhancement, personal growth, and civic learning. Students render meaningful service in community settings that present them with experiences related to academic material. Through guided reflection, students examine their experiences critically and articulate specific learning outcomes, thus enhancing the quality of their learning and of their service. Students, faculty, and community members all serve as co-educators, co-learners, co-servers, and co-generators of knowledge.

Learning Categories → Learning Goals

Learning Goal Categories of S-L
(critical thinking in all categories)

- personal growth
- academic enhancement
- civic learning

Example of Unpacking Learning Goals:

**Diversity**

- Awareness of difference
- Tolerance of difference
- Appreciation of difference
- Understanding the sources and significance of difference
- Navigating or managing difference
- Capitalizing on or leveraging difference

OR

- Accepting and understanding difference (individual)
- Working to promote equity across difference (interpersonal)
- Leveraging difference for collaborative action (collective)
## Bloom’s Taxonomy of the Cognitive Domain

<table>
<thead>
<tr>
<th>Bloom's Classification</th>
<th>Examples of Learning-Related Behaviors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge</td>
<td>Identify, define, order</td>
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<tr>
<td>Comprehension</td>
<td>Explain, restate</td>
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<tr>
<td>Application</td>
<td>Apply, solve, choose</td>
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<tr>
<td>Analysis</td>
<td>Analyze, compare, contrast</td>
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<tr>
<td>Synthesis</td>
<td>Synthesize, develop, propose</td>
</tr>
<tr>
<td>Evaluation</td>
<td>Evaluate, assess, judge, critique</td>
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### Learning Goal

**Category: Academic Enhancement**

**Goal:** I want students to understand and be able to use Chickering and Gamson’s 7 principles for good practice in undergraduate education.

<table>
<thead>
<tr>
<th>Learning Objective (LO)</th>
<th>Description</th>
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<tbody>
<tr>
<td><strong>LO #1</strong></td>
<td>Students will identify the 7 principles</td>
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<tr>
<td><strong>LO #2</strong></td>
<td>Students will explain the 7 principles in their own words so that someone not familiar with them could understand them</td>
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<tr>
<td><strong>LO #3</strong></td>
<td>Students will apply the 7 principles to their roles as teachers of young children or elderly residents in the community, using them to design learning activities</td>
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<tr>
<td><strong>LO #4</strong></td>
<td>Students will analyze the similarities and differences between the 7 principles as outlined in the text and as experienced with their learner population in the community</td>
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<td><strong>LO #5</strong></td>
<td>Students will propose changes to the 7 principles</td>
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<tr>
<td><strong>LO #6</strong></td>
<td>Students will evaluate both their implementation of the 7 principles (original and revised) with their learner population and the relevance of the principles for this population</td>
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## Worksheet D: Learning Goals → Learning Objectives

**Category:** ______________________________________________________________

<table>
<thead>
<tr>
<th>Learning Goal</th>
<th>Learning Objectives (LOs)</th>
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Consider the differences in the level of reasoning demonstrated between A and B below:
A: I learned that foresight is an important part of leadership ... when reflecting on my group's failure to anticipate the likelihood that the computers we were to install might not be in good working order.

B: One main attribute we have discussed that a servant-leader should have is foresight, or the ability to anticipate what will happen based on patterns observed from the past through a combination of rational thought and intuition. In "The Servant as Leader," Robert Greenleaf says that foresight is "the 'lead' that the leader has" and that without it "he is not leading" because events "force his hand." However, I have learned that although lack of foresight can indeed limit the choices of a leader, his/her "lead" may not be lost entirely as long as there are options for action; lack of foresight need not entirely "force [one's] hand," but to avoid the situation in which it does, it is necessary to think creatively about one's remaining options and not assume that one no longer has any options.
Generating Learning through Critical Reflection

**Designing Your Reflection Strategy: General Principles**
- Match with design of learning process and integrate with other assignments / activities
- Combine multiple mechanisms: Written, oral, individual, and collaborative … let them build
- Use early – middle – late overlay
- Provide scaffolding & guided practice (learning to learn through reflection), in part through feedback
- Create “safe yet critical” spaces, perhaps erring on the side of safe early on

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**WHAT**
- Everything is Reflection Worthy

**WHERE**
- In the Classroom
- Online
- In the Community
- Out of the Classroom

**WHO**
- Individual Reflection
- Collaborative Reflection
- Your friends
- Your instructor
- Your SL project group
- Members of the community
- Your family
- Staff of your partner organization
- Your classmates

**WHEN**
- Reflection Before
- Reflection During
- Reflection After

**WHY**
- Personal Growth
- Academic Enhancement
- Civic Learning

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PHC Ventures, 2010
Designing Your Reflection Mechanisms

- Determine learning goals in advance
- Develop prompts to guide reflection in accordance with the learning goals
- Share with the students elements of sound reasoning and apply them as standards to deepen reflection (don’t “miss the meaning”)
- Develop a mechanism capturing and expressing key learnings
- Support students in using / acting on their learning, including setting goals

A Continuum of Possibilities (field: Teacher Education)

Example reflection mechanism #1:
Reflect on your strengths and weaknesses

Example reflection mechanism #2:
List and explain 2 of your strengths and 2 of your weaknesses

Example reflection mechanism #3:
List and explain 2 of your strengths and 2 of your weaknesses. Share with a neighbor. Together, select the strength that, for each of you, is more relevant to / helpful in your role as a teacher

Example reflection mechanism #4:
According to Parker Palmer, “limitations are the flip side of our gifts … a particular weakness is the inevitable trade-off of a particular strength.” There is nothing “wrong” with us that we need to “fix,” he suggests. Rather, we are who we are; sometimes our personal characteristics serve us well (and we think of them as strengths), and sometimes they serve us ill (and we think of them as weaknesses). [Let Your Life Speak, 2000]

Individually and in writing …
- Identify and explain a personal characteristic that you tend to think of as a weakness in your role as a teacher
- Apply Palmer’s discussion: What gift or strength do you think this “weakness” might be the flip side of?

Discuss with a neighbor …
- Compare and contrast a teaching-related situation in which the weakness emerged and one in which the flip side strength emerged. Why do you think each emerged as it did and what were the consequences?
- If Palmer is correct regarding the relationship between our strengths and weaknesses, what do you think are the implications for our approach to personal and professional development as teachers?

Individually and in writing …
- Do you agree with Palmer? Why or why not?

Activity:
1) What are the similarities and differences across these example mechanisms?
2) When might each of them be appropriate? Inappropriate?
3) How does Bloom’s Taxonomy appear within and across these examples?
Schematic Overview of the DEAL Model for Critical Reflection

**Engage in experience**

**Describe**
experience objectively

**Examine**
per category

- **Personal Growth**
- **Civic Learning**
- **Academic Enhancement**

**Articulate Learning**
(incl setting goals) in each category

**Engage in experience and test learning and/or implement goals**
Sample DEAL Prompts
(illustrating 3 approaches to Examine prompts)

Describe (objectively)
- When did this experience take place?
- Where did it take place?
- Who else was there? Who wasn’t there?
- What did I do? What did others do? What actions did I / we take?
- What did I / we say or otherwise communicate?
- Who didn’t speak or act?
- Did I / others laugh, cry, make a face, etc.?
- What did I / we hear? See? Smell? Taste? Touch?
- Why did the situation occur?

Examine – Academic Enhancement (Bloom objectives-based)
1. Identify specific academic material related to your SL activities
2. Explain the material so that someone unfamiliar with it could understand it
3. Apply the material to your SL experience (E.g., when did you see it, or note its absence? How did / could you or someone else use it?)
4. Compare and contrast your initial understanding of the academic concept and your experience of it:
   - In what specific ways are your understanding and the experience the same and in what specific ways are they different?
   - What are the possible reasons for the difference(s) (E.g., bias, assumptions, lack of information on your part or on the part of the author / instructor / community?)

Examine – Civic Learning (Goal-based)
- What was I / someone else trying to accomplish? In taking the actions I / they did, was the focus on symptoms of problems or causes of problems? Was the focus (symptom or cause) appropriate to the situation? How might I / they focus more on underlying causes in the future?
- What roles did each person / group / organization involved in the situation play and why? What alternative roles could each have played? Did I / other individuals act unilaterally or collaboratively and why? Should I / they have worked with others in a different way?
- In what ways did differentials in power and privilege emerge in this experience? What are the sources of power and privilege in this situation, and who benefits and is harmed? How might any inappropriate dependencies be eliminated?
- How did leadership emerge in this situation, on my / others part?
- What is in the interest of the common good in this situation? In what ways is the individual good (mine / others) linked to and/or contrary to the common good? What tradeoffs between them are involved? In what way did any other tradeoffs (long-term / short-term; justice / efficiency; etc.) emerge in this situation? Who made the trade-offs? Were the trade-offs made appropriate or inappropriate and why?
- How does this experience help me to better understand my partner organization’s vision, mission, and goals? What does it reveal about the relationship between the organization and those it serves? What does it suggest about how this relationship might be improved?

Or, in contexts (such as international SL) in which civic learning is framed explicitly in terms of global citizenship, such prompts as:
- What connections (economic, political, environmental, social, cultural, historical) does this experience suggest between local (my home community? the host community?) and global communities?
- What are the points of tension surfaced in this experience between my responsibilities to each of these local communities and to global communities? What trade-offs do I experience between my
In light of this learning, I learned that I learned this when.

Consider how the learning has value, both in terms of your project-related activities and in broader terms, such as:

1. Other organizations or issues
2. Other activities you participate in
3. Other personal interests or professional goals.
4. Other courses

Surface a personal characteristic that you are beginning to understand better:

- How does this characteristic positively and/or negatively affect your interactions with others, your decisions, and/or your actions in your service-learning activities and (as applicable) in other areas of your life?
- Analyze: What are the possible sources of / reasons for this characteristic? How does your understanding of these sources / reasons help you to better understand what will be involved in using, improving, or changing this characteristic in the future?

Expressing an important learning, not just a statement of fact:

- Provide a clear and correct explanation of the concept(s) in question so that someone not in the experience could understand it.
- Explain your enhanced understanding of the concept(s), as a result of reflection on your experience
- Be expressed in general terms, not just in the context of your experience (so that the learning can be applied more broadly to other experiences)

Connect your learning to your specific activities, making clear what happened in the context of that experience so that someone who wasn’t there could understand it.

This learning matters because:

- Consider how the learning has value, both in terms of your project-related activities and in broader terms, such as:
  - Other organizations or issues
  - Other activities you participate in
  - Other personal interests or professional goals.

Set specific and assessable goals and consider the benefits and challenges involved in fulfilling those goals.

Tie back clearly to the original learning statement.
EXAMPLE Reflection Mechanism per DEAL

Clayton, P.H. MDS 302 – “Contemporary Science, Technology, and Human Values” – NC State University

Sample written spectrum activity / Notes / excerpts for spectrum activity on Robert Greenleaf’s Servant Leadership

Goal: Support intensive individual reflection on the issues the author raises – in order to achieve personal engagement with the text and to promote deeper understanding of the complexities of servant leadership as a way of being in the world

Process:
Step 1: Discussion of the reading in the previous class period identified key issues and helped establish shared understanding of the reading (DESCRIBE step of reflection)

Step 2: Ask the students to find a private place in the classroom to sit, bring out their copy of the reading, and draw a series of spectrums (1 – 10 scales) on notebook paper (unless worksheet developed in advance, with a series of spectrums and space to write between them)

Step 3: Students play a written spectrum game – instructor facilitated: they are to locate themselves on a scale of 1 (strongly agree, unless otherwise noted) – 10 (strongly disagree, unless otherwise noted) and make notes to themselves in support of their judgment on each spectrum and in response to the follow-up questions on each spectrum (EXAMINE step of reflection – individual)

1. See page 7 – 8: I am generally confident that my actions result in meeting the other’s highest priority needs (agree 1 -- disagree 10)
   ● When am I unsure – give an example
   ● What do I do / how do I handle it when I am not sure whether I am really serving in this way?

2. See page 10: I generally seek to understand (1) -- seek to be understood (10)
   ● Example of having done each each

3. See page 10 and page 34: I generally blame others or see problems as “out there” (1) -- I generally accept responsibility and ask myself, in what way is this “my problem,” looking “in here” (10)

4. See pages 13 – 14 (“anyone could lead perfect people”): I generally do (1) – do not (10) expect others to be perfect
   ● Potential reasons for this?

Step 4: Return to our seats and discuss key tensions / questions / issues surfaced in further depth, sharing from our individual reflection as desired (EXAMINE step of reflection – collaborative)

Step 5: ARTICULATE LEARNING per worksheet
Example DEAL: Group Activity and Reflection on the Meanings of Service

Activity
Project the following two quotes:
“One who serves takes care to make sure that other people’s highest priority needs are being served. The best test, and difficult to administer, is: do those served grow as persons; do they while being served, become healthier, wiser, freer, more autonomous, more likely themselves to become servants? And, what is the effect on the least privileged in society; will they benefit, or, at least, will they not be further deprived?” –Robert Greenleaf

“If I knew for a certainty that a man was coming to my house with the conscious design of doing me good, I should run for my life.” –Henry David Thoreau

Place a collection of items on a table in the room. Items might include: pens, coins, pieces of colored paper, a scarf, a bottle of water, fresh flowers, food (a plate of bagels, a bag of cookies, an apple), a book, etc. Virtually any collection of items will suffice, but you may be able to accomplish certain objectives through the materials you choose to include (e.g., if you want your students thinking about cultural associations with food, then include a food item that has cultural connotations; if you want your students thinking about issues related to reading, then include a book or other written document). Be careful to have some variety in the items (e.g., more than just 2 or 3 items) but also to avoid having too many items (e.g., more than 10).

Divide the class into two or more groups, depending on class size, and give them the following instructions: “In light of the two perspectives on service represented by these quotes, in your groups develop a plan to be of service using the materials provided. Present your plans to the other group(s). Be ready to move on to another activity in 15 minutes.” Do not warn the students when they are running out of time or answer questions about how they should approach their task. After 15 minutes, call the activity to an end. If the students have not completed the activity (including presenting to one another), at your discretion (depending on your objectives and constraints) give them additional time.

Reflection on the Activity
Provide a worksheet with reflection prompts (such as those that follow) and ask the students to reflect collaboratively in their groups, with each student taking notes on his/her own worksheet, including any private thoughts he/she has but does not share with the group. Be sure to include prompts that focus their attention on the learning objectives you have for this activity.
2. Examine the activity:
   a. In what ways did I / we respond to the perspectives on service? To the task of producing a “service plan”? Why did I / we respond as I / we did (e.g., what previous experiences or expectations influenced me / us)?
   b. What skills or abilities did I / other members of my group use in accomplishing this task? What skills or abilities did I / they have but not use, and why? What skills or abilities did I / we not have that would have been useful, and how can I / we develop them?
   c. What assumptions did we make (e.g., about the instructor’s role, about the particular materials provided) and how did they influence how we undertook the task?
   d. What roles were played by the various members of our group? Were there roles that should have been played that no one assumed? How did we determine who would play what role?
   e. To what extent were we successful in accomplishing the task we were given? Did we complete it on time? Did we present our plan effectively? What else might “success” mean, as we judge our efforts? How might we have approached the task differently, in order to be more successful?
   f. What alternative “service plans” might we have produced? Why did we produce the one we did? Is this the “best” plan we could have produced? What would have had to change in order for us to have produced a better plan?
   g. What specific elements of our “service plan” emerged from our engagement with the perspectives on service? What did we agree with and try to adopt? What did we disagree with and try to avoid?
   h. In this activity and more generally, is it difficult to translate the perspective on service offered by Greenleaf into concrete action? Why or why not? Is it of value to try to do so? Why or why not?
   i. What questions about the nature of service does our engagement with these perspectives lead us to identify? In what ways might these be important questions as our service-learning project unfolds throughout the semester?
3. Articulate one or more specific learnings from this discussion.

After 30 minutes, ask each group to share some of the most important learnings they achieved through reflection on this activity and then as a class set goals for future action.

PHC Ventures, 2010

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## Worksheet: Practicing DEAL Examine Prompts

### Goal:
Participants will better understand and appreciate the relationships between concepts presented in the workshop.

### Goal:
Participants will better understand power / X / Y / Z dynamics in collaborative learning environments.

### Describe this workshop
(in detail, objectively) – need prompts

### Describe this workshop
(in detail, objectively) – need prompts

### Examine the workshop

**Prompt #1:** Identify concepts in the workshop thus far (write on the board)

**Prompt #2:** What does each of these concepts mean, in your own words?

**Prompt #3:** Provide an example of each of the concepts as it does or could emerge in your teaching

**Prompt #4:** Draw a concept map to represent the relationships between these 5 concepts, with labels, arrows, etc. on the lines connecting the concepts to one another

**Prompt #5:** What new dimensions/nuances do you now see in any of the concepts? What questions does this lead you to (about any of the concepts)?

**Prompt #6:** What is the most significant change in your understanding of the concepts?

### Articulate Learning – need prompts

### Articulate Learning – need prompts
Worksheet: From Goals/Objectives to Examine Prompts (Your Class)

**Personal Growth**

Learning Goal/Objective:

Examine Prompts:

**Civic Learning**

Learning Goal/Objective:

Examine Prompts:

**Academic Enhancement**

Learning Goal/Objective:

Examine Prompts:
Worksheet: Designing Critical Reflection to Capitalize on Serendipity

A. Identify potential learning outcomes achieved through reflection on ...

- Students asking for extension on a deadline --
- Students not coming to class prepared --
- Students working well / not working well in groups --
- SL project frustrating the students --
- ________________________________ --

B. Organize these learning goals per the categories of learning that define service-learning:

- Academic enhancement --

- Civic learning --

- Personal growth --

- Your additional category (______________________) --

C. Select 1 of these learning goals. Express it in terms of assessable learning objectives. Design a DEAL-based reflection mechanism to generate, deepen, and document this learning.
Integrating Reflection and Assessment: Critical Thinking and Higher Order Reasoning

Review the following statements and consider what feedback you’d like to give the authors in order to improve the quality of their reasoning and of their interactions with others.

A: "Everybody knows that smoking is bad, so parents shouldn’t smoke when they have children; those parents who do smoke obviously just don’t care about their kids."

B: "I was not used to working with so many kids. This made me nervous and I do not like being nervous. This is important to know because I know that in the future I do not want to have a job that requires me to work with children. After I worked with them for a few weeks and got to know them the nervousness wore off and I became comfortable. This was important because it allowed me to be the best role model I could be."

C: "Being effective at improving the lives of a group of disadvantaged people (in this case the academic performance of underprivileged children) includes not only being good at the specific task or activity we are bringing to the community (explaining academic concepts to them), but also making them feel special and loved. This helps to make them more receptive to our efforts. It became clear that the more we got to know the kids and showed them that we actually cared about them, the more willing they were to pay attention to us and their homework. For example, when I first started working with William, he wouldn’t even look at me or acknowledge my presence. But every week I brought him little gifts, like candy and stickers, and slowly he began to warm up to me so that now he runs up when I come in and is ready to get to work… This matters because underprivileged children are not getting the attention that they need at home...."

D: We talked about how we had not had much foresight regarding the computers we had obtained as donations: when we made our project plan at the beginning of the semester, we did not even consider the possibility that the donated equipment might not be in good working order and so had planned only a little time for computer set-up. At this point, we were discouraged that we were having to spend a lot of time trying to fix technological problems at the assisted living facilities when, if we had anticipated the need, we could have arranged for someone with more technical expertise than we have to get the computers in working order before we took them to the sites; had we done that (and one of my group members even knows someone who would have been happy to help us out, so it wouldn’t have been difficult to find such a person), we would have had working computers much more quickly and could have moved on by now to working on sustainability for the computer literacy project. We felt that, at this point, we would not have enough time to accomplish all of the objectives we had at first set forth for the project; in particular, we realized that we may not be able to firmly establish a permanent "home" program to take on the responsibility of the Computer Literacy Project. We felt that we had no choice but to simply give up this objective—that is, we felt that our lack of foresight had indeed taken away our "lead"—since the pressure we were experiencing from time seemed to be forcing our hand and leaving us no options.
# DEAL Model Critical Thinking Standards Table

<table>
<thead>
<tr>
<th>Critical Thinking Standard</th>
<th>Description</th>
<th>Associated questions to ask to check your thinking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integration</td>
<td>Service experience clearly related to the learning</td>
<td>• Have I clearly shown the connection between my experience and my learning?</td>
</tr>
</tbody>
</table>
| Clarity                    | Expands on ideas, express ideas in another way, provides examples or illustrations where appropriate. | • Did I give an example?  
• Is it clear what I mean by this?  
• Could I elaborate further?  |
| Accuracy                   | All statements are factually correct and/or supported with evidence.         | • How do I know this?  
• Is this true?  
• How could I check on this or verify it? |
| Precision                  | Statements contain specific information                                      | • Can I be more specific?  
• Have I provided sufficient detail? |
| Relevance                  | All statements are relevant to the question at hand; all statements connect to the central point. | • How does this relate to the issue being discussed?  
• How does this help us/me deal with the issue being discussed? |
| Depth                      | Explains the reasons behind conclusions and anticipates and answers the questions that the reasoning raises and/or acknowledges the complexity of the issue. | • Why is this so?  
• What are some of the complexities here?  
• What would it take for this to happen?  
• Would this be easy to do? |
| Breadth                    | Considers alternative points of view or how someone else might have interpreted the situation. | • Would this look the same from the perspective of….?  
• Is there another way to interpret what this means? |
| Logic                      | The line of reasoning makes sense and follows from the facts and/or what has been said.  | • Does what I said at the beginning fit with what I concluded at the end?  
• Do my conclusions match the evidence that I have presented? |
| Significance                | The conclusions or goals represent a (the) major issue raised by the reflection on experience. | • Is this the most important issue to focus on?  
• Is this most significant problem to consider? |
| Fairness                   | Other points of view are represented with integrity (without bias or distortion) | • Have I represented this viewpoint in such a way that the person who holds it would agree with my characterization? |

### DEAL Model Critical Thinking Rubric [August 2007]

![Rubric Image]

**CT Set A**

<table>
<thead>
<tr>
<th></th>
<th>completely lacking (1)</th>
<th>under-developed (2)</th>
<th>good (3)</th>
<th>excellent (4)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Integration</strong></td>
<td>Provides no clear connection between the experience and the learning</td>
<td>Provides minimal and/or unclear connection between the experience and the learning</td>
<td>Provides adequate and reasonably clear connection between the experience and the learning</td>
<td>Provides thorough and very clear connection(s) between the experience and the learning</td>
</tr>
<tr>
<td><strong>Relevance</strong></td>
<td>Misclassifies the learning and/or inappropriately shifts from one category of learning goal to another; fails to keep the discussion specific to the learning</td>
<td>Discusses learning that is relevant to the category of learning goal, but much of the discussion is not related to the learning</td>
<td>Discusses learning that is relevant to the category of learning goal and keeps the discussion reasonably well focused on the learning</td>
<td>Discusses learning that is relevant to the category of learning goal and keeps the discussion well-focused on the learning</td>
</tr>
<tr>
<td><strong>Accuracy</strong></td>
<td>Consistently makes inaccurate statements and/or fails to provide supporting evidence for claims</td>
<td>Makes several inaccurate statements and/or supports few statements with evidence</td>
<td>Usually but not always makes statements that are accurate and well-supported with evidence</td>
<td>Consistently makes statements that are accurate and well-supported with evidence</td>
</tr>
<tr>
<td><strong>Clarity</strong></td>
<td>Consistently fails to provide examples, to illustrate points, to define terms, and/or to express ideas in other ways</td>
<td>Only occasionally provides examples, illustrates points, defines terms, and/or expresses ideas in other ways</td>
<td>Usually but not always provides examples, illustrates points, defines terms, and/or expresses ideas in other ways</td>
<td>Consistently provides examples, illustrates points, defines terms, and/or expresses ideas in other ways</td>
</tr>
<tr>
<td><strong>Precision</strong></td>
<td>Consistently fails to provide specific information, descriptions, or data</td>
<td>Only occasionally provides specific information, descriptions, or data</td>
<td>Usually but not always provides specific information, descriptions, or data</td>
<td>Consistently provides specific information, descriptions, or data</td>
</tr>
<tr>
<td><strong>Writing</strong></td>
<td>Consistently makes typographical, spelling, and/or grammatical errors</td>
<td>Makes several typographical, spelling, and/or grammatical errors</td>
<td>Makes few typographical, spelling, and/or grammatical errors</td>
<td>Makes very few or no typographical, spelling, and/or grammatical errors</td>
</tr>
</tbody>
</table>

**CT Set B**

|                        | fails to address salient questions that arise from statements being made; consistently over-simplifies when making connections; fails to consider any of the complexities of the issue | Addresses few of the salient questions that arise from statements being made; often over-simplifies when making connections; considers little of the complexity of the issue | Addresses some but not all of the salient questions that arise from statements being made; rarely over-simplifies when making connections; considers some but not all of the full complexity of the issue | Thoroughly addresses salient questions that arise from statements being made; avoids over-simplifying when making connections; considers the full complexity of the issue |
| **Depth**              | Ignores or superficially considers alternative points of view and/or interpretations   | Gives minimal consideration to alternative points of view and/or interpretations and makes very limited use of them in shaping the learning being articulated | Gives some consideration to alternative points of view and/or interpretations and makes some use of them in shaping the learning being articulated | Gives meaningful consideration to alternative points of view and/or interpretations and makes very good use of them in shaping the learning being articulated |
| **Breadth**            | Draws conclusions and/or sets goals that don’t follow at all from the line of reasoning presented | Draws conclusions and/or sets goals that only occasionally follow reasonably well from the line of reasoning presented | Draws conclusions and/or sets goals that usually follow well from the line of reasoning presented | Draws conclusions and/or sets goals that consistently follow very well from the line of reasoning presented |
| **Significance**       | Draws conclusions and/or sets goals that don’t address the most significant issue(s) raised by the experience | Draws conclusions and/or sets goals that only minimally address the significant issue(s) raised by the experience | Draws conclusions and/or sets goals that usually address fairly significant issue(s) raised by the experience | Draws important conclusions and/or sets meaningful goals that substantially address the most significant issue(s) raised by the experience |
| **Fairness**           | Consistently represents others’ perspectives in a biased or distorted way               | Occasionally represents others’ perspectives in a biased or distorted way            | Often but not always represents others’ perspectives with integrity     | Consistently represents others’ perspectives with integrity (without bias or distortion) |

Consider the differences in the level of reasoning demonstrated between A and B below:

A: *I learned that* foresight is an important part of leadership ... when reflecting on my group’s failure to anticipate the likelihood that the computers we were to install might not be in good working order.

B: One main attribute we have discussed that a servant-leader should have is foresight, or the ability to anticipate what will happen based on patterns observed from the past through a combination of rational thought and intuition. In “The Servant as Leader,” Robert Greenleaf says that foresight is “the ‘lead’ that the leader has” and that without it “he is not leading” because events “force his hand.” However, *I have learned that* although lack of foresight can indeed limit the choices of a leader, his/her “lead” may not be lost entirely as long as there are options for action; lack of foresight need not entirely “force [one’s] hand,” but to avoid the situation in which it does, it is necessary to think creatively about one’s remaining options and not assume that one no longer has any options.

A. *I learned that* my dependency and reliance on our site coordinator’s presence caused me to be less effective when she was not at the assisted living facility.

B. *I learned that* for the past 20 years I have been developing a pattern of inappropriate dependency in that I easily default to depending on other people, relying on them to help me accomplish my objectives even if I do not really know them well enough to trust them. However when I get backed into a corner because of this dependency, I have the capability to handle it because of my resourcefulness, or my ability to find alternate ways to accomplish my objectives when situations are not conducive to meeting those objectives.
<table>
<thead>
<tr>
<th>Learning Objective Level</th>
<th>Academic Enhancement Learning Objectives</th>
<th>Associated Guiding Prompts</th>
</tr>
</thead>
<tbody>
<tr>
<td>LO 1: Identify</td>
<td>Identify a specific academic concept.</td>
<td>Identify a specific academic concept related to your service-learning experience that you now understand better as a result of reflection on that experience.</td>
</tr>
<tr>
<td>LO 2: Explain</td>
<td>Explain the academic concept.</td>
<td>Explain the academic concept (so that someone not in your class would understand it).</td>
</tr>
<tr>
<td>LO 3: Apply</td>
<td>Apply the academic concept in the context of the experience.</td>
<td>How does the academic concept apply to your service-learning experience? (E.g., When did you see it, or note its absence? How did, or could, you or someone else use it?)</td>
</tr>
</tbody>
</table>
| LO 4: Analyze            | Analyze your initial understanding* of the academic concept in light of the experience. | 4.1 Compare and contrast your initial understanding of the academic concept and your experience of it: In what specific ways are your understanding and the experience the same and in what specific ways are they different? —AND—
|                          |                                         | 4.2 What are the possible reasons for the difference(s) (E.g., bias, assumptions, lack of information on your part or on the part of the author / instructor / community) |
| LO 5: Synthesize         | Develop an enhanced understanding of the academic concept in light of the experience. | How do you now understand the concept differently than you did before? In other words, what do you now see in the concept that you had not seen before (complexities, subtleties, new dimensions, etc.)? |
| LO 6: Evaluate           | Evaluate the completeness of your understanding of the concept and of its use in the community. | 6.1 How, specifically, might you now explain the concept differently, to express your enhanced understanding of it? —AND—
|                          |                                         | 6.2 What additional questions need to be answered and/or evidence gathered in order to test the appropriateness of this preliminary revision in your understanding of the concept? —AND—
|                          |                                         | 6.3 Based on this enhanced understanding of the concept, how, specifically, might you and/or your service organization need to act differently in the future (or, how might you have acted differently in the past) AND what are the associated benefits and challenges? |

* For example, based on your encounter with it to date in readings, lectures, class discussions, previous courses, etc. Remember that your understanding of an idea is always incomplete – perhaps because it is your first encounter with it, or because it was not presented in its entirety, or because your interpretation or that of the author / instructor is limited. The very nature of ideas is that our understanding of them can always deepen, expand, or change as we continue to read, listen, experience, study, and reflect.
<table>
<thead>
<tr>
<th>Learning Objective Level</th>
<th>Personal Growth Learning Objectives</th>
<th>Associated Guiding Prompts</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>LO 1: Identify</strong></td>
<td>Identify a personal characteristic* of yours.</td>
<td>Identify a personal characteristic that you now understand better as a result of reflection on your service-learning experiences.</td>
</tr>
<tr>
<td><strong>LO 2: Explain</strong></td>
<td>Explain the personal characteristic.</td>
<td>Explain the personal characteristic (so that someone who does not know you would understand it)</td>
</tr>
<tr>
<td></td>
<td>Apply your understanding of this personal characteristic in the context of the experience and (as applicable) to other areas of your life.</td>
<td>How does / might this personal characteristic positively and/or negatively affect your interactions with others, your decisions, and/or your actions in your service-learning activities and (as applicable) in other areas of your life?</td>
</tr>
<tr>
<td><strong>LO 3: Apply</strong></td>
<td>Analyze the sources of this personal characteristic</td>
<td>4.1 What are the possible sources of / reasons for this personal characteristic?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>-- AND --</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.2 How does your understanding of the sources of this personal characteristic help you to better understand what will be involved in using, improving, or changing it in the future?</td>
</tr>
<tr>
<td></td>
<td>Develop the steps necessary to use, improve upon, or otherwise change this personal characteristic in the short term, in your service-learning activities and (as applicable) in other areas of your life.</td>
<td>5.1 In what specific way(s) can you use, improve upon, or otherwise change this characteristic, in your service-learning activities and (as applicable) in other areas of your life over the short term?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>--AND--</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5.2 What are the potential personal benefits and risks / challenges you might face as you do so?</td>
</tr>
<tr>
<td><strong>LO 4: Analyze</strong></td>
<td>Evaluate your strategies for personal growth over the long term.</td>
<td>6.1 What is a more general and significant way to use this new understanding of yourself in your life over the long term, so that you continue, improve upon, and increasingly become more responsible for your own process of personal growth?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>--AND--</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.2 What challenges or setbacks might you face in this ongoing personal growth process and how might you deal with them?</td>
</tr>
<tr>
<td></td>
<td></td>
<td>--AND--</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6.3 How will you assess your progress in this process so that you may make changes to your personal growth strategies as needed?</td>
</tr>
</tbody>
</table>

* For example, a tendency to make certain types of assumptions, to have certain types of reactions, to interpret others in certain ways; a particular strength or shortcoming (skill, ability, perspective, attitude, knowledge, etc.); a pattern of thought or behavior; a value, belief, or conviction; your sense of identity (in terms of gender, ethnicity, age, socioeconomic status, etc.).
I learned that my dependency and reliance on our site coordinator's presence caused me to be less effective when she was not at the assisted living facility.

I learned this when my group member and I went to the assisted living facility on Friday and were not able to accomplish all of our objectives because the site coordinator was not there like she had told us last week she would be. Last week I had also agreed with the site coordinator that our primary objective for the next week would be to interact with the residents, and although I was able to meet this objective without her I was not able to achieve my objectives to the extent that I had hoped. For example, my group member and I basically wasted half an hour waiting for her, time that could have been spent more effectively by actually meeting interested residents if I wasn't depending on her to be at the site so that she could introduce us. Also we were depending on her to tell us specifically which residents would be interested in learning about computers so we could focus on meeting them, however because of her absence we talked to all the residents in groups during happy hour. This helped us to meet more residents than if we had only talked to the ones interested in computers; however, we left without knowing how many residents or which ones would really participate in the program, one of our initial objectives.

This learning matters because if a similar situation happens where the coordinator is not able to be at the site, I need to be less dependent on her in order to continue accomplishing my objectives. I think that my dependency on her was increased since this was the first time I had interacted with the residents, except briefly during orientation, so hopefully next time I will be better able to accomplish my objectives whether or not she is there. It is also important that I recognize this relationship between dependency and effectiveness because when people depend on me, I don't want a lack of action on my part to hinder them. For example, since my group member does not have a car, she depends on me to take her to our site every other week and if I were to not show up without telling her, she would not be able to arrange another ride and would be much less effective.

In light of this learning I will have a backup plan in case the site coordinator is not available next time I visit the assisted living facility. I will try not to be as dependent upon her to get my objectives accomplished by realizing that I need to be a leader and have a plan for taking the initiative to accomplish my goals. Also, in light of the fact that others are often dependent upon me, I will try to make sure that I do not cause them to be less effective by keeping my promises and fulfilling my obligations.
I learned that… developing a meaningful relationship with a community partner, as described by Berte and O’Neil in their article, “Old and New Models of Academic Service,” is not nearly as easy as one would guess from the absence of a discussion of the challenges associated with making such relationships work. The authors say that “service-learning brings together the faculty sponsor, the supervisor, and the [student] – three individuals who may not have had contact previously – into a relationship that can produce opportunities for growth and development for all concerned.” What they describe is a relationship of full reciprocity, but I now realize much better than when I read the article that reciprocity is not an automatic result of the SL model but requires time and effort on the part of all partners as well as shared commitment to striving for this type of relationship. It is unclear whether our partner is going to be able to experience this type of relationship. Their presentation of the concept seems to be missing consideration of how the day-to-day challenges faced by many community organizations hinder the development of fully reciprocal partnerships and thus limit the growth potential of the relationship for the community partners and in turn for the students. This apparent disconnect between the SL model and the realities of community organizations may have implications for how faculty and community partners establish expectations for SL partnerships and for how students should expect to work with their community partners, but of course we would need to consider many more examples of such SL partnerships before we could judge for sure whether the ideal of reciprocity is in fact as rare as our experience suggests.

I learned this through…my experience with our site coordinator and through reflection on her role in our project. Both of the student groups in our class have noticed the hectic nature that seems to envelop the after-school program and the coordinator’s need to deal with it. We often find her being bombarded with questions from students, phone calls, trips to the office, parent meetings, delivering snacks, setting up supplies for the afternoon’s activities, etc. She is often so busy that we do not even exchange a few sentences with her during our entire visit to the school. All of these examples are situational; they change each week. However, her burden to maintain organization in that rather chaotic setting is time-consuming and does not allow her the time to invest as much in our project as full reciprocity probably requires. Berte and O’Neil prompted me to analyze our relationship with her and to realize that we were not connecting with her in the ways required for reciprocity. Following the above mentioned quote, Berte and O’Neil go on to say that “At the completion of the service-learning experience, supervisors frequently carry back a better understanding of the educational community to their professional setting…” This quote suggests that coordinators leave this SL experience with a better understanding of SL and the learning community as a whole. Presumably, this learning would come from our learning community being actively engaged together. I felt that she should have a mentor-like role, one with insight into our reflections and suggestions for the future. However, she does not seem to have the time take on that role. I now realize that partners must actively seek and nurture a relationship with each other.

This learning matters because…it reveals a weakness in our SL project and a fact that needs to be considered when developing SL opportunities. I believe Berte and O’Neil were correct in their decision to place the student, professor, and community partner all on one level, stating that there are opportunities for growth and development for all of the participants. It is much like the Venn-diagram from class that connects these three partners together in an equal relationship. However, this type of relationship is a very complex matter. Our site coordinator is devoted to her students and making sure they have as many opportunities as she can offer them. I believe this is why it was important to implement reflection with her, to offer them a new opportunity to develop life-long skills. But adding this new component of SL rather than retaining their old model of service asks more of her time than in the past. Unfortunately, the organization of the program is such that she cannot separate herself from the day-to-day tasks of running the program in order to engage fully with us. I believe Berte and O’Neil could strengthen their argument with examples of how to foster that relationship between the faculty advisor, community partner, and student and with discussion of the obstacles that often must be overcome in the process. Giving the reader concrete examples of both obstacles and mechanisms for relationship-building would make the goal of such a relationship more attainable. It seems that Berte
and O’Neil assume that building a relationship that produces opportunities for growth and development for all involved is easy to achieve through the SL model. However, it has been our experience that such a relationship does not evolve only because this new model of learning is being used but rather takes time and effort on the part of everyone involved. And in our case, this relationship may not ever be as deep and meaningful as we all had expected because of the daily demands that divert the coordinator’s attention. It would be interesting to determine whether certain types of organizations (such as schools) operate under such extreme constraints (e.g., limited teacher’s time) that fully reciprocal partnerships as the authors describe are virtually unattainable and to explore any examples of such organizations that have in fact overcome these constraints.

**In light of this learning I will...** be more deliberate in trying to develop my relationship with the site coordinator. I have been quite passive in approaching her for insight and suggestions thus far. I have been more than willing to listen to her thoughts when she offered them, but I have not actively sought her wisdom. Therefore, I am going to make an effort to contact her on a more regular basis and ask her for input on our project. I must understand that she leads a life of multiple responsibilities and many of those responsibilities seem to culminate in the time period that we are in her presence. This is no one’s fault, but it is a fact that we must work through. I believe that if we can find a way to connect with her better, by taking more initiative to reach out to her, we can demonstrate better than we have been the type of relationship we would like to have, such that all of us experience more growth. Beyond the immediate SL project, I believe the ability of a community partner to engage actively in a project should be considered when designing SL partnerships. I believe that the program we are working with at the school is a great one, but is this the right time and arena to introduce SL into it? Would our relationship be more reciprocal if we worked with a teacher within the program who did not have so many responsibilities and thus could be more interactive in our projects, or if we ourselves had more flexibility in the times we could interact with the teacher? In general, I see important issues involved in maximizing the relationships between the SL partners. First, I think partners should be thoroughly educated on the principles and ideals of SL. It is important that community partners know they are vital to the process, that they have the chance to be involved in a reciprocal relationship, and that time and effort is required on all ends of that partnership. This awareness may come through readings or discussions, much like our awareness of SL has come through this class. It is important that students also be educated on the initiative etc that is required of them if they are to cultivate reciprocity. Shifting into the potentially unfamiliar roles that such a relationship requires may involve taking interpersonal risks and working hard to communicate mutual expectations.
Shifts in perspective and practice re: written critical reflection

Writing as an assignment to express learning that has already occurred →

Writing as a vehicle for ongoing learning

Writing and speaking are not merely the end products of a thought process developed to fulfill an assignment or to demonstrate thinking that has already been done. Rather, they can also be vehicles for ongoing learning and deeper thinking about who we are and the work we are doing. This shift in perspective includes the realization that understanding includes being able to articulate learning, and that quality of thought rather than quantity of writing is key in effectively learning through writing. By approaching assignments in this light, we can see them as meaningful vehicles for important learning rather than as “busywork” to satisfy a requirement.

Characteristics of writing in traditional vs. engaged pedagogies

Traditional: Write one version and receive a grade
Instructor comments may only highlight shortcomings
Length, format, grammar, spelling are often primary concerns
The writing is solitary in nature
The writing is product-oriented

Engaged: Revise through multiple drafts before being graded
Instructor/peer feedback challenges / deepens thinking
Quality of ideas is generally the key concern
The writing (and thinking) is collaborative in nature
The writing is process- as well as product-oriented

Categories of differences

Understanding of and approaches to assessment
Role of the instructor
Meaning of feedback

Shifts in perspective

Write after learning → Write for learning
Feedback as justification of grade → Feedback as valuable stimulus to improved thinking
Objective is to generate static product → Objective is to undertake thinking process

Shifts in practice

Student: Ignore instructor comments → Carefully study and use instructor comments
Student: Set aside one block of time to produce a written product → Set aside several blocks of time for writing process
Instructor: Provide limited feedback → Provide substantial formative feedback

Facilitating these shifts

Share draft writing with students and solicit and use their feedback
Reward improvement in writing / thinking over the course of multiple drafts / of the semester
10 Summary Tips for Designing Critical Reflection

1. “Everything is reflection-worthy”: Few if any details are too small or insignificant to have meaning, and all experiences—whether designed for learning or serendipitous—as well as readings, observations, events, etc. present opportunities for a wide range of learning.

2. Critical reflection is the part of experiential learning that generates, deepens, and documents learning. When used in this capacity, it needs to be understood not as “touchy-feely,” non-grade-able, private, stream-of-consciousness but rather as a reasoning process that is analytical, integrative, assessable, subject to public critique, and structured/guided.

3. Critical reflection can generate learning outcomes that include knowledge, skills, attitudes/values, and behaviors. If it is to generate assessable learning, critical reflection should be guided in accordance with the desired learning outcomes.

4. Reflection can be guided by a facilitator orally, by a set of written prompts, or by other methods. This guidance should enable the learner to generate learning and then assist them in articulating it coherently and cohesively, in part so as to inform future learning and action.

5. Reflection activities can be written or oral or both, and they can be individual or collaborative or both; perhaps the strongest reflection combines all four possibilities. Reflection can involve physical movement, drawing, audio-visual elements … the possibilities are limited only by the facilitator’s creativity.

6. Critical reflection can be designed iteratively and therefore build on itself cumulatively. Relatedly, it is helpful to use a pre-mid-post structure that focuses the learner’s attention on changes in his/her assumptions and reasoning processes and on progress toward fulfilling objectives.

7. An overall reflection strategy may integrate multiple reflection mechanisms. A reflection strategy answers the questions
   a. “When do we reflect?” (at what points during the experience or course or project)
   b. “Why do we reflect?” (toward what learning objectives)
   c. “Where do we reflect?” (in what settings, geographic or virtual)
   d. “Who reflects?” (learners alone or together, with facilitators, with other participants)
A reflection mechanism answers the question: “How do we reflect?” (with what guidance, in what structure)

8. It is useful to begin designing a reflection strategy or mechanism by considering such questions as:
   a. Who are the learners (what experience, skills, etc. do they bring and not bring)?
   b. Who is the facilitator, if there is one (what experience, skills, etc. does he/she bring and not bring)?
   c. What are the objectives?
   d. What are the constraints?

9. Reflection requires a “safe yet critical” space: the risks associated with meaning making need to be acknowledged and minimized while adhering to high standards of reasoning. While reflection is not about generating one right answer, not all reasoning is equally valid. Reflection can be used to support learners in making reasoned judgments that are well-supported with evidence and that result from consideration of multiple perspective—not merely expressing opinions.

10. Learning through critical reflection is often an unfamiliar (counter-normative) process, which requires intentional capacity-building: many learners need to learn how to learn through critical reflection. Facilitators modeling reflection can be an important part of such capacity-building and can enhance their own learning as well.
Which tips are most significant to you?

Which tips would you revise and how?

What additional tips do you recommend?

Specific enhancement(s) you might make to your approach(es) to reflection, in light of the “Tips”:
Investigating Student Learning through Critical Reflection: SoTL Example
[Ash, Clayton, & Atkinson (2005)]

This example suggests various scales at which a SoTL project might be undertaken: within an individual instructor’s course, across multiple courses at the same institution, and across multiple institutions.

Service-learning practitioner-scholars ….

➢ articulated an issue we wanted to understand better in our implementation of service-learning (arising from central challenges we were facing): How can we help students deepen their learning?

➢ developed a hypothesis that using Paul’s standards of critical thinking and Bloom’s Taxonomy would support deeper learning

➢ developed user-friendly tables on the standards of critical thinking (CT) and on hierarchically-expressed learning objectives (LOs) for our students and an associated CT rubric

➢ developed reflection prompts that were well-matched to the learning objectives

➢ assigned reflection activities to our students at multiple points throughout the semester

➢ used the CT standards and LOs in giving feedback on draft reflection products throughout the semester

➢ collected and de-identified draft and final reflection products from our students from early in the semester and late in the semester

➢ gathered a team of students and faculty to collaboratively score the draft and final reflection products against the CT and LO rubrics

➢ examined the scores to answer specific research questions
  o Does use of the CT standards and LOs improve the quality of students’ thinking across drafts, e.g., from a first draft to a final draft?
  o Does use of the CT standards and LOs improve the quality of students’ thinking across the semester, e.g., from an early first draft to a late first draft?
  o Are there any differences in student improvement using these tools across the categories of learning objectives (academic, civic, personal growth)

➢ refined the prompts, tools, and rubrics in accordance with the research results

➢ integrated this refined work into faculty development processes and into our own teaching

➢ presented on this research at a conference and published an article on it in a peer-reviewed journal

➢ shared the model we were refining with other campuses

➢ launched an inter-institutional SoTL project to expand the applications of the core reflection model

➢ developed a student Tutorial and Instructor Version on the reflection model and associated CT and LO tools

➢ are presenting on and publishing the work while also launching spin-off SoTL projects on multiple campuses [including cross-course assessment of student learning – see Jameson, Clayton, & Bringle (2008)].
The Scholarship of Teaching and Learning: An Overview

“… all faculty have an obligation to teach well, to engage students, and to foster important forms of student learning—not that this is easily done. Such teaching is a good fully sufficient unto itself. When it entails, as well, certain practices of classroom assessment and evidence gathering, when it is informed not only by the latest ideas in the field but by current ideas about teaching the field, when it invites peer collaboration and review, then that teaching might rightly be called scholarly, or reflective, or informed. But in addition to all of this, yet another good is needed, one called a scholarship of teaching, which … we have described as having the three additional central features of being public ("community property"), open to critique and evaluation, and in a form that others can build on… A fourth attribute of a scholarship of teaching, implied by the other three, is that it involves question-asking, inquiry, and investigation, particularly around issues of student learning…

A scholarship of teaching is not synonymous with excellent teaching. It requires “a kind of ‘going meta,’ in which faculty frame and systematically investigate questions related to student learning—the conditions under which it occurs, what it looks like, how to deepen it, and so forth—and do so with an eye not only to improving their own classroom but to advancing practice beyond it.”


**Good teaching:**
- to engage students
- to foster important forms of student learning

**Scholarly teaching:** good teaching +
- practices of classroom assessment and evidence gathering, informed not only by the latest ideas in the field but by current ideas about teaching the field
- peer collaboration and review

**Scholarship of teaching:** scholarly teaching +
- public ("community property")
- open to critique and evaluation
- in a form that others can build on
- involving question-asking, inquiry, and investigation (particularly around issues of student learning)
Getting Started in SoTL

Some important questions to ask yourself as you proceed from “good teaching” to “scholarly teaching” to “scholarship of teaching and learning” [modified source: Clayton & Moses 2008]:

Finding a focus:
What interventions/strategies generate learning in my course or other learning environment?

How effective are those interventions/strategies at present? How do I know (what evidence do I have to support my judgment)?

Am I satisfied with the current outcomes? Why or why not? What particular struggles am I facing in my efforts to enhance these outcomes?

Drawing on what is already known: What do principles of good practice (in my pedagogy, in my discipline) suggest as possible ways to enhance student learning outcomes?

Developing a hypothesis: If I modify an intervention/strategy in accordance with these principles, what difference do I expect it to make? Why?

Collecting and analyzing results:
How will I know if the revised approach has been successful in enhancing student learning outcomes?

What type(s) of evidence do I need to see, and how can I best gather it?

How can I best analyze the evidence I gather in order to help me better understand the effectiveness of the revised approach?
Dealing with challenges: What challenges will be associated with this revised approach and how will I handle them?

Collaborating with others: Who should I collaborate with in this process? Who are the leading scholars in my field who are engaged in SoTL? How can I build on the work of other scholars in this process?

Disseminating results: What are the best dissemination outlets for this work, and how might I connect with them? To what extent does my discipline support SoTL? Which conferences and/or journals include SoTL dissemination options?

Refining implementation: How can I best feed what I learn back into my teaching, for further modification of the same intervention/strategy or similar modification of another? What additional questions might arise as I act on what I learn?

Complying with regulations: What is the Institutional Review Board policy on my campus governing use of student products in scholarship, and what will I need to do in order to comply with it?

Taking into account cultural opportunities and constraints: To what extent does my departmental and/or institutional context support and reward the scholarship of teaching and learning / the scholarship of engagement? What are the implications for me?
~Closing Reflection~

**Describe** critical reflection

**Examine** critical reflection
What are the most significant similarities between your current approaches and critical reflection as we have discussed it today?

What are the most significant differences?

What specific elements of critical reflection do you want to incorporate more of? Why?

What challenges might you face in making changes to your current approaches to reflection? What trade-offs might be required?

What do you want to learn more about regarding critical reflection?

**Articulate learning**
What are your most important take-away messages from your reflection on reflection?

What specific actions will you take in light of your learning? When will you take them? With whom? What challenges will they present and how will you deal with those challenges?
Selected Related Publications


**ABSTRACT:** Designing effective reflection is one of the key ingredients in harnessing the capacity of domestic and international service learning to generate significant learning and service outcomes. Both the process and the products of reflection provide rich grounds for investigating the relationship between the nature of the ISL experience and the outcomes achieved and for examining the ISL experience in-depth so as to better understand its dynamics. Many practitioners find the reflection component of service-learning challenging to implement, however, and the difficulties may well be enhanced when service-learning is undertaken in an international context. This chapter will discuss the meaning and role of critical reflection in service-learning, explore issues of effective design, and consider the implications of an international context. With this foundation, the chapter provides recommendations for constructing research to study both outcomes and the role of reflection in reaching them.


**ABSTRACT:** Applied learning pedagogies—including service-learning, internships/practica, study abroad, and undergraduate research—have in common both the potential for significant student learning and the challenges of facilitating and assessing that learning, often in non-traditional ways that involve experiential strategies outside the classroom as well as individualized outcomes. Critical reflection oriented toward well-articulated learning outcomes is key to generating, deepening, and documenting student learning in applied learning. This article will consider the meaning of critical reflection and principles of good practice for designing it effectively and will present a research-grounded, flexible model for integrating critical reflection and assessment.

ABSTRACT: Intentionally linking the assessment of the student learning outcomes of service-learning with its reflective component allows each to inform and reinforce the other. This paper traces the evolution of a strategy that uses reflection products as data sources to assess and improve both individual student learning and program-wide approaches to reflection. Two tools were developed in response to an earlier, unsatisfactory, assessment of students’ work. Students and instructors then used these tools to guide the process of reflective writing in two courses. Associated rubrics evaluated the quality of thinking demonstrated in the written products. Results suggest that these tools can improve students’ higher order reasoning abilities and critical thinking skills relative to academic enhancement, civic engagement, and personal growth, and as a result, can improve the overall quality of their thinking and learning. However, this assessment has also surfaced the need for further improvement, particularly with respect to academic learning outcomes.

Clayton, P.H., & Ash, S.L. (2005). Reflection as a key component in faculty development. On the Horizon, 13(3). ABSTRACT: Reflection is key to learning from experience, including the experience of teaching. We suggest that critical reflection is as important in faculty development as it is in student learning and offer our experience with a service-learning program as a case study of the benefits and challenges of structuring faculty development around reflection. Reflection on our teaching both deepens our understanding of our roles as educators and allows us to model those abilities and perspectives we want our students to develop. Further, collaborating with our students in the reflective process promotes a strong sense of learning community, positioning students and faculty alike as engaged in collaborative inquiry.

Clayton, P.H., Ash, S.L., Bullard, L.G., Bullock, B.P., Moses, M.G., Moore, A.C., O'Steen, W.L., Stallings, S.P., & Usry, R.H. (2005). Adapting a core service-learning model for wide-ranging implementation: An institutional case study. Creative College Teaching, Vol 2, Spring, pp. 10-26. ABSTRACT: Service-learning is a highly adaptable pedagogy, well-suited to fulfill a variety of objectives with a range of student populations across the spectrum of disciplines. This article shares the experience of a large institution’s Service-Learning Program that has developed a core model for service-learning and that supports instructors across campus in customizing it for their own unique implementation. The core model consists of a baseline definition, a standard approach to curricular design, and a simple but well-structured reflection process. Discussion of this core model is followed by the presentation of seven examples of courses that have been reworked accordingly with a service-learning component, from the small-scale module to the semester-long project to the entirely project-based course. The experiences of students and faculty across this spectrum of approaches reveal some of the benefits and the challenges associated with adaptation of a core model in implementing service-learning across the disciplines.

Clayton, P.H. & Ash, S.L. (2004). Shifts in perspective: Capitalizing on the counter-normative nature of service-learning. Michigan Journal of Community Service-Learning, 11(1). pp. 59-70. ABSTRACT: Service-learning is a unique pedagogy, and its very differences from traditional teaching and learning strategies make it both appealing and challenging to implement. Students and faculty alike are the products of traditional learning environments and often find service-learning unfamiliar and, as a consequence, experience dissonance, discomfort, and uncertainty. Confronting the difficulties students and faculty at our institution have faced in adjusting to these differences has helped us to realize the importance of making “shifts in perspective” in how we understand and enact teaching and learning and service. This article shares our emerging understanding of these “shifts” and of how we can support students and faculty in undertaking them effectively. The central conclusion is that reflecting on the differences between service-learning and more traditional pedagogies and on ways to make the associated shifts in perspective and practice can help practitioners to implement service-learning successfully and to more fully tap its power to nurture the capacity for self-directed learning.

Select Additional References


