Training for Self-Directed Learning in SI Leaders

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- Private, research University
  - 6,000 undergraduate students
  - 6th highest international student population in the U.S.
- SI began in 1997
  - Primarily support STEM courses
  - Expanded with formalized small group program in 2007
Overview

• Leaders Engage in Self-Directed Learning
• Theory of Self-Directed Learning
• Enhancing Engagement in Self-Directed Learning
  • Three Research-based Recommendations
  • Best Practices at CMU
LEADERS ENGAGE IN SELF-DIRECTED LEARNING
To what extent is the role of SI Leader self-directed?

IN YOUR OPINION...
The SI Leader Experience

Independent preparation and practice

- 74%

Preparation Hours

- 135 hours

Session Hours

- 40 hours

Ongoing Training Hours

- 17 hours

Pre-employment Training Hours

- 45 hours
Such high autonomy suggests that SI Leaders need to regularly engage in Self-Directed Learning.

Do they?
### Spring 2016 Training Cohort Learning Strategies Assessment Results Compared to National Average

<table>
<thead>
<tr>
<th>Learning Strategy</th>
<th>Leaders</th>
<th>National Average</th>
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</thead>
<tbody>
<tr>
<td>Intrinsic Goal Orientation</td>
<td>6.05</td>
<td>5.47</td>
</tr>
<tr>
<td>Self Efficacy</td>
<td>5.59</td>
<td>5.03</td>
</tr>
<tr>
<td>Metacognition</td>
<td>5.36</td>
<td>4.54</td>
</tr>
<tr>
<td>Effort Regulation</td>
<td>6.04</td>
<td>5.25</td>
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</table>
Once or twice across the whole semester
Several times across the semester
Once per week (or more) across the semester, on average
SI Leaders are already highly likely to be practicing the requisite skills necessary for Self-Directed Learning.

How can we ensure that they apply these skills as well or as often as they should?
THE THEORY OF SELF-DIRECTED LEARNING
"Learning results from what the student does and thinks and only what the student does and thinks. The teacher can advance learning only by influencing what the student does to learn."

Herbert Simon
Cognitive Scientist,
Nobel Laureate

Cycle of Self-Directed Learning (SDL)

1. Assess the Task
2. Evaluate Strengths and Weaknesses
3. Plan
4. Apply Strategies and Monitor Performance
5. Reflect and Adjust if Needed

IN YOUR OPINION... 

What parts of the cycle are SI Leaders skilled at completing? What parts do they need to do more often or more intentionally?

ENHANCING ENGAGEMENT IN SELF-DIRECTED LEARNING
Enhancing Engagement in SDL

1. Assess the Task
2. Evaluate Strengths and Weaknesses
3. Plan
4. Apply Strategies and Monitor Performance
5. Reflect and Adjust if Needed

Enhancing Engagement in Self-Directed Learning

3 Research-based Recommendations

1. Scaffold metacognitive processes
2. Provide guided self-assessment with peer feedback
3. Support peak performance

Enhancing Engagement in Self-Directed Learning

1. Scaffold metacognitive processes
   • Model self-reflection
   • Give students questions they can ask themselves about each step
   • Provide activities that require leaders to reflect on their performance

Enhancing Engagement in Self-Directed Learning

Best Practice at CMU: Complete a First-Session Self-Reflection that models self-reflection, asks questions about each step of the process and requires leaders to reflect on their performance.
Enhancing Engagement in Self-Directed Learning

Training Timeline

Spring Semester
Pre-employment Training

August

Session Plan
Pre-session Consultation
First Session
First Session Self-Reflection

Fall Semester
Ongoing Training

September
Debrief
I. Preparation
• How did you arrange the room? Why did you arrange it in this manner? How did the arrangement fit the instructional techniques you had planned?
• What instructional techniques did you plan for the session? Why did you choose these techniques?
• What topics did you choose to cover in the session? Why did you choose these topics?
• What were the learning objectives for the session?
Enhancing Engagement in Self-Directed Learning

First Session Self-Reflection

II. Session Facilitation & Group Dynamic
- Did you make sure that students were at the same level of basic knowledge before proceeding with the material? If so, how?
- How did you encourage students to interact with each other? What percentage of the time were they talking to each other as opposed to talking to you?
- When and how were the students actively engaged?
- How did you check for understanding?
III. Session Wrap-Up

• Were there questions that no one in the session could answer? If so, how will you follow up?
• How did you provide closure to the session?
• What content from this session do you plan to review/check in the next session?
• Overall, do you feel that the session met the planned objective(s)?
IV. Reflection

• What did you think was the strongest aspect/accomplishment of the session?
• What did you think was the weakest aspect of the session?
• What is one thing that you learned from this session and want to apply in the future?
• Overall, I thought the session was:
What are other best practices for scaffolding metacognitive processes for Leaders?
Enhancing Engagement in Self-Directed Learning

2. Provide guided self-assessment with peer feedback

• Provide opportunities for leaders to reflect on their work and analyze the effectiveness of their own skills
• Create opportunities for peer strategizing and feedback

Enhancing Engagement in Self-Directed Learning

Best Practice at CMU: Participate in an *Outcome Area Assessment* that provides an opportunity for reflection and analysis of their own work through guided self-assessment and with peer feedback.
Enhancing Engagement in Self-Directed Learning

Training Timeline

**Fall Semester**

- **August**: Form Teams
- **September**: Team Selects a Technique
- **October**: Individually Implement, Assess the Technique
- **November**: Debrief their Approach

Outcome Area Assessment
Enhancing Engagement in Self-Directed Learning

**Outcome Area Assessment**

<table>
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<tr>
<th>Stimulating Active Learning</th>
<th>Helping Students Reach Higher Levels of Learning</th>
<th>Encouraging Student-to-Student Interactions</th>
<th>Planning Flexibility/Adapting to Students</th>
<th>Checking for Understanding</th>
<th>Involving Quiet Students</th>
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1. Assess their Team's selected technique
2. Assess other techniques that they have tried individually
3. Rate the effectiveness of these Outcomes in their sessions
4. Identify one Outcome that they would like to focus on improving
5. Reorganize into new groups based on the Outcome they selected
6. Strategize methods for addressing this Outcome with their peers
7. Implement methods in their sessions before next meeting
8. Reconvene and debrief their experiences at the next meeting
IN YOUR OPINION. . .

What are other best practices for offering guided self-assessment and peer feedback for Leaders?
Enhancing Engagement in Self-Directed Learning

Yerkes-Dodson Law

- Peak performance
- Healthy
  - Focused
  - Motivated
  - Healthy tension
- Optimum stress
- Inactive & bored
- Lame
- Fatigued
  - Exhaustion
  - Panic
  - Anxiety
  - Anger
- Stress overload
- Burn-out & breakdown
- Sick
- Disease

Enhancing Engagement in Self-Directed Learning

3. Support peak performance

- Help leaders sustain the continual process of self-regulation
- Provide moderate challenge to help leaders avoid disengagement or burnout by remaining in their optimal zone of productivity

Enhancing Engagement in Self-Directed Learning

Best Practice at CMU: Engage in the moderate challenge of presenting their skills to their peers during the Collaborative Learning Technique (CLT) Olympics, a capstone training event at the end of the spring term.
Enhancing Engagement in Self-Directed Learning

Training Timeline

Spring Semester

January
- Form Teams

February
- Complete a cumulative self-assessment of technique mastery

March
- Present their best practices during the CLT Olympic Trials
- Design their Challenge

April
- Test Run
- CLT Olympics
Enhancing Engagement in Self-Directed Learning

The Collaborative Learning Technique (CLT) Olympics are intended to serve as an opportunity for current leaders to share some of what they’ve learned over their career as leaders by introducing their signature CLT and best practices for implementation to the current cohort of training leaders.
Enhancing Engagement in Self-Directed Learning

Spring 2016 CLT Olympics

- Notecards
- Assigned Discussion Leader
- Moving Problem Solving
- Identify the Big Idea/ Verbal Volleyball/ Think-Pair-Share
- Jigsaw
- Create Your Own Adventure/ Peer Lessons

- Speed Dating
- Jeopardy
IN YOUR OPINION. . .

What are other best practices to help leaders avoid burnout or disengagement and replenish their mental and emotional energy?

Conclusions

• Leaders need to be able to engage in an ongoing process of Self-Directed Learning in order to sustain their highly autonomous role

• Leaders are likely to practice the component skills of Self-Directed Learning, but need encouragement to engage in it appropriately

• Self-Directed Learning can be enhanced through:
  • Scaffolded metacognitive processes
  • Guided self-assessment with peer feedback
  • Methods to maintain peak performance
Bibliography


