Building Leadership Skills: The Benefits of Being an SI Leader

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• Undergraduate and Research Institution
• Professional Programs
  - Architecture, Engineering
  - Nursing, Medicine, Pharmacy, Dentistry
  - Business, Law
  - Agriculture
• ~30,000 Students
SI Program at U of M

• First piloted in 2012
• 9 courses planned for 2016-2017 (Chemistry, Statistics, Economics, Engineering)
• ~16 S.I. leaders hired per term
• 34% usage (once) in winter 2016
• 20% usage (2+) in winter 2016
• ~13 students per session
Research Questions

1. What specific skills do students gain by being SI leaders?

2. How do SI leadership experiences benefit students in their professional work lives?

3. How do SI leadership experiences benefit students in their future studies?
Exercise: Generate a list of leadership skills that SI leaders might develop from participating in the program.
What is leadership?

• Communication
• Collaboration
• Organization
• Decision Making
• Providing Support
• Pedagogy
• Role modelling

(Skalicky and Caney, 2010)
Research Methodology

• On-line survey (anonymous)
• Lickert scale
  (strongly agree, moderately agree, neutral, moderately disagree, strongly disagree)
• 24/37 survey participants (65% responded)
• 2 focus groups (5 participants)
# Communication Skills

## Being an SI leader...

<table>
<thead>
<tr>
<th>Skill Description</th>
<th>Strongly Agree</th>
<th>Moderately Agree</th>
<th>Neutral</th>
<th>Moderately Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Made me more confident when communicating with others</td>
<td>50%</td>
<td>50%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Helped me develop my ability to listen attentively to others</td>
<td>41%</td>
<td>55%</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Helped me develop my presentation skills</td>
<td>79%</td>
<td>17%</td>
<td>4%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Helped me develop my overall communication skills</td>
<td>88%</td>
<td>13%</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
</tbody>
</table>
Communication Skills

- Clarity and Effectiveness
  - explaining ideas differently
  - speaking slowly
  - using visuals
  - writing clearly
  - awareness of body language
  - listening patiently
Clarity and Effectiveness

“I really tried to think of all of the different ways that I could really communicate the concept of the photoelectric effect to the students, so I really tried to use the whiteboard as much as possible because I kind of found that the students a lot of them were very good visual learners” (Former SI Leader).
Clarity and Effectiveness

“I would get some blank stares, and any time I would get blank stares, I would always say, is there a different way I can explain it, or I would try and think on the spot...about how to explain something differently. So yeah, I definitely think it really helps your communication skills” (Former SI Leader).
Listening Patiently

“I find it helped me in groups, and it kind of gave me more of the patience to know that my point isn’t the right point and other people have points, and I kind of gave them the time to speak and say their point of view” (Former SI Leader).

“Give more importance to the second person. Let them express what they think instead of pushing your thoughts first” (Former SI Leader).
Communication Skills

• Self-Confidence
  - speaking in front of groups
  - communicating with supervisors
  - meeting new people
Communicative Confidence

“If you can now go up in front of 200 people and make a little speech kind of on the spot, if you can do that, it raises your confidence, and then you’re like, ‘yeah, I can do this, I can probably speak in a group of just 20 people anytime in my life now.’ Yeah, it definitely helps with your confidence” (Former SI Leader).
Communicative Confidence

“How that helped was in situations where you are at a new job and you go into the lunch room…the ability to not feel intimidated or shy and be able to communicate with other people that’s a skill that over the years of putting yourself in front of a group of people gives you the ability to communicate…and not feel awkward or shy” (Former SI Leader).
Team Building

Being an SI leader has made me

- more respectful and appreciative of different viewpoints: 33% Strongly Agree, 46% Moderately Agree, 17% Neutral, 4% Moderately Disagree, 4% Strongly Disagree
- more confident when engaging a group of individuals on a task: 61% Strongly Agree, 26% Moderately Agree, 13% Neutral, 4% Moderately Disagree, 4% Strongly Disagree
- more confident when leading a group discussion: 63% Strongly Agree, 29% Moderately Agree, 8% Neutral, 4% Moderately Disagree, 4% Strongly Disagree
- more confident when working as part of a group: 54% Strongly Agree, 42% Moderately Agree, 4% Neutral, 4% Moderately Disagree, 4% Strongly Disagree
Team Building

• New Appreciation for Collaborative Learning
• Respect for Diversity
• Conflict Resolution Skills
Appreciation for Peer Learning

“That’s obviously a huge part of Engineering, working in teams and team-building and things like that, so I think that SI has definitely been helpful for that, and it’s been helpful in terms of encouraging me to ask questions of my peers because then your peers are also benefiting from you asking them questions, and you’re benefiting from them asking you questions” (Former SI Leader).
Respect for Diversity

“I can already appreciate the skills of understanding different perspectives, understanding different people, appreciating diversity is a very good thing. I can already see going forward, even just being an SI leader, having that little bit of experience of working with different people and seeing how everyone learns differently, people have different ways of communicating with others and have different ideas all the time” (Former SI Leader).
Respect for Diversity

“I always feel like it’s important to make the students in my session or my colleagues at work feel comfortable…and so being able to adjust your personality can help overall productivity in SI sessions or at work” (Former SI Leader)
Conflict Resolution

“I learned not to get into conflict. I learned there could be certain things that could trigger, which may arise a conflict. I try to avoid that” (Former SI Leader).

“The conflict required a flexible mindset and the ability to see both sides of the conflict, and SI constantly puts you in situations where two different students may see two different answers, and being able to get into their mind and see how they got there is important” (Former SI Leader).
## Planning Skills

**Being an SI leader has...**

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Agree</th>
<th>Moderately Agree</th>
<th>Neutral</th>
<th>Moderately Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>made me better at setting and articulating personal goals</td>
<td>29%</td>
<td>54%</td>
<td>17%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>made me better at assessing and critiquing the quality of my own work</td>
<td>42%</td>
<td>38%</td>
<td>21%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Planning and Adaptability

- Anticipating Time Requirements
- Improvising and Adapting
Anticipating Time

“It really makes you appreciate that, you know, you give yourself a time frame but nothing always stays within that time frame. You have to factor in other things may come up within the time that you’ve allotted” (Former SI Leader).
Improvising and Adapting

“It’s really about adaptability and thinking on your feet…and really changing and tailoring things as you go, and that’s again another important life skill and work force skill” (Former SI Leader).
Teaching Skills

• Assessing Understanding
• Questioning Techniques
• Scaffolding / Promoting Independence
Assessing Understanding

“You learn the different levels of comprehension that each student has. When you are being asked a certain question, before you answer that question, you need to get a gauge at where they’re at. In the work setting, a lot of times I am tasked with training new students on applications that we are using, once again, I guess I am asking more questions at the beginning” (Former SI Leader).
Questioning

“SI has made me a better TA… I try to avoid giving answers and I try to prompt people to come up with them on their own” (Former SI Leader).
Scaffolding and Independence

“I would rather help them learn and help them learn through it themselves rather than just telling someone how to do it because it will stick with them a lot better” (Former SI Leader).

“I made them find the answer for themselves” (Former SI Leader).
New Study Techniques

I learned new study techniques from other SI leaders
- 21% Strongly Agree
- 25% Moderately Agree
- 33% Neutral
- 21% Moderately Disagree
- 13% Strongly Disagree

I learned new study techniques from other students
- 21% Strongly Agree
- 25% Moderately Agree
- 33% Neutral
- 21% Moderately Disagree
- 13% Strongly Disagree

I learned new study techniques from SI training
- 29% Strongly Agree
- 63% Moderately Agree
- 8% Neutral

I developed a greater awareness of own study practices
- 38% Strongly Agree
- 58% Moderately Agree
- 4% Neutral

0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%
Study Techniques

I developed the following study techniques…

- Test preparation strategies: 71%
- New approaches to problem solving: 79%
- Strategies for identifying important concepts: 75%
Study Skills

• Problem Solving Methods
  -more efficient techniques
  (ex: calculating a “limiting reagent”)

• Identifying Important Concepts
  -organizing and summarizing notes
  -identifying lecture cues
Study Skills

• Test Preparation
  - distributed practice
  - predicting test questions
  - specific review techniques
  (ex: flashcards, diagrams, concept maps)
Distributed Practice

“I’ve always kind of made a bad habit out of not spending enough time reviewing everything throughout the semester. I definitely think that I spend a lot more time reviewing overall my concepts…so it sort of forces me to think about how can I connect all of the concepts throughout the class” (Former SI Leader).
Specific Study Strategies

“One of the strategies that the students told me about that really worked for them was using flash cards. I personally had never really worked with flash cards up until my time as being an SI leader. Right now, being in Pharmacy, I have to take Anatomy, so you know, flash cards are very helpful for Anatomy. It’s definitely something I will take away from being an SI leader, something very very helpful” (Former SI Leader).
Discussion/Conclusion

How or why is this useful for SI programming?

What can we do with this information?

Why should universities care about this?
Discussion/Conclusion

• Enhanced Study Skills Support Retention
  - SI Leaders are also Students

• Building a Culture of Leadership and Teamwork
  - U of M Strategic Priority

• More Feasible Experiential Learning Opportunity
  - U of M Strategic Priority

• Future Preparation for the Workforce
  - SI Leadership Skills Well-Aligned with Employability
Discussion/Conclusion

• Opportunity to Develop Teaching Skills
  - Especially Important Within a University Context
• Assessment Opportunity with Broader Outcomes
• Networking Opportunity with SI Alumni
References

