Evaluation of the Effectiveness of Internships for Preparing Natural Resource Students

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Acknowledgements

- Vernal Field Office – USDIBureau of Land Management
- USU – UB
- Students and graduates
- Greg Wheeler – Stats Guy
Objectives

- Provide an objective measure of the change in abilities of students after they had served an internship
- Evaluate how students and natural resource managers viewed the program on a more subjective level
- Document programmatic outcomes
- Fine tune internship program
Background

- Program at USU-UB is about 15 years old
- ~ 50 students have completed program
- About $1.5 million in funding
- Majority of funding is through Challenge Cost Share
- 100% of students who have completed program have career positions
Methods

• Reviewed the literature regarding the value of hands-on experiences for students
• Gathered the opinions of wildlife professionals regarding the qualifications for future employees
• Developed a skill set that described characteristics of successful natural resource managers
• Females vs males
• Academic experience – juniors vs seniors
Skill set survey for undergraduate students who completed an internship.

Please rate your skills on a scale of 1 (Low) to 10 (High) before and after participating in an undergraduate internship at Utah State University. A rating of 1 would indicate little or no ability and 10 would indicate complete comfort with your ability.

<table>
<thead>
<tr>
<th>Skill</th>
<th>Before</th>
<th>After</th>
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<tbody>
<tr>
<td>Ability to work independently</td>
<td></td>
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<td>Ability to apply materials learned in class</td>
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<td>Ability to understand the role of planning</td>
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<td>Ability to implement planning</td>
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<td>Ability to make decisions</td>
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<td>Ability to understand the management process</td>
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<td>Ability to communicate via writing</td>
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<td>Ability to understand the role of science in management</td>
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Please use the back of this page to provide any comments you might have about your internship experience.
Results

- Small, non-random sample
- No differences in responses between females and males
- No differences between year when internship performed, junior vs senior
- Significant differences exist between before and after internship for all categories
Survey Results

Mean ratings by undergraduate students (n = 31) who completed a skill set questionnaire to describe their abilities before and after participating in an internship. The ratings ranged from 1 (Low) to 10 (High). A rating of 1 indicates little or no ability by a student and a 10 indicates complete comfort with their ability.

<table>
<thead>
<tr>
<th>Ability</th>
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<tbody>
<tr>
<td>Ability to work independently</td>
<td>5.9</td>
<td>9.3</td>
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<tr>
<td>Ability to apply materials learned in class</td>
<td>4.5</td>
<td>8.5</td>
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<tr>
<td>Ability to understand the role of planning</td>
<td>3.7</td>
<td>8.1</td>
</tr>
<tr>
<td>Ability to implement planning</td>
<td>3.5</td>
<td>7.0</td>
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<tr>
<td>Ability to make decisions</td>
<td>3.4</td>
<td>6.9</td>
</tr>
<tr>
<td>Ability to understand the management process</td>
<td>4.0</td>
<td>7.7</td>
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<tr>
<td>Ability to communicate via writing</td>
<td>4.2</td>
<td>7.0</td>
</tr>
<tr>
<td>Ability to communicate via speaking</td>
<td>4.2</td>
<td>8.3</td>
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<tr>
<td>Ability to solve problems</td>
<td>3.6</td>
<td>7.7</td>
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<tr>
<td>Ability to understand the role of science in management</td>
<td>4.3</td>
<td>8.7</td>
</tr>
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</table>
What Did Agency Biologists Have To Say?

- When we hire these interns for career positions we know that they are prepared to hit the ground running.
- They have the ability to ask the right questions.
- The internship has certainly given them a leg-up for becoming a career hire with us.
- The experience and exposure that the interns have make them successful from day one.
What Did The Students Have To Say?

- This internship changed my life. I was able to explore a wildlife career while I was still in school.

- I owe my job as a biologist with the BLM to my internship. The relationships I built with the people working there helped me to get the job.

- Before I worked on the internship, I did not have a clue how everything was connected.

- Dr. E was right, working with people can be as important as working with wildlife and habitat.

- I had the chance to learn from my mistakes and to apply what I learned in class.
Student Accomplishments

- 100% have careers in NR
- Students have presented
- Students have published
- Students have earned awards
Conclusions

- The internship program at USU-UB has had a very positive impact on the students who have completed it.

- Student abilities increased dramatically for all characteristics considered important.

- A large measure of the success of the program stems from the close relationship between the natural resource management agencies and USU-UB.
Conclusions

• Another key to student success is the large amount of structure in the program.

• Students compete to serve an internship. This involves excelling at classwork and also by volunteering.
Questions?