

An Evaluation of the Implementation and Use of College-Level Standards in Undergraduate Research in a College of Agricultural and Life Sciences

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June 2016



Background

Undergraduate research

- ❑ Provide an immersive opportunity to learn new skills and knowledge in a multi-faceted environment^{1,2}
- ❑ Results in an ↑ understanding of research process and clarified interests in STEM careers²
- ❑ ↑ Satisfaction undergraduate education and greater enrichment of cognitive and personal skills³
- ❑ Retention in scientific field⁴

Background

Previous
Research

Methods

Results

Application

Previous Research

- ❑ Examined assessment methods
 - Used to evaluate undergrad students who participated in research activities for course credit (fall 2013)

- ❑ Assessment Methods- course credit
 - 87% did not receive a syllabus
 - those who did (13%) indicated final grade determined by attendance and participation

- ❑ Results suggest course credits for undergraduate research are not being clearly assessed for knowledge and/or skill gains


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“Research is much more intense and time-consuming than the credits signify. Based on the amount of work and stress that I had to put in, the 2 credits were very small.”

“Research was very independent and self-driven.”

“I enjoy working in my lab. This semester I will be completing my 10th credit hour for undergrad research.”

Major Findings

- ❑ Implementation of department/college standards
 - Offering undergraduates the opportunity to participate in research activities for course credit?

- ❑ Future research should focus on:
 - Evaluating appropriate methods for assessment of these outcomes
 - Measuring skills and/or knowledge gains

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College-Wide Syllabus for Supervised Research

- ❑ Implemented Fall 2014
 - Followed the college and university curricular process
- ❑ Introduction of a 0-credit research option at UF and CALS
 - UF desire to more closely track the research being carried out by undergraduate students
 - Many students volunteer to obtain research experience
- ❑ Goals:
 - Establish common expectations across research experiences
 - Guidance for faculty leading supervised research experiences
- ❑ Suggested grading schema:
 - 70% - degree to which student meets expectations
 - 15% - quality of final report
 - 15% - attendance


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The aim of this study was to evaluate the implementation of a 0-credit research course with a standardized syllabus and assessed as satisfactory/unsatisfactory (S/U), in the College of Agricultural and Life Sciences (CALs), University of Florida



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- ❑ In spring 2015, identified students (n=203) were contacted
 - 49 (24%) (35F,10M) completed a survey through Qualtrics®
- ❑ Faculty from CALS (n=30), who supervised undergraduate research for credit, also completed an online survey



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Results

- ❑ Students reported being familiar with the 0-credit option (78%)
- ❑ Few students received a syllabus; however, they met with their research advisor or were informed of the expectations (91%)
- ❑ Most faculty (75%) did not distribute a syllabus and some were unaware that a template syllabus existed (38%)
 - Those who did, used the CALS template (67%)

Background

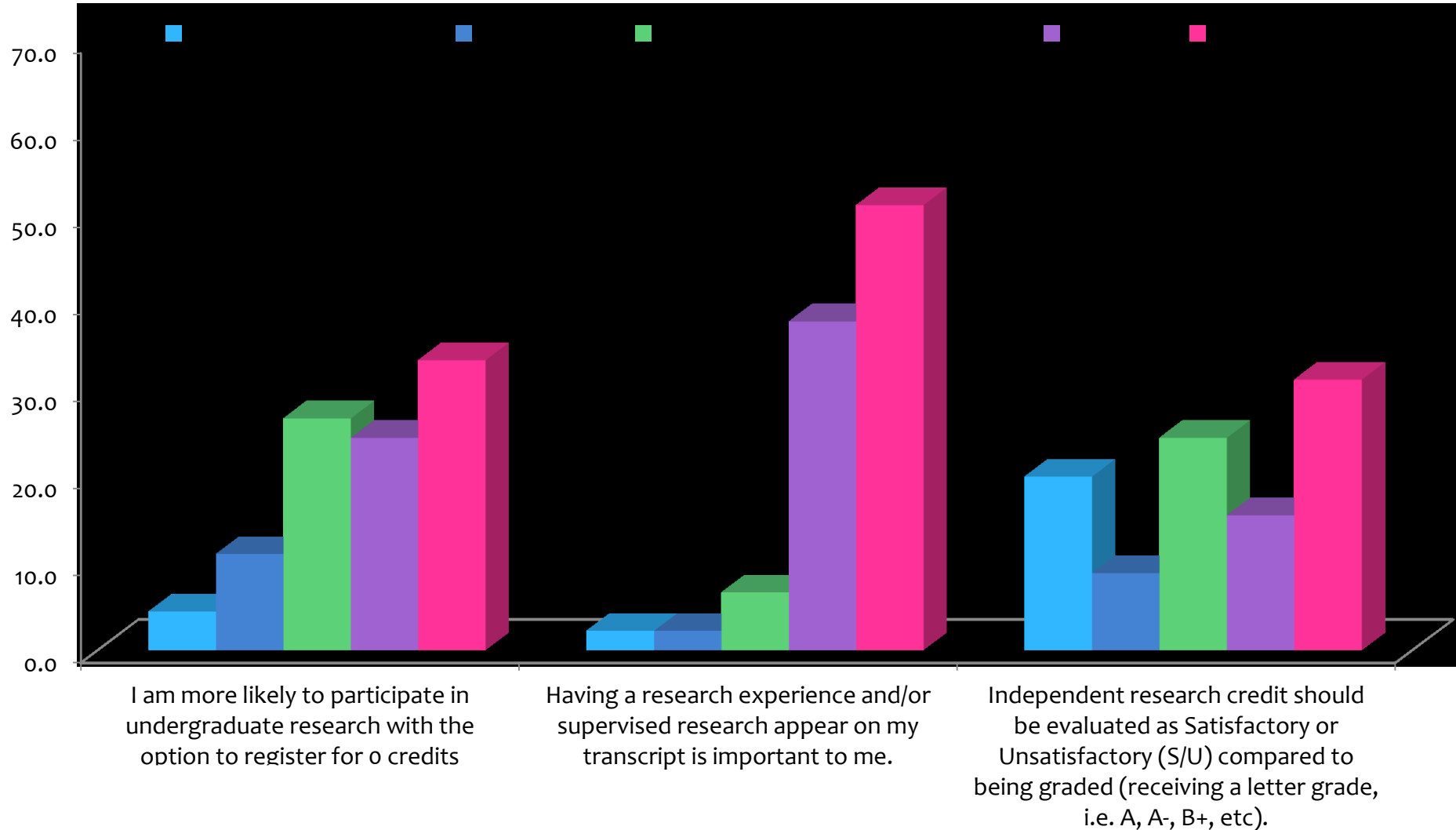
Previous
Research

Methods

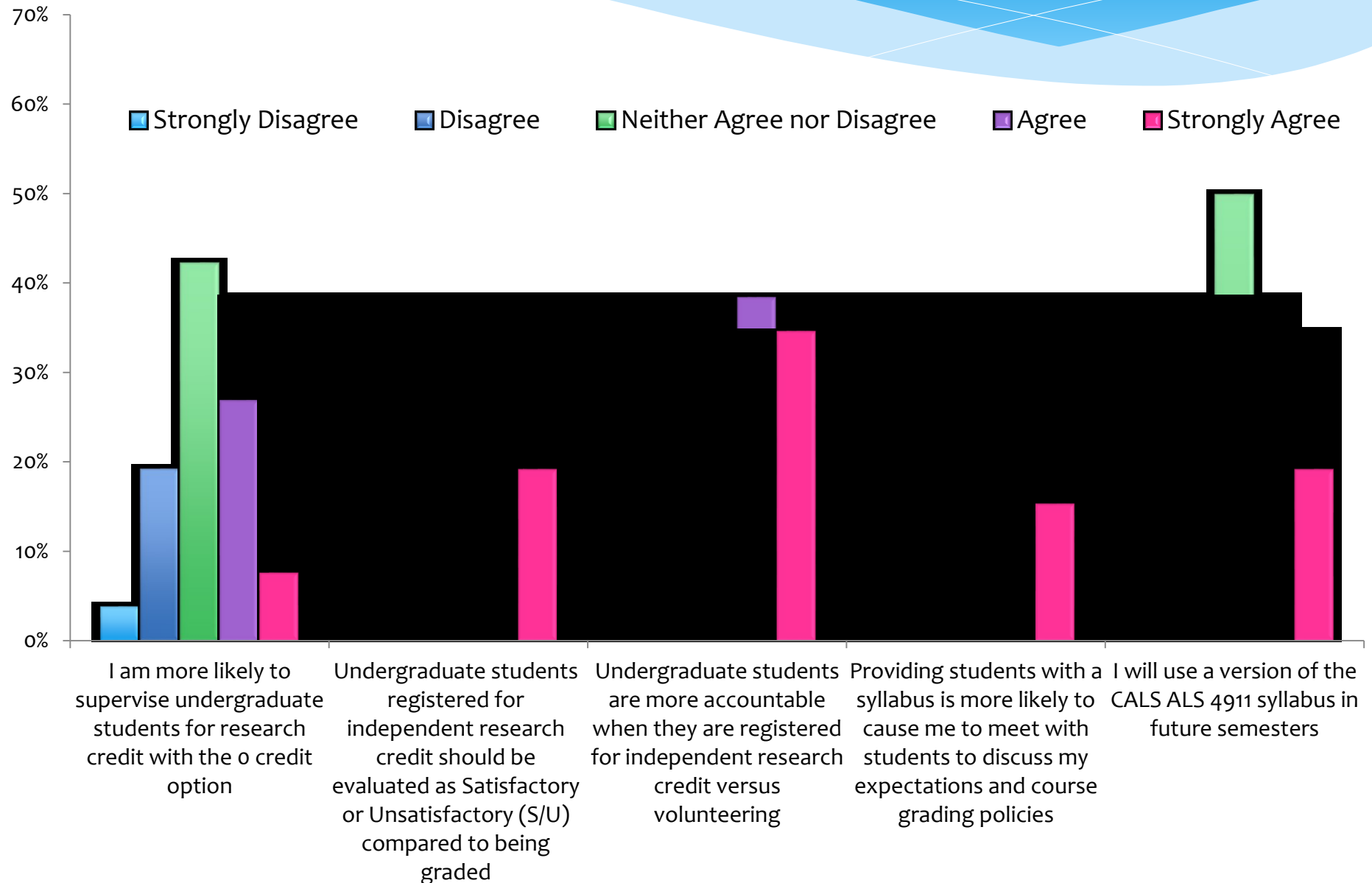
Results

Application

Student Response



Faculty Response



Conclusions

- ❑ ↑ Awareness of 0-credit option and syllabus template
 - Identify faculty barriers in using the template
- ❑ Additional steps needed to ensure the template is made available to students registered for research in CALS

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Application & Implementation

- ❑ Findings are not surprising, given the long history of independent student research at UF
- ❑ Need for further communication about the:
 - Existence of the research syllabus templates
 - Value of following suggested guidelines to ensure a more uniform research experience

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References

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2. Russell SH, Hancock MP, McCullough J. Benefits of undergraduate research experiences. *Science(Washington)*. 2007;316.5824:548-549.
3. Bauer KW, Bennett JS. Alumni perceptions used to assess undergraduate research experience. *The Journal of Higher Education*. 2003;74.2:210-230.
4. Lopatto D. Survey of Undergraduate Research Experiences (SURE): First Findings. *Cell Biology Education*. 2004; 3(4):270-277.