The Effectiveness, Efficiency, and Experience Offered by the PASS Student Led Team Learning Program: Biology and Beyond

Summary of Original Proposal

Andrew Koke, Kristyn Sylvia, Molly Burke, and Anthony Guest-Scott (Student Academic Center), Amy Berndston and Miriam Zolan (Biology)

The purpose of this study is to examine the embedded tutoring program coordinated by the Student Academic Center: PASS (Peer Assisted Study Sessions). PASS is a peer-led team learning program in which students who performed well in a difficult and required course attend the course again and offer study sessions for currently enrolled students. This type of tutoring permits discipline- and course-specific tutoring in which the tutor, seen as an authority and helper in class, becomes an ally of the enrolled students, encouraging PASS attendance. Further, because a session focuses on group and not one-on-one tutoring, it is possible for more widespread results per tutor hour. Finally, since the goal of the study session is for enrolled students to teach each other while the PASS leader facilitates this experience, the study session permits higher order thinking and greater mastery and confidence.

Our project will examine several facets of the PASS program in an attempt to determine the impact of the program upon the students enrolled in the class, the impact upon the students leading the PASS sessions, and potential impact for the campus. To observe the impact upon students in the class, course exam performance in multiple sections of BIOL-L112 will be tied to PASS attendance and demographic data. Further, students enrolled in the course will also be surveyed regarding their motives for attending, or not attending, PASS. To observe the impact upon the students leading PASS, current PASS leaders will be surveyed and interviewed by Student Academic Center staff. Finally, the project will analyze the amount of students tutored per dollar spent, decrease in DFW rates for the targeted sections, and demographic data, comparing these results to standard drop-in tutoring data.
The Effectiveness, Efficiency, and Experience Offered by the PASS Student Led Team Learning Program: Biology and Beyond

Conducted by the Student Academic Center:

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Proposal for the Scholarship of Teaching and Learning Grant
Funding Level Requested: Phase II ($5000)

Duration of Funding Period: 1 year
Project to be conducted in spring and fall semesters, 2016
1 January 2016 – 31 December 2016
Abstract

The purpose of this study is to examine the embedded tutoring program coordinated by the Student Academic Center: PASS (Peer Assisted Study Sessions). PASS is a peer-led team learning program in which students who performed well in a difficult and required course attend the course again and offer study sessions for currently enrolled students. This type of tutoring permits discipline- and course-specific tutoring in which the tutor, seen as an authority and helper in class, becomes an ally of the enrolled students, encouraging PASS attendance. Further, because a session focuses on group and not one-on-one tutoring, it is possible for more widespread results per tutor hour. Finally, since the goal of the study session is for enrolled students to teach each other while the PASS leader facilitates this experience, the study session permits higher order thinking and greater mastery and confidence.

Our project will examine several facets of the PASS program in an attempt to determine the impact of the program upon the students enrolled in the class, the impact upon the students leading the PASS sessions, and potential impact for the campus. To observe the impact upon students in the class, course exam performance in multiple sections of BIOL-L112 will be tied to PASS attendance and demographic data. Further, students enrolled in the course will also be surveyed regarding their motives for attending, or not attending, PASS. To observe the impact upon the students leading PASS, current PASS leaders will be surveyed and interviewed by Student Academic Center staff. Finally, the project will analyze the amount of students tutored per dollar spent, decrease in DFW rates for the targeted sections, and demographic data, comparing these results to standard drop-in tutoring data.
Project Description

Background to the Project
Peer Assisted Study Sessions (PASS) is a program provided by the Student Academic Center (SAC). The program is based on the Supplemental Instruction model of Peer-Led Team Learning (PLTL) headquartered at the University of Missouri at Kansas City, modified for our campus. The SAC previously operated a supplemental instruction program for several years, but recently restructured the program, hiring a new coordinator, instituting new training for undergraduate leaders, increasing observation and accountability, collecting various types of data, and creating additional partnerships with professors and departments. The new program was rebadged PASS, which is a better representation of the program’s content and goals.

In PASS, selected students are recruited to lead study sessions in difficult classes. These PASS leaders must have previously taken the class on this campus and must have passed the course with a 3.00 or better. PASS leaders attend the class again, work as an assistant to the instructor, and lead one or two study sessions per week covering the most difficult content from the course. PASS leaders undergo an extensive training at the beginning of the semester, weekly training meetings, multiple observations per semester, written feedback on pedagogical strengths and weaknesses, and a great deal of encouragement. They are taught dozens of sound pedagogical techniques that help students in a group setting communicate better and work towards learning goals. Currently PASS leaders who work in the Economics Department are paid for this work, while PASS leaders who work in the Biology Department receive course credit.

In Fall 2015 PASS is assisting ECON-E201, ECON-E202, and BIOL-L112, and therefore more than 1200 enrolled students have access to PASS, though not all of these will elect to take advantage of the PASS offerings. We ran a pilot study in Spring 2015 in ECON-E201 where we found that in some sections, student's self-selection to attend PASS was as high as 70% of the enrollment, while in others it was as low as 3%. Furthermore, we found that students who elected to attend PASS every week demonstrated a significant improvement in test grades over the course of the semester, averaging an 11% improvement (a full letter grade) from test one (during the fourth week) to the final (during the sixteenth week). Whereas most of the students in the course performed the same or slightly worse on their tests over the course of the semester, students who elected to attend PASS weekly significantly improved. Further, the DFW rates were one third lower than other ECON-E201 sections, suggesting higher retention and accomplishment.

Last year Provost Robel issued the Bicentennial Strategic Plan for the Bloomington campus, calling for programs that increase retention, completion, and undergraduate research particularly in the STEM disciplines. The Student Academic Center is uniquely positioned for PASS to function as an interdisciplinary, campus wide, co-curricular program that increases student mastery of difficult subject matter and increases retention. This proposal examines the impact of our program and includes an undergraduate research component to build upon leadership skills and research capabilities.

Purpose of the Investigation along with Specific Research Objectives
Our investigation will be a multimodal study of the impact of PASS in multiple sections of BIOL-L112 beginning Spring 2016 and ending Fall 2016. In total, two semesters will be studied, with an anticipated

1 (http://sac.indiana.edu/programsservices/pass/).
2 (http://www.umkc.edu/asm/si/).
3 Regarding retention, see The Bicentennial Strategic Plan for Indiana University Bloomington, Principles of Excellence One: IU Metrics: Bicentennial Plan subpoint 1B (p. 12). For co-curricular practices, see Principles of Excellence One: IUB Bicentennial Objective One subpoint 2 (p. 4). For undergraduate research, see Principles of Excellence One: subpoint 2C (p. 4) and Additional IUB Metrics subpoint 6 (p. 12). For STEM focus, see Principles of Excellence One: IUB Bicentennial Objective Two subpoint 2d (p. 9).
enrollment of more than 600 unique students. Additionally, approximately thirty undergraduate PASS leaders will be surveyed.

1. The first research objective is to robustly examine the efficacy of PASS in the selected courses. The PASS program will partner with Dr. Amy Berndtson (IUB Department of Biology) and Dr. Miriam Zolan (IUB Department of Biology). PASS will collect attendance information at every session, and the instructors will provide test results and final grade information for all students enrolled in the sections in a given semester. This information will be partnered with self-disclosed gender and ethnic data available to the OVPUE data center, as well as GPA and SAT/ACT data. This will allow us to determine the impact of PASS upon various student populations. Using statistical analysis, we will specifically examine potential correlations between frequency of PASS attendance and improved test performance. PASS leaders will assist with data collection, coding, and analysis.

2. The second research objective is to examine student participation in PASS. A number of factors appear to influence participation including when and where sessions are held, the frequency in which the PASS leader attends the course, the frequency in which the instructor encourages PASS participation, course incentives for PASS participation (e.g., extra credit), and student need, among others. It is unclear which of these factors have the greatest influence, although we predict course incentive and instructor encouragement to be some of the most important factors. We propose a qualitative study of student motive for choosing to attend, or not attend, PASS. Using Qualtrics software, students will be surveyed regarding participation or non-participation motives early in the semester. Further, in addition to students signing in at each session, they will also be asked to disclose why they are attending that particular session. PASS leaders will assist with data collection, coding, and analysis. This data will be compared to the quantitative data above as well as partnered with demographic data available to the OVPUE data center, permitting us to see what influenced a student to attend PASS.

3. The third research objective is to examine the impact of PASS upon the PASS leaders. PASS leaders work ten to twelve hours weekly in the program, a significant investment of time during busy semesters. The program is designed and described as a teaching internship, providing experience in teaching, managing groups of students, public speaking, and research. Using Qualtrics software and face-to-face interviews, current PASS leaders will be asked to disclose their motives for participating in the program and what they value, and do not value, about the program. This information will be used to improve the program and assist in future recruitment.

4. The fourth research objective will determine if the PASS program is suitable for widespread implementation across campus. By examining cost of the program per hour of tutoring, the impact it has on student endpoints, reduction of DFW rates, and student evaluation, we will be able to see if the program answers Provost Robel’s call for a comprehensive, interdisciplinary, co-curricular practice that aids in retention. This information will be shared with the Vice Provost for Undergraduate Education.

Previous Research Results
We conducted a preliminary examination of the efficacy of PASS in ECON-E201 in Spring 2015. This study only surveyed section 24660, and partnered with Dr. James Self and Instructor Philip Vinson. The study followed 60 students over the course of the semester, noting attendance and test performance only. The data was not tied to gender, ethnicity, GPA, or SAT/ACT, nor was statistical analysis used to test the significance of the results. This preliminary data was not published and simply determined if the PASS program appeared to be effective and warranted further investigation, which we answered in the affirmative.
Supplemental Instruction and other forms of PLTL have been robustly studied across the United States, confined almost exclusively to the STEM disciplines. While the research does indicated that PLTL interventions will have an impact in larger STEM introductory courses, such has not been studied in our campus STEM departments, which remains the primary purpose of the study. This study will begin testing the impact of PLTL for our unique IUB undergraduate culture.

This study will make a contribution beyond IUB in the area of student motivation for attending, or not attending, PASS sessions. Student motivation for attending supplemental programming remains unclear with little research conducted on the matter.

Significance of Study upon Undergraduate Teaching and Learning
On the IUB campus, this study will have a significant impact. Our research will show an increase in student mastery of Biology content over the course of the semester and a corresponding decrease in DFW grades in the courses. This information will be of interest to many disciplines, including Mathematics, Psychology, Chemistry, and Economics. These metrics will allow us to intervene in a number of courses with higher enrollment and DFW rates, thereby increasing retention and assisting with the campus goal of “finish in four.” We will be able to show departments interested in implementation concrete data addressing the utility of the program. Further, understanding student motivation for engagement with PASS will have broader applications to other campus tutoring programs.

The study is also designed, however, to improve the PASS program itself and the undergraduates working within the program by improving upon training. Analysis of PASS leader feedback will allow the program to improve its impact on our student interns. Further, by working with undergraduate PASS leaders on data collection, analysis, and conference presentation, the project will permit research mentoring, which will be an asset for these students on campus and in their careers going forward.

Outcomes from the Project Contributing to IUB Assessment of Student Learning
The main outcome of the project is to analyze one form of tutoring available at IUB. Our campus has a number of tutoring options available to students, most of which are drop-in tutoring. Despite the amount of resources dedicated to tutoring interventions at IUB, little is known about the total cost per hour of tutoring or the efficacy of said interventions. This project allows us to study one particular type of embedded tutoring, the PASS program, and determine its cost and efficacy. SoTL and Learning Analytics are key to the vision of Provost Robel and the Trustees, and this project begins the process of analyzing the tutoring programs at IUB.

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4 The best and most recent overview of the copious literature on PLTL is Phillip Dawson, “On the Effectiveness of Supplemental Instruction: A Systematic Review of Supplemental Instruction and Peer-Assisted Study Sessions Literature between 2001 and 2010,” *Review of Educational Research*, December 2014, Vol. 84, No. 4, pp. 609-639. Dawson reviewed more than 100 independent studies and concludes “SI worked,” with some caveats. PLTL has been studied in Biology since the early 1980s. For recent studies, consider Kenneth A. Rath, et al, “Supplemental Instruction in Introductory Biology I: Enhancing the Performance and Retention of Underrepresented Minority Students,” *Life Science Education*, vol. 6, no. 3 (2007), 203-216, which found that underrepresented minority students benefit significantly more than non-minority students with PLTL tutoring. See also Randy Moore and Olivia LeDee, “Supplemental Instruction and the Performance of Developmental Education Students in an Introductory Biology Course,” *Journal of College Reading & Learning*, May 1, 2006, p. 9-20, which found that the number of D,F, and W grades for students attending PLTL sessions were lower proportionally than those that did not.

5 Examples abound: the Math Learning Center, Academic Support Center, Writing Tutorial Services, Groups Tutoring, 21st Century Scholars Tutoring, departmental tutoring projects such as that found in Psychology and Chemistry, and tutoring for under-represented students such as that at Neal-Marshall or La Casa.

6 *The Bicentennial Strategic Plan for Indiana University Bloomington*, p. 6, IUB Bicentennial Objective One: subpoint 4.
Research Methodology, including Data Collection and Analysis

All participants including undergraduate PASS leaders assisting with data will complete IRB certification in January 2016.

The project will coordinate several forms of data. First, from the OVPUE data center, we will collect demographic data, specifically self-disclosed gender and ethnicity, current GPA, and SAT/ACT scores for all students enrolled in target courses. We will combine these data with the quantitative and qualitative data via Tableau software.

Further, we will acquire qualitative data through three tools. First, target students will take a Qualtrics survey identifying their motives for attending/not attending PASS sessions. This will be coded by teams made up of two PASS leaders. Second, all PASS sessions will track attendance, and students attending will fill out a form indicating main motives for attendance. This will be coded by the same teams above. Third, PASS leaders will be interviewed by Student Academic Center staff, who will code the interviews. After qualitative data is acquired and coded, it will be combined with the demographic data.

Finally, quantitative data will be collected, and PASS session attendance will be compared against the four standard tests for BIOL-L112 (three tests during term, plus one final).

The data will be analyzed in particular phases, each corresponding to a particular research objective. Research Objective 1 will be analyzed by the entire PASS team during the semesters. Essentially we believe we will see an upturn in test scores as students attend more PASS sessions, but we will compare this to student GPA and SAT/ACT in an effort to minimize self-selection bias (i.e., that the most adept students are using PASS). During the Summer 2016, when PASS leaders are absent, the Student Academic Center coordinators will analyze the data for Research Objectives 2 and 3, using demographic data as needed to determine patterns of motive. At the end of Fall 2016, a formal report will be provided to CITL and the Vice Provost for Undergraduate Research, including results for research objective four.

Means by which Success of Project will be Measured

This project will have several measures indicating success. First, we predict that we will see an upturn in student BIOL-L112 grades throughout the semester if they attend multiple PASS sessions, a result that will be consistent with the literature. A second measure of success will be our undergraduate poster session for the IUPUI National Mentoring Conference. This will be a significant accomplishment since undergraduate research and sharing of research is a major goal of the university, yet has proved difficult to implement in many cases. Third, as there is little data on the motivation for student PASS attendance, the project will be successful when the results of the qualitative study of student motive is presented at either a SoTL conference (such as ISSOTL 2016) or a student support conference (such as a Supplemental Instruction conference). Finally, Dr. Charles R. Frederick, Jr., Director of the SAC, will evaluate the project at the end of each semester focusing on timely completion of research goals.

Manner in which the Results will be Disseminated

Results will be disseminated in multiple forms and to multiple parties.

1. The Student Academic Center will create a new web page for instructors interested in implementing PASS. The new webpage will include results showing impact upon grades over the course of the semester, reduction of DFW rates, and quotes from PASS leaders sharing their experiences. This page will be used to inform instructors of the impact of the program on various students and also provide contact information for further inquiries, including those from other institutions.

2. The IUB Hutton Honors College Research Symposium (April 2016) will provide a campus opportunity for our undergraduate PASS leaders and will function as an early, first attempt at generating a useful poster session. The IUPUI National Mentoring Conference (October 2016) will
provide a formal, local conference experience for our undergraduate researchers. Our undergraduate PASS leaders will present a poster session that indicates their evaluation of the mentoring aspect of the PASS program. Further, the PASS staff will also attend one conference focused on student support, ideally the 2016 International Conference on Supplemental Instruction (May 2016), or perhaps ISSOTL 2016 if it is in North America, NASPA 2016, or the National Symposium on Student Retention. The PASS staff will present data indicating the impact in DFW rates from implementing embedded tutoring programs and a further presentation on student self-selection for PASS, allowing our research to be disseminated beyond the IUB community.

3. A detailed report will be produced for the Office of the Vice Provost of Undergraduate Education, specifically for Dr. Dennis Groth and Dr. C. Kurt Zorn. This report will include the result of our study on test score improvement and DFW rate impact, as well as an examination of cost per hour of tutoring and impact of the PASS program on undergraduate PASS leaders. The report will include the viability of extending PASS across multiple departments and will include various models of paying for the program.

4. We will use information regarding student motivation for attending PASS to create a report for our faculty partners and the Biology department. This report will also be shared with Christopher Parks of the Math Learning Center and Dr. Leslie Robinson of the Academic Support Centers.

5. The PASS program would welcome the opportunity to present at an IUB SoTL event, via either a poster session or other presentation.

6. We are considering a publication, particularly with the data regarding student self-selection and motive for attending PASS sessions. Our target journals would include *Mentoring and Tutoring: Partnerships in Learning*, *Journal of Peer Learning*, or *Tutors: A Multiliteracy Journal*.

**Reflective Teaching Practices**

This project is designed to provide feedback to the PASS team to increase the impact of the program. By including interviews and surveys with the PASS leaders, we will determine the parts of the program that are particularly appealing and beneficial to the students with whom we are working. This information will be used to improve training and aid in recruitment. Further, the analysis of student motivation for attending/not attending PASS sessions will be used to improve engagement with students in PASS courses and will be discussed with directors of various tutoring centers across campus.
Phase II funding is $5,000. The budget for this project is slightly over the funding amount. These funds will be used to pay undergraduate and graduate investigators as well as fund two conferences. The Student Academic Center will contribute all funds above the grant limit.

1. Dr. Andrew M. Koke is Principal Investigator and will manage all parts of the grant and project. Time commitment is estimated to be 5 hours per week. This time is donated to the project and is of no cost to the grant.

2. Kristyn Sylvia, SAC PASS assistant, will be tasked above and beyond her normal role of training and supervising undergraduate PASS leaders. Her research contribution is estimated to be 2 hours per week, at $25 per hour. $50 per week, for 34 weeks (17 weeks for Spring 2016, and 17 weeks for Fall 2016). Total cost to the grant: $1700.

3. Dr. Molly Burke and Dr. Anthony Guest-Scott will assist the project as needed, serve as advisors to the project, and will conduct interviews with the undergraduate PASS leaders. Their time commitment is estimated to be 2 hours per week. This time is donated to the project and is of no cost to the grant.

4. Dr. Amy Berndtson and Dr. Miriam Zolan will teach the BIOL-L112 courses that PASS will study and serve as advisors to the project. Their time commitment is estimated to be 1 hour per week each. This time is donated to the project and is of no cost to the grant.

5. Time of undergraduate investigators is estimated to be 1 hour per week, for each of the six undergraduates (6 hours per week total). Each undergraduate investigator will receive $10 per hour for work on the project, above and beyond their normal PASS duties of attending class, preparing PASS materials, delivering PASS sessions, and attending meetings (therefore, $60 per week, for 34 weeks). Total cost to the grant: $2040.

6. The IUPUI National Mentoring Conference will be in October 2016. Undergraduate investigators will present at this one-day conference. $30 per person for registration, for eight people (Dr. Andrew M. Koke, Kristyn Sylvia, and six investigators) is $240. Plus $100 for mileage up to IUPUI and back. Total cost to the grant: $340.

7. One additional conference, attended by Dr. Andrew M. Koke and Kristyn Sylvia. The conference will depend on geographic location, but top preferences are for the International Conference on Supplemental Instruction or the International Society for the Scholarship of Teaching and Learning. Anticipated cost is, per person, $500 for flight, $300 for hotel, and $200 for per diem. Total cost to the grant: $2000.

8. Qualtrics software and Tableau software are available to the SAC via the OVPUE license, and therefore are no cost to the grant.

<table>
<thead>
<tr>
<th>Budget Item</th>
<th>Cost</th>
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<tbody>
<tr>
<td>SAC PASS Assistant funding</td>
<td>$1700</td>
</tr>
<tr>
<td>SAC undergraduate investigator funding</td>
<td>$2040</td>
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<tr>
<td>IUPUI National Mentoring Conference</td>
<td>$340</td>
</tr>
<tr>
<td>Other Conference funding</td>
<td>$2000</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>$6080</strong></td>
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</tbody>
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## Research Plan and Timeline

<table>
<thead>
<tr>
<th>Date</th>
<th>Activities</th>
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<tbody>
<tr>
<td><strong>January 2016</strong></td>
<td>• All participants will complete IRB training and certification by 31 January.</td>
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<tr>
<td></td>
<td>• Investigators will create the Qualtrics survey of student motivation and distribute.</td>
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<td></td>
<td>• Investigators will contact OVPUE data center to request demographic data of enrolled students.</td>
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<td><strong>February 2016</strong></td>
<td>• Investigators will begin coding Qualtrics survey of student motivation.</td>
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<td></td>
<td>• First BIOL-L112 tests will be completed. Results will be paired with the demographic data, creating master data collection in Tableau.</td>
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<td></td>
<td>• PASS attendance will be inserted into master data collection.</td>
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<td></td>
<td>• Student investigators will apply to present a poster session at the 2016 Hutton Honors College Research Symposium.</td>
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<tr>
<td><strong>March 2016</strong></td>
<td>• Qualtrics data will be inserted into master data collection.</td>
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<td></td>
<td>• Second BIOL-L112 tests will be completed and scores inserted into master data collection.</td>
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<td></td>
<td>• SAC staff will interview PASS leaders. Results of interview will be coded.</td>
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<td></td>
<td>• PASS attendance updated.</td>
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<td></td>
<td>• Analysis of survey of student motivation will begin.</td>
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<td></td>
<td>• PASS leadership will prepare conference application for International Conference on Supplemental Instruction.</td>
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<tr>
<td><strong>April 2016</strong></td>
<td>• Third BIOL-L112 tests completed and scores inserted into master data collection.</td>
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<tr>
<td></td>
<td>• PASS attendance updated.</td>
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<td></td>
<td>• Preliminary analysis begun. With ¾ of the tests finished and the attendance completed, some patterns should emerge.</td>
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<tr>
<td></td>
<td>• Analysis of survey of student motivation completed.</td>
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<td></td>
<td>• Student investigators will present a poster session at the 2016 Hutton Honors College Research Symposium.</td>
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<tr>
<td><strong>May 2016</strong></td>
<td>• Final exam in BIOL-L112 completed and scores inserted into master data collection.</td>
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<td></td>
<td>• Analysis of spring semester test scores and PASS attendance begins.</td>
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<td>• PASS leadership attends International Conference on Supplemental Instruction.</td>
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<td><strong>Summer 2016</strong></td>
<td>• Analysis of PASS leader interviews completed.</td>
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<tr>
<td></td>
<td>• Analysis of test scores and attendance completed.</td>
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<td><strong>August 2016</strong></td>
<td>• PASS leaders apply to IUPUI National Mentoring Conference</td>
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<tr>
<td><strong>Fall 2016</strong></td>
<td>• As above. Team will mirror the timing of Spring 2016 and replicate study, with a new data set and timeline adjusted as needed.</td>
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<tr>
<td><strong>October 2016</strong></td>
<td>• PASS leaders attend IUPUI National Mentoring Conference</td>
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<td></td>
<td>• Prepare new SoTL grant request, as needed.</td>
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<td><strong>November 2016</strong></td>
<td>• Prepare final report for OVPUE and CITL.</td>
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<tr>
<td><strong>December 2016</strong></td>
<td>• Deliver final report to OVPUE and CITL.</td>
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October 29, 2015

I am writing in strong support of the proposal authored by Dr. Andrew Koke as submitted for STL for funding consideration.

The PASS Program, a variant of Supplemental Instruction adapted to the particular conditions and demands of IU-B showed positive early results during spring 2015 in Econ-E201. The current proposal would allow for further collection, quantification, and evaluation of a large data set drawn from fall 2015.

Current research in the effectiveness of tutoring indicates that embedded tutoring, like PASS, is more effective with C, D & F grade students as well as underrepresented student populations than is the more widely used “drop in” approach.

This proposal answers the Provost’s call in the Strategic Plan for a co-curricular interdisciplinary research effort to determine more effective ways to foster student academic success.

I hope that readers of Dr. Koke’s proposal will agree.

Sincerely,

[Signature]

Charles R. Frederick, Jr. Ph.D.
Director
Student Academic Center
Office of the Vice Provost for Undergraduate Education
Indiana University Bloomington IN 47405
408 N. Union St. Suite 300
(812) 855-7313 phone
(812) 855-5474 fax
October 22, 2015

I am writing to express my enthusiastic support for Andrew Koke's proposal for a Scholarship of Teaching and Learning Grant entitled “The Effectiveness, Efficiency, and Experience Offered by the PASS Student Led Team Learning Program: Biology and Beyond.” The Peer Assisted Study Sessions (PASS) program was introduced to the Bloomington campus when Andrew joined the staff of the Student Academic Center (SAC). Although the program is still in its infancy, the early results are very promising. Through this study the impact of the PASS program in selected courses will be studied and quantified, thereby assisting in the determination of how more widely dispersed PASS offerings can support the campus’s efforts to enhance student academic success and retention.

A preliminary analysis of PASS, performed during the spring 2015 semester, suggests the program is an effective way to assist students academically. The analysis indicated that students who attended PASS on a weekly basis saw a better than eleven percent improvement in their ECON-E201 tests scores during the semester while students not participating in the program saw no improvement or slight decreases in their scores. In addition, overall DFW rates were lower for the class compared to previous semesters.

These preliminary results suggest PASS benefits to students and it makes sense to more thoroughly investigate the program to better understand its overall efficacy. The proposed study will provide insight into why the PASS program appears to have a greater impact than other peer-led team learning interventions. Additionally, the study will provide insight into why students choose to attend PASS and how undergraduate PASS leaders may gain from participation in the program. Neither of these questions has been previously studied.

The Strategic Plan for the Bloomington campus calls for co-curricular, interdisciplinary programs to improve the retention rates for undergraduate students. The Student Academic Center, a unit within The Office of the Vice Provost for Undergraduate Education, is uniquely positioned to introduce and provide assistance for the PASS program to the various academic units on the Bloomington campus. Better understanding the impact and the cost of the PASS program, two goals of the proposed study, will make it easier to entice these units to devote the resources needed to offer PASS in selected courses.

Another focus of the Strategic Plan is to expand efforts and services in the STEM disciplines. With its emphasis on multiple sections of Biology L112, the study will provide an understanding of how PASS can positively affect the success of the more than 600 students in this course. Therefore insight will be expanded from the impact in a social science discipline to that in a natural science discipline.
Finally, undergraduate students will gain experience in research, another area of emphasis in the Strategic Plan. The project is designed to afford undergraduate students the opportunity to create surveys, code results, and interpret data. The goal is for these students to present their research at the IUPUI National Mentoring Conference.

Clearly the PASS program is a very promising initiative that could have a profound positive impact on the academic success of undergraduate students at Indiana University, Bloomington. It is my hope that you agree that better understanding and quantifying the contributions PASS can make to student success and retention is a worthwhile endeavor.

Sincerely,

C. Kurt Zorn
Professor and Associate Vice Provost
ANDREW M. K OKE
918 W 13TH CT • BLOOMINGTON, IN 47404
(217) 899-1859 • AKOKE@INDIANA.EDU

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Ph. D., Indiana University (2013)
Major Fields: British History
Minor Fields: Atlantic World History, Religious Studies
Advisors: Konstantin Dierks, Constance Furey, Sarah Knott, and Dror Wahrman
“Limitations of an Episcopal Empire: The Church of England in the British Atlantic, 1675-1761”

Major: History
Advisors: Anthony J. Crubaugh, Mohammad Tavakoli-Targhi

MA, Lincoln Christian University (1998)
Major: Postmodern Theology and Philosophy
Advisor: John D. Castelein

BA, Lincoln Christian University (1995)
Major: Biblical Studies

Publications


“Local and Imperial Allegiance: Virginia Commissary James Blair and the Induction Controversy, 1690-1722.” In revision for the Virginia Magazine of History and Biography.

Positions Held
Director of Basic Academic Skills Education, Student Academic Center, Indiana University (2014 to present). Responsible for creation of curriculum, Supplemental Instruction, and management of extensive staff.

Academic Advisor, College of Arts and Sciences, Indiana University (2013)

Webmaster, Editor, and Director of Publications for *HistSOTL*, the International Society for the Scholarship of Teaching and Learning in History at Indiana University (2008 to present). Prof. David Pace, director.

**Selected Pedagogical Presentations and Awards**

Learning Analytics Research Grant, Indiana University Vice Provost for Research (2014)

*A Smarter U @ IU Workshops* podcast series hosted by the Student Academic Center. Episodes 1-7 (2012-present)

“Beyond the Lesson Plan: From Pedagogical Theory to Classroom Application” for IU Dept. of History (2013)

“Using Student Failure as a Pedagogical Tool in the History Classroom” at the 13th Annual Conference on Teaching and Learning in History, Oxford, UK.

“What Are They Thinking?: Using the Anonymous Essay Question to Access Student Thought” at the 12th Annual Conference on Teaching and Learning in History, Oxford, UK.

“All Work and No Play: Games and Pedagogy in the Classroom” at the International Society for the Scholarship of Teaching and Learning 2009, Bloomington, IN.

“Touch and Go: Beyond Audio-Visual Pedagogical Techniques in the History Classroom” at the 11th Annual Conference on Teaching and Learning in History, Oxford, UK.

Susan O’Kell Memorial Award for Outstanding Associate Instructors, Indiana University.

Global Village Competitive Teaching Award and Collins Living Learning Center Competitive Teaching Award, Indiana University.

**Selected History Presentations and Awards**

“Dissenting Histories in the Classroom Roundtable” at the Teaching the Past conference, Purdue University, IN (2014).


“The Peculiar Power of the Sermon: Using Sermons as Cultural History Sources” at the Paul Lucas Conference, Bloomington, IN.
Courses as Instructor of Record
Department of History
H105: American Civilization to 1860
W300: The History of Hell in the West
B302: Witches and Heretics

Student Academic Center, School of Education
X158: The Culture of College – recovering from Academic Probation
X152: Right Start – Transitioning to College

Global Village, College of Arts and Sciences
G220: A History of the Afterlife

GROUPS Project, School of Education
X153: Critical Reading and Reasoning for the New College Student

Recent Service to Community and University
“Becoming the Episcopal Church: How Distance and Empire Changed the Church of England in the American Colonies” for Trinity Episcopal Church.


Indiana University Football NCAA Academic Orientation Series.


Membership
American Historical Association
International Society for the Scholarship of Teaching and Learning in History
Certified Supplemental Instruction Coordinator
References

Dr. Charles “Chip” Frederick, Jr.
Director, Student Academic Center
408 N. Union, Suite 300
Bloomington, IN 47405
crfreder@indiana.edu

Professor Konstantin Dierks
Department of History
Ballantine Hall 734
Indiana University
Bloomington, IN 47405-7103
(812) 855-6288
kdierks@indiana.edu

Professor David Pace
Emeritus
Department of History
Ballantine Hall 742
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Professor Sarah Knott
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Indiana University
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(812) 856-0092
saknott@indiana.edu
KRISTYN E. SYLVIA
3400 S. Sare Rd. Bloomington, IN  •  ksylvia@indiana.edu

EDUCATION  Indiana University, Bloomington, IN
Graduate Student in Evolution, Ecology & Behavior, Gregory Demas Lab
Anticipated Graduation: May 2018

Stonehill College, Easton MA  Major: Biology
Bachelor of Science, May 2011  Minor: Health Care Administration

SCHOLARSHIP OF TEACHING AND LEARNING (SOTL) PUBLICATIONS & PRESENTATIONS

DISCIPLINARY PUBLICATIONS & PRESENTATIONS

RESEARCH EXPERIENCE
Indiana University, Demas Lab, Bloomington, IN
Graduate Researcher, August 2013 – Present
- Perform proper handling and care of animals, necropsies, retro-orbital blood sampling, hormone assays and euthanasia
- Proficient in techniques necessary to perform intraperitoneal injections (i.p.) in both adult and neonatal Siberian hamsters (Phodopus sungorus)
- Conduct studies focusing on the tradeoffs between the reproductive system and the immune system during early development in the Siberian hamster
- Records and scores play and reproductive behaviors in Siberian hamsters

Harvard Medical School and VA Boston Healthcare System – Laboratory of Neuroscience, Brockton, MA
Behavioral Neuroscience Researcher, January 2010 – May 2011
- Worked with Dr. Youngsoo Kim and Dr. Robert Strecker to analyze and report data through use of computer programs to hypothesize mechanisms of the sleep/wake cycle
• Applied classroom laboratory experience to perform data analysis of EEG and EMG recordings, staining and microscopy results, and neurodiagnostic implantations
• Learned immunohistochemistry, fluorescent microscopy, neuron mapping, use of sliding microtome, stereotaxic surgery and histological preparation methods

Stonehill Undergraduate Research Experience (S.U.R.E.), Easton, MA
Research Assistant at Harvard Medical School and VA Boston Healthcare System – Laboratory of Neuroscience, Brockton, MA, June 2010 – August 2010
• Conducted neuroanatomical research with Dr. Youngsoo Kim on rats’ brain regions during the sleep/wake cycle
• Learned technique of cutting rat tissue with sliding microtome
• Learned Molecular Biology and Immunohistochemistry procedures for brain tissue

UNIVERSITY TEACHING & PEDAGOGICAL EXPERIENCE
Indiana University’s Student Academic Center (SAC), Bloomington, IN
Peer Assisted Study Sessions (PASS) Program Graduate Assistant – Program Coordinator Aug. 2015 – Present
• Schedule and manage data for PASS sessions
• Create and lead pedagogical trainings for undergraduate PASS students
• Observe PASS sessions and provide ongoing feedback to help improve the PASS program

Indiana University, Bloomington, IN
Graduate Student Representative – Undergraduate Animal Behavior Major Curriculum Committee Aug. 2015 – Present
• Collect and analyze data from students enrolled in Animal Behavior course across multiple semesters
• Address curricular issues that arise
• Meet with faculty to determine possible changes to the curriculum

Indiana University, Bloomington, IN
• Provided support and guidance for advanced students under the guidance of Dr. Whitney Schlegel
• Taught guest lectures for the class and provided feedback via self-made rubrics
• Assisted in lab sections of the class via case-based and collaborative learning activities

Indiana University, Bloomington, IN
Associate Instructor of Biological Science for Elementary Teachers (Q201) Jan. 2015 – May 2015
• Provided main instruction for lab sections under the guidance of Dr. Pamela Hanratty
• Created in-class worksheets, quizzes and guides for students
• Graded and provided feedback on lab reports and individual projects

Indiana University, Bloomington, IN
• Provided support and guidance for advanced students under the guidance of Dr. Emily Chester
• Taught guest lectures for the course and provided feedback via self-made rubrics
• Assisted in classroom activities during the course

WORK EXPERIENCE
WorldCare Clinical, LLC, Boston, MA
Clinical Research Associate II, January 2013 – June 2013
• Used Standard Operating and Study Specific Procedures (SOPs/SSPS) concepts and practices in a time sensitive manner
• Maintained and updated trial tracking databases
• Used experience and judgment to assist in the development of trial SOPs
• Worked with the Project Manager (PM) to implement and monitor clinical research projects
WorldCare Clinical, LLC, Boston, MA  
Clinical Research Associate I, June 2011 – December 2012
  • Received, tracked and processed data from participating sites according to SSPs
  • Monitored clinical trials in 14 different countries for quality assurance
  • Followed site MRI, CT and PET scan protocols
  • Communicated with clinical research investigators on the progress of oncology trials

Stonehill College, Easton, MA  
Behavioral Research Assistant, January 2011 – May 2011
  • Cared and maintained Poecilia reticulata under the supervision of Dr. Bronwyn H. Bleakley
  • Cleaned and monitored the fish for health and safety

Brockton Neighborhood Healthcare Center, Brockton, MA  
Student Intern, September 2010 – December 2010
  • Assisted in the process of patient care and treatment in an outpatient setting in an underprivileged area
  • Evaluated vital signs of patients in various departments, including OB/GYN, Urgent Care, Adult Care, and Pediatrics
  • Performed venipuncture on patients
  • Researched and analyzed public health data on obesity in children

AWARDS & HONORS
  Kinsey Institute Student Research Grant (KISRG), June 2015  
  Honorable Mention, National Science Foundation (NSF) Graduate Research Fellowship Program (GRFP), April 2015  
  Sigma Xi Grant-in-Aid of Research, December 2014  
  CISAB Travel Award, November 2014  
  Indiana University Provost’s Travel Award for Women in Science, October 2014, February 2015  
  Indiana University Biology Departmental Research Recruitment Fellowship, August 2013  
  Stonehill Undergraduate Research Experience (SURE) Grant, June 2009  
  Stonehill Summer Science Bridge Program, August 2007

VOLUNTEER/OUTREACH
  Volunteer Facilitator for the Center for Innovative Teaching and Learning (CITL) Teaching Orientation for new Associate Instructors (AIs), August 2015  
  Volunteer Organ System Specialist, Cook Medical Anatomy, Physiology, and Product Experience for Interns – Surgery (SUR) with Gastrointestinal System, June 2015  
  Volunteer Judge, Indiana University’s Animal Behavior Poster Session, April 2015  
  Volunteer Biology Teacher, Foundations in Science and Mathematics, Summer 2014  
  Volunteer Mentor/Teacher, Girl’s, Inc. Life Sciences Camp on the Farm, Summer 2014  
  Volunteer Teacher, Childs Elementary School, Bloomington, IN, Spring 2014  
  Volunteer Judge, Brown County High School Science Fair, Nashville, IN, Spring 2014  
  Volunteer Judge, South Central Indiana Science Fair, Ivy Tech Community College, Bloomington, IN, Spring 2014  
  Participant, Walk for Breast Cancer, Boston, MA, Fall 2011  
  Participant, Relay for Life, Plymouth, MA, Summer 2013  
  Volunteer, Special Olympics, Stonehill College, Easton, MA, Spring 2011  
  Mentor, Into the Streets: Big Sister Big Brother, Brockton, MA, Fall 2007

PROFESSIONAL ORGANIZATIONS
  Member, AAAS/Science Program for Excellence in Science, May 2015 – Present  
  Associate Member of Sigma Xi, Indiana University Chapter, March 2015 to Present
Committee Chair, CISAB’s Animal Behavior Conference (ABC), Indiana University, Bloomington, IN, March 2015
Member, Center for Innovative Teaching and Learning (CITL) Graduate Student Learning Community (GSLC), Fall 2014 – June 2015
Member, American Physiological Society (APS), Fall 2014 to Present
Member, Society for Integrative & Comparative Biology (SiCB), Fall 2014 to Present
Member, Indiana Academy of Science, Summer 2014 to Present
Member, Indiana University’s Center for the Integrative Study of Animal Behavior (CISAB), Bloomington, IN, Fall 2013 to Present
Member, CISAB’s Animal Behavior Conference (ABC) Committee, Indiana University, Bloomington, IN, April 2014
President/Member, Stonehill College Biology Society, Fall 2007 – Spring 2011
Executive Board, Stonehill College Student Alumni Association (SAA), Spring 2009 – Spring 2011
Member, Stonehill College Health Care Society, Fall 2007 – Fall 2011

SKILLS

Computer Technology
Proficiency in both Mac and PC platforms, Microsoft Word, Excel, and Powerpoint, PACS, InteleViewer, AS-400 Database, Banner Information System, general Internet research

Laboratory Technology
Sleep Sign for Animal, Vital Recorder, Neurolucida, Picture Frame, Adobe Illustrator, ImageJ, Photoshop 11.0, VLC Media Player

Laboratory Techniques
Light and fluorescent microscopy, histological preparation techniques, immunocytochemistry, freezing microtome, rodent stereotaxic injection surgeries and perfusions, pipetting, sterile technique, cell staining, conducting necropsies, retro-orbital blood sampling, injections, euthanasia, general handling and care of animals

Clinical Techniques
Venipuncture, Urinalysis, Glycated Hemoglobin Test (A1C)

TRAINING

Collaborative Institutional Training Initiative (CITI) Human Research Social/Behavioral Researchers
Collaborative Institutional Training Initiative (CITI) Occupational Health and Safety Training for Personnel
Working with Animals, Stage 1
Collaborative Institutional Training Initiative (CITI) Working with the IACUC - Investigators, Staff and Students, Basic Course
Collaborative Institutional Training Initiative (CITI) Working with Hamsters in Research Settings, Basic Course
Collaborative Institutional Training Initiative (CITI) Working with Mice in Research - Basic Course
Amy K. Berndtson

Address:
Department of Biology
Indiana University
812-855-4842
aberndts@indiana.edu

Education:
1988: Ph.D., Biology: University of Notre Dame, Notre Dame, IN
Major Field: Comparative Endocrinology, Advisor: F.W. Goetz
Dissertation title: The role of proteolytic enzymes in ovulation of brook trout, Salvelinus fontinalis, and yellow perch, Perca flavescens, follicles

1983: BS, Biology: Marquette University, Milwaukee, WI cum laude

Employment:
2005-present: Senior Lecturer, Department of Biology, Indiana University

1999-2005: Lecturer, Department of Biology, Indiana University

1996-1998: Instructor, Department of Biology, University of the Incarnate Word, San Antonio TX

Research: Regulation of ovarian hormone production by bovine preovulatory follicles

Research: Isolation, characterization, and expression of two unique 3-methyl-cholan-threne-inducible genes in trout

Related Work Activities:
2014-present: Faculty Advisor, TEDx Indiana University

2006-present: Program Faculty, Human Biology, Indiana University

2011-2014: Member of Advisory Committee, Human Biology, Indiana University

2009-2013: Member of the Committee on Courses and Curriculum, Department of Biology, Indiana University

Teaching Honors and Presentations:
2009: Trustees’ Teaching Award, Indiana University
2003: Senior Class Award for Teaching Excellence and Commitment to Students, Department of Biology, Indiana University

“How to Succeed in 100-level Biology Courses” Groups Scholars, Indiana University, 2015

**Teaching Experience Indiana University:**
Department of Biology

**Currently Teaching:**
- BIOL-L 104: Human Reproduction
- BIOL-L 112: Biological Mechanisms
- BIOL-Z 469: Endocrinology Laboratory

**Previously Taught Courses:**
- BIOL-L 319: Genetics Laboratory
- BIOL-Z 466: Endocrinology

Human Biology

**Currently Teaching:**
- HUBI-B 300: Human Dilemmas

**Previously Taught Course**
- HUBI-B 200: The Intricate Human

**Publications:**


Berndtson, A.K. and T.T. Chen, 1994. Two unique CYP1 genes are expressed in response to


Molly Burke  
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EDUCATION
Rutgers University, New Brunswick, New Jersey  
Master of Arts and Doctor of Philosophy, Comparative Literature  
2003; 2006

Haverford College, Haverford, Pennsylvania  
Bachelor of Arts, Comparative Literature  
1999

WORK EXPERIENCE
Coordinator of Retention Services  
Student Academic Center, Indiana University Bloomington, Bloomington, Indiana  
2007-present

• Direct Phoenix Program for students on Academic Probation along with director of academic advising  
  o Coordinate research on retention with institutional research office and help to set effective retention policy  
  o Design and implement curriculum for Educ-X158, The Culture of College, 3-credit class required for students on Academic Probation, serving over 600 students per year  
  o Assess need for and create new programming, including Educ-X157, Continuing the Phoenix Program Success Seminar, 1-credit small group academic support class  
  o Train academic advisors in supporting students facing academic difficulty  
  o Use IU early alert and advising software to track student progress and assess need for intervention

• Coordinate other classes as needed, including Educ-X152: The Right Start, a first year seminar introducing students to the university environment and various resources at IUB & Educ-X153: Critical Reading and Reasoning for students in summer bridge program  

• Hire, train and supervise approximately 30 graduate instructors and undergraduate peer mentors  
• Teach Educ-L490, internship class for undergraduate peer mentors in training  
• Construct budget to fund programming  
• Perform outreach duties across campus as needed  
• Serve on Reinstatement Committee to evaluate petitions for readmission

Postdoctoral Teaching Fellow  
Tulane University, New Orleans, Louisiana  
2006-2007

• Taught two English 101 classes introducing critical reading and analytical writing  
• Designed service-learning project, proposed to community organizations and facilitated student arrangements

Tutor  
Tulane University, New Orleans, Louisiana and Rutgers University, New Brunswick, New Jersey  
2003-2007

• Assisted students with all aspects of the writing process, including basic reading and writing and ESL skills  
• Mentored newly trained tutors
Teaching Assistant 2001-2006
Rutgers University, New Brunswick, New Jersey
- Taught introductory and advanced classes in Comparative Literature, English, and Women’s and Gender Studies

AWARDS AND PRESENTATIONS

“How to Speak to Students about Academic Difficulty.” Invited presentation for IU Bloomington’s University Division Academic Advisor Training. Bloomington, Indiana. September, 2014.


OTHER EXPERIENCES AND COMPETENCIES
Soprano
Bloomington Chamber Singers, Bloomington, Indiana 2007-present
Vox Feminae/Musica da Camera, New Orleans, Louisiana 2006-2007

Crisis Line Volunteer 2007-2010
Middle Way House Women’s Shelter, Bloomington, Indiana
- Fielded phone calls to crisis line; assessed need for shelter; referred to other resources
- Staffed shelter one night per week: welcomed new residents, oversaw shelter procedures and regulations

Commissioner-in-Charge 2006-2007
Ninth Ward, New Orleans, Louisiana
- Oversaw and filed paperwork documenting voting in precinct
- Set up and closed down poll as per state regulations
Support Group Facilitator 2003-2005
Women Helping Women, Metuchen, New Jersey

- Trained in “strengths perspective” approach to counseling building on clients’ past successes
- Facilitated several ten-week support groups with co-facilitator for 8-10 diverse women seeking to improve self-esteem and meet personal goals
- Mentored newly trained facilitators, consulted with supervisor, assessed women’s changes, formulated approaches to issues within group

COMPUTER SKILLS: Proficiency using Microsoft Office Suite, including Word, Excel, PowerPoint and Outlook; PeopleSoft-supported SIS and HRMS functions

LANGUAGE ABILITIES: Moderate proficiency in Spanish and French
Anthony Guest-Scott  
Curriculum Vitae

507 Birch St.  
Ellettsville, IN 47429  
812-353-7078 (cell/home)  
aguestsc@indiana.edu

EDUCATION

Ph.D., Folklore and Ethnomusicology, Minor: Anthropology, 2014  
Indiana University

M.A., Folklore and Ethnomusicology, 2006  
Indiana University

B.M., Music Composition, 2000 (Summa cum laude)  
Virginia Commonwealth University

AWARDS, DISTINCTIONS, AND FELLOWSHIPS

Carl Ziegler Outstanding Instructor Award, Collins Living-Learning Center, Fall 2009

Louise McNutt Dissertation Year Research Fellowship, IU College of Arts and Sciences,  
Academic Year 2008/2009

RESEARCH

“An Inquiry into Purpose and Motivation as Catalysts for Retention,” Learning Analytics Fellows Program, Center for Innovative Teaching and Learning, Indiana University Bloomington  
2014-Present

- As part of a team of researchers that also includes Andrew M. Koke and led by principal investigator Molly Burke, investigating the efficacy of key curricular goals of a retention course required for University Division students placed on Academic Probation. This includes a robust qualitative examination of the relationship between student motivation and the multivalent purposes of higher education and its impact on retention and grade point average metrics.

Ph.D. Dissertation: “Culture, Metaculture, and the Unfolding of Four ‘Arab’ And ‘Middle Eastern’ Music And Dance Learning Events in The United States”  
2007-2011

- Multi-sited ethnographic exploration of how predominately white, middle class Americans make meaning through an extended engagement in annual “Middle Eastern” music and dance learning camps, retreats, and seminar events held in the United States. Expanding anthropologist Greg Urban’s metaculture concept, I explore how the ways in which participants in these events think about one another take shape according to the practice of their mutual construction at multiple levels of reflexivity: the teaching of specific songs, instrumental pieces, and dance techniques; communication about the most important elements of those forms; stereotypes about “American”
and “Middle Eastern” cultures and ethnicities (and their representative expressive forms); and ideologies of culture, music, knowledge, and experience (and the interrelationship between them) more generally.

M.A. Thesis Project: “Categories in Motion: The Use of Generic Multiplicity in Music Store Guitar Lessons,” Published in article form in Ethnomusicology 52(3).
2003-2006
- Ethnographic study of a large guitar lesson program at a Midwest music store.
- Explore how multiple musical genres are used both by music store staff and instructors themselves to define instructor identity and evaluate pedagogy proficiency, as well as the ways in which instructors draw upon an array of musical genres to construct their individual lesson programs for students.

UNIVERSITY TEACHING AND ADMINISTRATIVE EXPERIENCE

Academic Coordinator, Student Academic Center, Indiana University
August 2012-Present
- Design the curriculum and hire, train, and supervise the graduate teaching staff for two courses offered through the Student Academic Center.
- The first, “EDUC-X150: Becoming the Best Student” X150 is an 8-week concentrated crash-course in which students both 1) discover best practices and create and learn to use an individually tailored set of hard skills and strategies for academic study that they can apply in all of their classes (and beyond); and 2) grapple with the significance, and means of pursuing, the habits of heart and mind, the attitudes, qualities of character, and beliefs that inform best student behavior, learning, and academic success. About 600-700 students on average register for this course each academic year.
- The second, “EDUC-X159: You@IU,” is designed as an ideal beginning for freshmen and transfer students: the course decodes college, IU resources, and student development; connects students' personal goals with choices of major, degree, and career; and engages students in campus life and high-impact educational practices. About 120 students on average register for this course each academic year.
- Produce the SAC’s online workshop series (http://sacblog.indiana.edu). This series focuses on a wide variety of topics and skills to enhance undergraduate academic success and provide students the tools they need to reach the ultimate potential of a college education. New episodes in the series are released regularly.
- Assist in coordinating the EDUC-X152 University Experience courses during the summers.
- Work one-on-one with academically struggling students on overcoming complex obstacles and developing individualized plans for college success.
- Speak across campus to various units about a wide variety of topics relating to student academics, including learning styles, college classroom culture, teaching international students, etc.

Instructor, EDUC-X155 Critical Reading and Research Seminar. Topic: Unlocking Your Creativity. Student Academic Center, Indiana University
Spring 2015-present
The primary objectives of this course are:
- The transformation and expansion of students’ received models of what human creativity means, how it is to be understood, and how it can be used across the boundaries of discipline, field of study, and profession.
- The reorientation of student perspectives toward a new sense of critical thinking as essential “equipment for living”: an ability that is absolutely necessary to be a fully reflective human being with the capacity to render understandable even the densest of problems and arguments in a complex world.
- The combination of theory and practice to produce intellectually engaged, high-impact creative work. In other words, students will actively apply critical thinking to an expanded notion of human creativity as they complete creative exercises throughout the semester and as a final project. The form these creations take will be subject to individual students’ particular disciplines, fields of study, or hobbies and personal interests.
- The development of a set of sharpened and transferable reasoning skills, particularly as they can be used to analyze human experience and expressive forms, that students can apply to work in any university department or professional school and in the world beyond.

PRESENTATIONS

“This Is an Important Moment.” Presentation to all freshmen, Owen Valley High School. October 14, 2015.


“Just Add Performance.” Presentation at Ignite! Inquiry and Reflections about Teaching and Learning, Faculty Colloquium on Excellence in Teaching, Indiana University. February 27, 2015.


“College Academics.” Presentations delivered for incoming high school seniors as part of the Balfour Scholars Program’s Pre-College Academy at Indiana University. Summer 2013, 2014, and 2015.

“How to Take Notes, Read, and Study.” Presentation delivered as part of the First Year Success Conference, Office of International Services, Indiana University. September 24, 2014.

“Classroom Culture and Academic Success for Graduate Students.” Presentation delivered as part of International Graduate Student Orientation, Office of International Services, Indiana University. January 8, 2014.

“What Does My Professor Want from Me?’ and Other Classroom Questions.” Co-presentation with Kate Goldstein and Mike Kersulov as part of the International Student First-Year Success Series, Office of International Services, Indiana University. September 18, 2013.

“Academic Success and Motivation.” Presentation delivered as part of the training for new Residential Assistants working for Residential Programs and Services at Indiana University. August 13, 2013.

REFERENCES
Ruth M. Stone
Laura Boulton Professor of Folklore and Ethnomusicology
Indiana University, Bloomington
510 N. Fess, Room 100A
Bloomington, IN 47408
812-855-0398 (phone)
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Richard Bauman
Distinguished Professor Emeritus of Folklore
Professor of Anthropology
Professor of Communication and Culture
Indiana University, Bloomington
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Sue Tuohy
Senior Lecturer of Ethnomusicology
Department of Folklore and Ethnomusicology
Indiana University, Bloomington
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Bloomington, IN 47405
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crfreder@indiana.edu
MIRIAM E. ZOLAN

A. PROFESSIONAL PREPARATION:

<table>
<thead>
<tr>
<th>Institution</th>
<th>Department</th>
<th>Degree</th>
<th>Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Smith College</td>
<td>Biology</td>
<td>A.B.</td>
<td>1976</td>
</tr>
<tr>
<td>Stanford University</td>
<td>Biology</td>
<td>Ph.D.</td>
<td>1983</td>
</tr>
<tr>
<td>University of North Carolina</td>
<td>Biology</td>
<td></td>
<td>1983-1984</td>
</tr>
<tr>
<td>University of Michigan</td>
<td>Biology</td>
<td>Postdoc</td>
<td>1984-1986</td>
</tr>
</tbody>
</table>

B. APPOINTMENTS:

- 2003– Present: Professor, Department of Biology, Indiana University
- 1996–2003: Associate Professor, Department of Biology, Indiana University
- 1989–1996: Assistant Professor, Department of Biology, Indiana University
- 1985–1989: Assistant Professor of Biology, University of Michigan, Dearborn, MI

C. PUBLICATIONS:

(i) Specific Publications related to project:

(ii) Other Publications:


D. SYNERGISTIC ACTIVITIES

*Teaching-related Activities*

1997-2007 Founder and co-director of summer Research Experience for Undergraduates Program, Indiana University

2000 Development of Introductory Biology course under the auspices of a Lilly Endowment grant to foster retention of students in the sciences, Indiana University

2001 Participation in the Freshman Learning Project, a two-week teaching workshop devoted to the enhancement of student learning

2006, 2007 Instructor for a week-long, hands-on laboratory on DNA fingerprinting, a section of a Genetics course for high school sophomores and juniors

2006– Host laboratory for high school students engaged in year-long research projects

2008–2011 CoPI on Teagle Foundation grant, “Teagle Collegium on Inquiry in Action.” In this program, Biology doctoral students become “Teagle Fellows,” who form an interdisciplinary group (including the departments of Biology, Anthropology, and Communication and Culture). As part of the group, Fellows study and discuss issues in student learning and then develop and implement activities to enhance student participation and learning throughout a semester-length course. Teagle Fellows write course portfolios to document their progress as reflective teachers; it is anticipated that these portfolios will eventually form part of their application packages for academic positions.

2009 Chapter reviews of Biology (Campbell and Reese) for Benjamin Cummings

2005-present Developer and instructor for Pedagogy course for Biology doctoral students, “Mentored Teaching”

*Teaching-related Honors*

1990 Biology Department Teaching Award, Indiana University

1991 Senior Class Award for Teaching Excellence in Biology, Indiana University

1993 Faculty Colloquium on Excellence in Teaching (FACET) Award, Indiana Univ.

1997, 98, 2000 Teaching Excellence Recognition Award, Department of Biology, Indiana U.

2001, 2008 Trustees Teaching Award, Indiana University

2007 Elected Fellow, American Association for the Advancement of Science

E. COLLABORATORS AND AFFILIATIONS:

(i) **Current and former collaborators:** James Bever (Indiana University), Michael Lynch (Indiana University), Donald Natvig (University of New Mexico), Bruce Roe (University of Oklahoma), John Tainer (Scripps Research Institute).

(ii) **Former research advisors:**

Graduate advisor: Philip C. Hanawalt (Stanford U.)

Postdoctoral advisor: Patricia J. Pukkila (University of North Carolina)
(iii) Current and former advisees (last 5 years; *underrepresented minority students):
Graduate Students (10): Nicole Coffey, *Felicia Kennedy, Heather Palmerini, Elizabeth Sierra
Post-Doctoral Fellows (4): Claire Burns, Martina Celerin (no affiliation), *Sandra Merino
(Novozymes Biotech Inc.), Dai Tsuchiya (Indiana U.)
Undergraduate students mentored at Indiana University (more than 50)

F. COURSES TAUGHT IN LAST 3 YEARS

L112, Biological Mechanisms (introductory biology for majors; for Spring 2014, developed
new “hybrid” version of the course, which was offered to 250 undergraduates in the
Fall 2014 and Fall 2015 semesters
Z620, Mentored Teaching (graduate pedagogy course, provides hands-on experience in
teaching and extensive feedback, taught most Spring semesters)
Becky Andrews
1446 Coventry Lane, Munster, IN 46321 • (219) 741-7619 • rrandrew@indiana.edu

EDUCATION

Indiana University College of Arts and Sciences, Bloomington, IN May 2016
Bachelor of Arts degree, GPA 3.24/4.00
Major: Mathematics/Economics
Minor: Marketing
Certificate: Liberal Arts and Management Program (LAMP)
- Selective interdisciplinary certificate program that supplements the strengths of a Liberal Arts discipline with the practical skills of business management

PROFESSIONAL EXPERIENCE

General Electric Oil & Gas, Oklahoma City, OK May - July 2015
Financial Management Program (FMP) Intern
- Implemented a customized physical inventory checklist, directory, and box account for 26+ artificial lift sites to standardize the inventory process and minimize missing essential tasks, resulting in a more accurate count and reliability
- Assembled a facilities rent account reporting methodology to quickly identify incorrect bookings, resulting in the reclassification of ~$20k to the correct accounts
- Computed 10+ data reports utilizing a newly implemented methodology of gross profit elimination in order to accurately forecast GP Elim for the upcoming year
- Orchestrated the coordination and delivery of in house software training on our Physical Count Manager (PCM) system for 26+ sites in order to save on expenses
- Established working relationships with ~30 contacts from various remote locations in order to keep track of each sites’ progress towards a successful physical inventory
- Coordinated external auditors for site mandatory audits by scheduling site inspections and preparation
- Documented 4+ SOPs for gross profit eliminate, physical inventory, and facility rent account reporting in order for methodologies to be continually utilized

Timmy Global Health, Indianapolis, IN June - August 2014
Finance and Operations Intern
- Developed and reported 13 KPI’s as part of a balanced scorecard for management to evaluate growth
- Managed financial projects including donor follow up, database management, and general nonprofit management
- Constructed and implemented over 250 in-kind tax receipts and submitted donor information in eTapestry, an online database, ensuring up-to-date information is recorded
- Developed Excel models, which utilized 33 historical workbooks, for trip coordinators to properly forecast demand
- Analyzed statistical findings and recommended future resource adjustment to better fill medical needs of certain programs

Indiana University Student Academic Center, Bloomington, IN Aug 2014 - Present
Peer Assisted Study Session Leader
- Persuade students to come together in a collaborative environment to strengthen the independent learning and cognitive skills they need to perform well in the particular economics course
- Integrate and apply learning of course content in order for the students to develop study strategies
- Supervise a class of 12+ students by creating PowerPoints allowing students to openly discuss economic word problems

The Virtu Project, Bloomington, IN Jan 2014 - Present
Member
- Learn advanced investment skills through the intensive investment curriculum course 2 hours per week
- Identify and approach potential donors to contribute to the Virtu portfolio which benefits our philanthropic partner Timmy Global Health

Kelley Computer in Business, Bloomington, IN Aug 2013-May 2014
Peer Tutor
- Facilitated a class of 40+ students who are having difficulties with Microsoft Excel and Access by effectively explaining the material to the students, allowing them to understand the challenges of these programs
- Communicated effectively through email and discussions with course faculty to maintain the class at a quick pace

ACTIVITIES

The Virtu Project, Bloomington, IN Jan 2014 - Present
Member
- Learn advanced investment skills through the intensive investment curriculum course 2 hours per week
- Identify and approach potential donors to contribute to the Virtu portfolio which benefits our philanthropic partner Timmy Global Health

INTERESTS
- Intramural Volleyball (Captain) • Boxing • Photography • LAMP Marketing Team • Traveling
Ellen M. Brennan

9205 Compton St. Indianapolis, IN 46240 | 317-417-8374 | ellbrenn@indiana.edu

Education and Honors

International Baccalaureate high school diploma
Sophomore at Indiana University, attaining a Bachelor of Arts
GPA: 3.94/4.00
Majors: Economics, Political Science, German
Hudson and Holland Scholar
Hutton Honors College Scholar
Indiana University Foundation Scholar
German Academic Exchange Service Award

Skills

Work skills
· Tutoring (effective communication and understanding, mastery of area knowledge)
· Restaurant training (sanitizing, cashiering, solving customers’ problems thoroughly, cooperation/teamwork, following daily procedures)

Relevant classes
· Intro to Micro and Macroeconomics (A’s), Intermediate Microeconomics currently at the honors level
· Analyzing Politics Y205
· Statistics in Business and Economics E370

Foreign Languages
· Portuguese at native level
· Spanish with fluency
· German at conversational level

Work Experience

Jan. 2015-current Tutor in Economics, Indiana University Student Academic Center
· My job is to help groups of 5-20 IU students in Economics, an important class in the business setting, to better grasp the more difficult concepts of the subject through the use of pedagogical techniques and clear illustrations.

· I started out as a crew member doing typical restaurant chores and moved up to more managerial tasks such as inventory count, supply orders and creating deployment charts, in addition to training new employees to succeed.

Relevant Experience

· Collecting, compiling and analyzing personal survey data inferentially on relevant topics around campus for Analyzing Politics class
· Extensive Excel data manipulation in Business and Economics Statistics class
· After school tutor/mentor to underprivileged young children in West Philadelphia, demonstrating patience and service to the community
· Habitat for Humanity president in high school, demonstrating strong interpersonal skills and initiative; persuaded new members to join and help build houses
· Black belt in Tae Kwon Do, demonstrating discipline and commitment
Kirstyn L. Buck

Current Address: 333 E Brownstone Dr.  
Phone: (574) 209-1231  
Bloomington, IN 47408  
E-mail: klbuck@imail.iu.edu

Permanent Address: 3794 3rd Road  
Bremen, IN 46506

EDUCATION

Indiana University, Kelley School of Business, Bloomington IN  
Bachelor of Science in Business  
Majors: Finance and Economic Consulting  
December 2015  
GPA: 3.64/4.00

WORK EXPERIENCE

J.P. Morgan Chase & Co. -Indianapolis, IN  
Private Bank Summer Analyst  
June 2015 – August 2015

- Conducted diligent research on 30 prospective High Net Worth business owners for four Bankers to increase the office’s clientele base
- Generated 15 client performance reports and balance sheets in order for both Bankers and clients to gain a comprehensive understanding of their investment returns and net worth
- Devised two targeted long-term strategy presentations for identifying potential Northern Indiana and corporate executive clients that resulted in prospect meetings
- Networked with colleagues in other lines of the business to acquire more knowledge of the firm and expand my communication with other professionals in the industry
- Enhanced comprehension of clients’ relationships with the firm by compiling detailed checklists before meetings to thoroughly prepare the Integrated Team for their presentations

Wells Fargo Advisors -Indianapolis, IN  
Financial Advisor Intern  
June 2014 – August 2014

- Interpreted company performances and stock valuations to assist my manager to make sound investment strategies for his clients
- Formulated Envision wealth performance reviews to compile clients’ desires into tactical asset allocation proposals to produce high and stable investment returns
- Researched market trends and fluctuations to stay current on clients’ portfolio investments

Supplemental Instruction Indiana University -Bloomington, IN  
Economics Teaching Intern  
August 2014 - Present

- Direct weekly classes to foster a collaborative learning environment for 40 students to acquire teamwork skills, while improving their understanding Macroeconomics
- Strengthen teaching skills and ideas through weekly meetings with a team of 8 coworkers to develop new initiatives that cultivate higher student test scores

Activities

Kelley School of Business Coaching Program -Bloomington, IN  
Business Communications Academic Coach  
August 2013 - Present

- Evaluate business essays to help students meet the objectives of their assignments and advance their aptitude in business communications to implement throughout their business careers
- Educate Kelley students in grammar and writing skills used in business presentations and communications in order for them to converse professionally and competently

National Society of Leadership and Success -Bloomington, IN  
Scholar –SNT Leader  
August 2013 – May 2015

- Developed leadership skills by attending motivational convocations, and participating in biweekly success group sessions to plan methods to meet personal objectives
- Collaborate with a group of 5 members to work through their struggles and encourage them to achieve their personal and professional goals
Victoria Consolvo
Cell: (317) 413-7002
vconsolv@indiana.edu

EDUCATION
Indiana University, Bloomington, Indiana
Intended Majors/Minors: Economics, Philosophy, English
Overall GPA: 3.75

EXPERIENCE
Undergraduate Peer Tutor
Writing Tutorial Services, Indiana University, Bloomington, IN
December 2014 - Present
Assist undergraduate students with writing assignments and projects in Academic Support Centers and libraries on campus

PASS (Peer Assisted Study Session) Leader - Microeconomics
Student Academic Center, Indiana University, Bloomington, IN
August 2015 – Present
Lead weekly review sessions for undergraduates taking introductory microeconomics; perform review exercises, assist with homework, administer informal quizzes, and act as an assistant to the professor

Undergraduate Advisory Board Member
Philosophy Department, Indiana University, Bloomington, IN
July 2015 – Present
Meet with other undergraduate philosophy students and the Director of Undergraduate Studies to discuss current and future events and academic affairs in the Philosophy department

Tutor
Monroe County Public Library, Bloomington, IN
October 2014 – Present
Tutor teens in Math and Science areas every week for two hours, on a voluntary basis; help them to complete homework and projects

Volunteer (Usher)
Indiana University Cinema, Bloomington, IN
October 2013 – December 2014
Greet guests, take tickets, show guests to their seats, and assist the house manager before, during, and after films

OTHER EXPERIENCE
Hostess, Elly’s Pancake House, Chicago, IL
May 2014 – August 2014
Shift Manager, McDonald’s, Brownsburg, IN
April 2011- June 2015

RELATED SKILLS/RECOGNITION
Proficient Spanish Speaker
Knowledge of Excel and Stata
IU Cox Legacy Scholar
IU Coca-Cola First Generation Scholar
IU Prestige Scholar
Summer School Student at the London School of Economics – Summer 2015
Themester Undergraduate Symposium Nominee, Spring 2014

References Available Upon Request
Alex Rangazas
205 S. Jefferson St, Bloomington, IN 47408
Phone: (317) 374-9503 E-Mail: alexrangazas@gmail.com

Experience

Research Assistant 7/14-9/14
- Worked with Excel cleansing data for further research (Political Science Department).

Undergraduate Intern – Economics 1/15-5/15
- Undergraduate teaching assistant for Intermediate Micro-Economics (E321)-Best Student in class is selected each semester.
- Held office hours to help students as well as graded and recorded homework.

Student Academic Center – Teaching Intern 8/14-current
- Lead Peer Assisted Study Sessions that supplement economics and mathematics classes.
- Prepare lesson plans and lead groups of between 10-30 students. Develop teaching skills.

Education

Indiana Academy (High School) Grad: May 2013
Indiana University Currently enrolled in classes
- In third year at Indiana University.
- Currently hold a 3.9 GPA as a Math-Econ Major
- Currently have enough credits to graduate with a Math-Econ Interdepartmental Major at the end of this year, Spring 2016.

Skills/Achievements

- Technical: Proficient in Microsoft: excel, word, PowerPoint, Experience in STATA, Mathematica
- Communication: Substantial experience teaching groups of students (10-20)
Michael York  
yorkma@indiana.edu  •  (317) 503-9815

EDUCATION

Indiana University – Kelley School of Business – Bloomington, IN  
Bachelor of Science in Business  
Major: Economic Consulting – Co-major: Sustainable Business
  • Fred and Della Spencer Scholarship Recipient
  • Founders Scholar Award Recipient
  • Service Learning Project in Canberra, Australia

Hamilton Southeastern High School – Fishers, IN
  • Graduated in the top ten percent of my class of 715 students
  • Susan Wong Award, Set a Good Example Award, Senior Speaker Award

JOB EXPERIENCE

Indiana University, Student Academic Center – Bloomington, IN  
TI (Teaching Intern) - Microeconomics  
August 2014 – Present
  • Lead groups of students in an independent collaborative study session
  • Explain and reiterate economic concepts and specific class problems to assist in the learning process

City of Bozeman – Bozeman, MT  
Short Term Volunteer Intern  
July 2015 – August 2015
  • Interviewed Bozeman Energy Project participants, gathering data on energy usage
  • Crafted case studies for each company to report on the municipal webpage

Depco Parts Inc. – Noblesville, IN  
Summer Internship  
July 2014 – August 2014
  • Complied, analyzed and mined data followed by the creation of dashboards for upper level employees

Laser /Shipping Assistant  
August 2012 – May 2013
  • Assisted with the exact demands of customers related to the creation of customer designs and engraving products

ACTIVITIES

Sustainability Service Learning Project – Canberra, ACT (Australia)  
May 2015
L272 Sustainability Down Under – Group participant (researcher, writer, and presenter)
  • Researched, wrote and presented an analysis and set of recommendations to the Commissioner of Sustainability and the Environment of Australian Capital Territory based on their growth metric reform

Kelley School of Business – Bloomington, IN  
K201 (The Computer in Business) Peer Tutor  
January 2014 – May 2014
  • Selected by the department for high marks in the course to help assist with lab classes
  • Assisted students, the professor, and the teaching assistant in teaching and assessing Microsoft Access and Microsoft Excel skills

DECA – Indianapolis, IN  
Participant – Second in state  
November 2011 – March 2012
  • Competed, with my three man team, in the written entrepreneurship section of the competition
  • Wrote out a business plan for a mock company and gave a speech over this company

SKILLS & INTERESTS

Microsoft Excel  •  Data Analysis  •  Environmental Health  •  Communication  •  Volleyball

Current Address:  
315 E. 11th Street  
Bloomington, IN 47408

Permanent Address:  
13241 Fenwick Street  
Fishers IN, 46037