

## **S&H Fulfillment Patterns and Their Effect on Student Retention and Performance**

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## Abstract

As state and federal legislatures increasingly focus on reducing tuition costs and time to degree for college students, more colleges have emphasized the acceptance of transfer credits that allow students to fulfill general-education and breadth-of-study requirements at a lower cost. At the same time, studies note a 40% enrollment in remedial writing courses at 4-year doctorate-granting institutions public universities, a trend that also contributes to college graduates' lack of expertise in critical thinking, argumentation and writing. Balancing the necessary decrease in time to degree with curriculum plans that emphasize more and more rigorous courses will help equip graduates of Indiana University to succeed in a very competitive job market. To encourage that balance, our goal is to study patterns in student fulfillment of IUB GenEd S&H requirements and attempt to understand how the variety of options available for S&H transfer credits affect student engagement, retention and performance. Specifically, we will measure whether and how retention rates and academic performance differ for students who fulfill GenEd S&H requirements through dual-enrollment courses in history. We will compare these students to students who fulfilled S&H requirements via AP, transfers from 2-year institutions, and from IU-system institutions, with an eye to documenting and understanding the effect of dual-enrollment credit on student performance, retention and engagement. The data that results from this project will help inform ongoing changes to Indiana's ACP curriculum in history, IUB history department curriculum, and to the literature on how dual-enrollment courses should and can function in disciplines where learning outcomes are primarily made in less easily measurable skills like critical thinking, argumentation and writing.

## Project Description

### Purpose & Significance

As state and federal legislatures increasingly focus on reducing tuition costs and time to degree for college students, more colleges have emphasized the acceptance of transfer credits—via AP or ACT scores, transfers from community colleges, and dual-enrollment credit—that allow students to fulfill general-education and breadth-of-study requirements at a lower cost (Scott-Clayton, 2011). At the same time, studies note a 40% enrollment in remedial writing courses at 4-year doctorate-granting institutions public universities, a trend that also contributes to college graduates' lack of expertise in critical thinking, argumentation and writing (National Postsecondary Student Aid Study, 2012; Arum, 2011).<sup>1</sup> Balancing the necessary decrease in time to degree with curriculum plans that emphasize more and more rigorous courses will help equip graduates of Indiana University to succeed in a very competitive job market.

This study will use SIS/IUIE records to examine IUB students who fulfilled GenEd breadth-of-inquiry S&H requirements using dual-enrollment courses in history and compare them to students who fulfilled S&H requirements via AP, transfers from 2-year institutions, and from IU-system institutions, with an eye to documenting and understanding the effect of dual-enrollment credit on student performance, retention and engagement. On a broad basis, we will then use that data to better understand the effects of structure and timing of both GenEd and CASE S&H requirements on student performance and retention across the curriculum. More narrowly, we hope to clarify the sometimes-contradictory conclusions about learning gains from dual-enrollment studies and studies of other transfer-credit mechanisms for history-specific courses and use that understanding to make data-driven recommendations about the structure and content of the dual-enrollment Advance College Project (ACP) history program overseen by faculty in the IUB Department of History.

While many studies of student performance suggest that students who take advantage of dual-enrollment opportunities specifically, and other transfer-credit opportunities more generally, tend to perform as well as or better than their peers (Taylor 2015; Allen, 2012), there are also studies that demonstrate reduced academic performance and retention (National Postsecondary Student Aid Study, 2012; North, 2010). This tension is the result of several issues: a focus on credits largely assessed by easily measured knowledge (first-year Spanish, basic college-level math, etc.), on academic momentum in the early stages of a college career (an increase in first-year retention rates and in two-year progress-to-degree rates) rather than on longer-term retention and overall performance, and on dual-enrollment at 2-year institutions. Dual enrollment outcomes for less easily measurable skills like critical thinking, argumentation and writing—precisely the areas in which S&H credits have demonstrated value—are worse for dual-enrollment students (Arum, 2011; North, 2012).<sup>2</sup>

More locally, assessments of Indiana's own ACP history curriculum and instruction by the IUB faculty who oversee the program suggest that ACP dual-enrollment courses are not equivalent in either rigor or content compared to the same

<sup>1</sup> Remedial data at [https://nces.ed.gov/das/library/tables\\_listings/showTable2005.asp?popup=true&tableID=3017&rt=p](https://nces.ed.gov/das/library/tables_listings/showTable2005.asp?popup=true&tableID=3017&rt=p)

<sup>2</sup> Arum R, Roksa J and Cho E. (2011) *Improving Undergraduate Learning: Findings and Policy Recommendations from the SSRC-CLA Longitudinal Project*. Brooklyn, NY: Social Science Research Council..

courses offered at IUB.<sup>3</sup> Changing requirements for teachers providing ACP instruction at the high school level further complicate the picture. A planned increase in content-area graduate-level credit hours for teachers from 6 to 18 has tentatively been postponed from Fall 2017 to Fall 2022. The bulk of the transfer credits that fulfill IUB GenEd S&H courses for students engaged in dual-enrollment efforts are coming not from 2-year institutions (POLS-Y 103 is the only S&H course in the top-10 list of transfers from Ivy Tech) but from these dual-enrollment credits offered through ACP, making it vital to understand the variances in student performance and retention for the current ACP environment.

### Methods

Using SIS and IUIE data, we will divide students into experimentation groups based on where and how they fulfilled their CASE and GenEd S&H requirements. We will correct for academic performance prior to matriculation at IUB and then analyze these groups using propensity score matching (PSM; Rosenbaum, 1983) for several patterns: academic performance (as measured by GPA), retention rate (measured after each year, 1-6 years), and progress to degree (as measured by credits earned year over year). We will also look at these same questions for students who engage in additional S&H elective courses beyond the required 6 credit hours but who major in non-S&H disciplines, both within the College of Arts and Sciences and in other IUB schools.

### Outcomes

The data that results from this project will provide a roadmap for a number of things. On a narrow basis, the Department of History administers Indiana's ACP program, and this data will allow us to make data-driven decisions about future content refinements, teaching requirements and student assessments for dual enrollment courses at Indiana high schools.

On a departmental scale, we plan to use the results of this larger, quantitative study to inform smaller, more qualitative studies of history learning outcomes in a variety of classroom environments, including online vs face-to-face courses and lecture vs active-learning classrooms. Once we have these big findings, we'd also like to do a more specific look at introductory 100- and 200-level history credits gained from a range of venues, and how they affect future performance in subsequent 200- and 300-level courses and major performance. The original data set will allow us to pull out history-specific credits given to people who fit the criteria for likely history majors, allow us to put some of these quantitative data in context and link grade outcome in S&H requirements to history learning outcomes more directly.

For IUB students at large, these big data will further help us to understand the wider universe of outcomes that we see from students satisfying S&H training in the full variety of possible ways. The data will provide better insight into the value of S&H requirements for all IUB students as we work to improve both the quality of students' critical thinking, argumentation and writing skills, as well as the College of Arts and Science's messaging about the value of S&H breadth-of-study requirements to prospective students and their parents.

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<sup>3</sup> <https://www.historians.org/publications-and-directories/perspectives-on-history/september-2015/noble-intentions-can-dual-enrollment-be-reformed>

Finally, this project will add to the literature on dual-enrollment course design and help the educational community at large make data-driven decisions about how dual-enrollment courses should and can function in disciplines where learning outcomes are primarily made in less easily measurable skills like critical thinking, argumentation and writing.

## Select References

- Allen D and Dadgar M. (2012) Does dual enrollment increase students' success in college? Evidence from a quasi-experimental analysis of dual enrollment in New York City. *New Directions for Higher Education* Summer 2012(158 (Special Issue: Dual Enrollment: Strategies, Outcomes, and Lessons for School–College Partnerships)): 11-19.
- Arum R, Roksa J and Cho E. (2011). *Improving Undergraduate Learning: Findings and Policy Recommendations from the SSRC-CLA Longitudinal Project*. Brooklyn, NY: Social Science Research Council.
- “National Postsecondary Student Aid Study 2011-12,” National Center for Education Statistics, 2012. Remedial statistics at [https://nces.ed.gov/das/library/tables\\_listings/showTable2005.asp?popup=true&tableID=3017&rt=p](https://nces.ed.gov/das/library/tables_listings/showTable2005.asp?popup=true&tableID=3017&rt=p).
- North T and Jacobs J. (2010) *Dual Credit in Oregon, 2010 Follow-up: An Analysis of Students Taking Dual Credit in High School in 2007-08 with Subsequent Performance in College*. Eugene, OR: Office of Institutional Research, Oregon University System.
- Rosenbaum, Paul R.; Rubin, Donald B. (1983). "The Central Role of the Propensity Score in Observational Studies for Causal Effects". *Biometrika* 70 (1): 41–55. doi:10.1093/biomet/70.1.41
- Taylor JL. (2015) Accelerating Pathways to College: The (In)Equitable Effects of Community College Dual Credit. *Community College Review* 43(4): 355-379.



## DEPARTMENT OF HISTORY

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INDIANA UNIVERSITY  
College of Arts and Sciences  
Bloomington

**KALANI CRAIG**

### APPOINTMENTS

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**Clinical Assistant Professor, Department of History**

*Indiana University—Bloomington (Bloomington, IN)*

*Aug 2015-present*

- Dissertation: “Struck by a divine blow! Divine and human agency in representations of conflict resolution by early medieval bishops, 500-1150 C.E.” under the direction of Deborah Deliyannis, with Edward Watts, Leah Shopkow, and Diane Reilly.

**Lecturer, Hutton Honors College**

*Indiana University—Bloomington (Bloomington, IN)*

*Jan 2013-May 2015*

- Medieval European history, medieval Chinese history and world history prior to 1500.

### EDUCATION

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**Ph.D., History**

*Indiana University (Bloomington, IN)*

*May, 2013*

- Dissertation: “Struck by a divine blow! Divine and human agency in representations of conflict resolution by early medieval bishops, 500-1150 C.E.” under the direction of Deborah Deliyannis, with Edward Watts, Leah Shopkow, and Diane Reilly.

**M.A., History**

*Portland State University (Portland, OR)*

*2007*

- Medieval European history, medieval Chinese history and world history prior to 1500.

**B.A., Honors English**

*Scripps College (Claremont, CA)*

*1995*

- Summa cum laude and Phi Beta Kappa, with History minor.

### RESEARCH & TEACHING EXPERIENCE

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**INSTRUCTOR OF RECORD**

*Hist-H213, The Black Death*

*Fall 2015*

- A survey of the cultural, social and economic factors in worldwide of bubonic plague, 500 C.E. – 1900 C.E.

*Hon-H211, Ideas and Experiences I: Crisis and Culture in the Ancient and Medieval Mediterranean*

*Spring 2013*

*Fall 2013, Spring 2014*

*Fall 2014, Spring 2015*

- A literary-history survey of the Mediterranean (1200 B.C.E. – 1500 C.E.).

*Indiana University (Bloomington, IN), Department of History*

*Summer 2002*

- H206 “Medieval Civilizations,” a Mediterranean-world survey (500 C.E. – 1500 C.E.). Conducted pedagogical experiment by designing a 5-step assignment process aimed at students’ synthesis of primary sources and historical arguments for Teaching and Learning of History Project. Summer 2010.

## PUBLICATIONS AND TALKS

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### PUBLICATIONS

- “Bishops and Balancing Acts: Divine and Human Agency in Gregory of Tours’ Vision of Episcopal Authority,” in *Envisioning the Bishop: Images and the Episcopacy in the Middle Ages*, edited by Sigrid Danielson and Evan Gatti (Brepols, 2014).
- “The Ouroboros; or, How ‘Digital’ and ‘Humanities’ Will Shape Each Other in the Near Future” for the “New Horizons [The Technologies Ahead]” editorial column in *EDUCAUSE Review* 46, No. 5 (September/October 2011).

### INVITED TALKS

- Plenary speaker for “AHA Getting Started in Digital History” at the *130th annual meeting of the American Historical Association*, Atlanta, GA, October 12, 2015.
- “Custom Data Mining, Data Visualization and GIS Solutions for Historians,” in “Digital Tools and Workflow for Historians,” *Preparing Future Faculty Workshop*, Indiana University—Bloomington, Bloomington, October 18, 2013.
- “Crafting an Integrated Digital Persona,” in “Putting Yourself Out There Digitally: Using Social Media for your Academic Studies,” *IUPUI Digital Sandbox Workshop*, IUPUI, Indianapolis, August 15, 2013. (<http://iupuidh.wordpress.com/>)

### SELECT CONFERENCE PAPERS

- “Workflows for Medievalists with Open Data Ideals and Closed-Source Texts” in “What does active learning look like in Canvas?” in “Medieval Data: Prospects and Practices” at the *50th International Congress on Medieval Studies*, Medieval Institute, Western Michigan University, May 14–17, 2015
- “Establishing Primary Source Veracity Using Digital Tools” in “Digital Pedagogy for History: Lightning Round” at the *129th annual meeting of the American Historical Association*, New York, NY, January 2-6, 2015.
- “The Living Syllabus: Linking Classroom Activities, Course Assignments, and Learning Outcomes in Canvas” in “What does active learning look like in Canvas?” at *Making it Click: 2014 Indiana Statewide IT Conference*, Indiana University—Bloomington, October 8, 2014.
- “‘Aut damnat aut corrigit’: A Digital Search for the Origins of Gregorian Church Reform Language” in “The Portrayal of Religious Change in *Gesta* and *Vitae Episcoporum* and *Abbatum*” at the *49th International Congress on Medieval Studies*, Medieval Institute, Western Michigan University, May 8–11, 2014.
- “A Brief Tour of Digital Solutions to Medieval Mediterranean Pedagogical Predicaments” in “Teaching the Mediterranean Middle Ages” at the *128th annual meeting of the American Historical Association*, Washington, D.C., January 2–5, 2014.

- “Bishops and Balancing Acts: Divine and Human Agency in Gregory of Tours’ Vision of Political Authority” at *Shifting Frontiers IX: Shifting Political Frontiers in Late Antiquity*, Pennsylvania State University, June 22, 2011.

## HONORS, DISTINCTIONS & AWARDS

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### RESEARCH AND WRITING AWARDS

- HASTAC Scholar**, representing the digital-humanities community at Indiana University to the national HASTAC community  
*Humanities, Arts, Science, and Technology Advanced Collaboratory* 2011-2012

### TEACHING AWARDS

- Susan O’Kell Memorial Award for Outstanding Associate Instructor**  
*Department of History, Indiana University* 2010-2011
- Competitive teaching award for summer lectureship**  
*Department of History, Indiana University* Summer 2010

## RELEVANT PROFESSIONAL EXPERIENCE

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- Project Manager and Lead Instructional Designer**  
*Kelley Executive Partners, Indiana University (Bloomington, IN)* May 2013– May 2014
- Oversaw the content production of and instructional-design guidelines for an online MBA certificate for life-sciences professionals.
  - Hired, managed, and provided editing support for faculty and instructional designers contracted to provide content for online learning platform.