Excellence, Innovation and Ingenuity in Honors Education

Excellence, Innovation and Ingenuity in Honors Education

Edited by Graeme Harper

Cambridge Scholars Publishing



Excellence, Innovation and Ingenuity in Honors Education

Edited by Graeme Harper

This book first published 2019

Cambridge Scholars Publishing

Lady Stephenson Library, Newcastle upon Tyne, NE6 2PA, UK

British Library Cataloguing in Publication Data A catalogue record for this book is available from the British Library

Copyright © 2019 by Graeme Harper and contributors

All rights for this book reserved. No part of this book may be reproduced, stored in a retrieval system, or transmitted, in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without the prior permission of the copyright owner.

ISBN (10): 1-5275-2803-0 ISBN (13): 978-1-5275-2803-1

CONTENTS

Foreword vii
C hapter One1 An Opening Note on Ingenuity <i>Graeme Harper</i>
Chapter Two
Chapter Three
Chapter Four
Chapter Five
Chapter Six
Chapter Seven

vi	Contents
Chapter Eight Innovation and Inclusion – Applying Design Thinking Lorelle A. Meadows, Mary	and Lean Startup in the Honors Context Raber and Laura Kasson Fiss
Chapter Nine International Epidemics: P of Innovation Honors Edu <i>Rajini Srikath and Louise</i>	ublic Health as a Cornerstone cation <i>Penner</i>
Chapter Ten Enhanced Student Leaders Brian Railsback	hip in Honors: A Case Study
Chapter Eleven Critical Global Citizenship High Impact Study Abroad <i>Melinda Yeomans</i>	DEducation: An Honors Seminar Model for and Intercultural Bridges of Understanding
Chapter Twelve Leading for Change in Ho Jaclyn M. Chancey, Leigh	nors Education E. Fine and Jennifer Lease Butts
Contributors	
Index	

FOREWORD

What is innovation? Such a simple question. One that I often ask C-Level executives and junior staff alike. Most of the time they give a look of "isn't it obvious?". Then they try to describe it, and the answers prove that there is a wide interpretation of what the concept is. Even though the term shows up in the majority of corporate mission or value statements, leaders can't describe consistently what the concept even means. Typically, their words fit into a pattern that I like to call "the 4 I's". Imagination, Invention, Improvement, and real Innovation. Imagination is a mind set to form new ideas. Invention is making something new or novel, Improvement is making something better, while Innovation is applying an invention to create value for a stakeholder. Words matter, and specifically in these words, leaders must understand that the reason that innovation is so critical to their success is the ability to translate new ideas into value!

Innovation is clearly one of the most important capabilities that organizations need to effectively compete in our fast moving, digital, global world. At times of significant disruption, the ability for an organization to properly conceptualize new business value, rapidly test the concepts, and drive the change into the market, becomes critical. Finding the mindset to celebrate the learning from failures equally with the prize from success is critical to making innovation work in your environment.

Developing the ability to imagine, to invent, to improve, and to ultimately to innovate the world around you is a life long journey. Why wait. Get started. Be Brave!

Greggory R Garrett

Gregg is the CEO of CGS Advisors, LLC a boutique strategy and innovation advisory firm helping Fortune 500 leaders transform their firms to more effectively compete in the connecting world. He keynote speaks globally and lectures at several business and engineering schools on the topics of innovation and transformation. He is also the author of the bestselling book, *Competing in the Connecting World* (Lioncrest Publishing)

CHAPTER ONE

AN OPENING NOTE ON INGENUITY

GRAEME HARPER

Introduction

For the purposes of grounding this discussion, excellence is defined here as something outstanding or eminently good. Innovation is defined as something new, a product or process that is potentially transformative. These two definitions are relatively traditional and are likely widely recognized. While honors education might face many challenges its association with the ideals of both excellence and innovation is rarely one of them. However, there is a third ideal benefitting our sense and practice of honors education, not least because of the association of honors with human capability and creativity, and that is the ideal we most often call ingenuity. Addressing ingenuity is not as evident today in honors as are its companion ideals. It should be.

Ingenuity is associated with inventiveness and skill. It is differentiated from innovation by not being as determined as innovation is by newness. It is therefore possible to be innovative while displaying ingenuity; but you are not necessarily displaying ingenuity while being innovative. The specific contribution of ingenuity to human life and human actions is located in individual and communal adaptability and resilience. Thus, while the notion of innovation promotes newness and yield – that is improvement, forward projection – it is the concept of ingenuity that powers initiative, astuteness and dexterity. Again, both innovation and ingenuity are associated with excellence. But it is ingenuity that highlights and develops resourcefulness.

Why Ingenuity in Honors Now?

Since the birth of honors in the USA nearly a century ago, the world has of course changed, and certainly honors education has changed with it, more

Chapter One

or less. But the difference between honors programs and colleges and other experiences in higher education still remains today the honors breadth and depth of context, beyond a particular disciplinary specialization. Essentially a liberal arts story. This coupled with a sense of one form of knowledge being emboldened and empowered by associations with other forms of knowledge, including knowledge gained and explored through experiences well beyond the classroom (so, study abroad, community service, site-specific undergraduate research). What informs this is a belief in preeminent educational experiences that befit supporting high achieving and gifted students.

As a common example of how we speak about honors, in a 2015 issue of the Journal of the National Collegiate Honors Council, George L. Hanbury II, President of Nova Southeastern University sets out in his article, "Advancing University Core Values by Developing an Honors College", a number of wonderful contributions of honors colleges and programs that also impacted on his university's decision to found an honors college. He notes: "this relationship [faculty members being inspired by enthused and engaged students] is the foundation of academic excellence and is the heart of the honors tradition." (Hanbury) and that "honors education champions innovative educational models." (Hanbury). Clearly, excellence and innovation feature in Hanbury's comments. Ingenuity does not. This is a common factor in analysis of honors education and, indeed a common element in how honors is developed and managed, theoretically and practically. Such things as whether a particular honors college or program uses a particular method of admitting students. Or employs a particular method of developing and supporting student projects in research or service. Or offers opportunities for a variety of cultural experiences, both home and abroad. Or selects and locates its classes in ways that challenge pedagogic convention. These things are always put into relief by the breadth and depth of context honors offers. Such epistemological complexity is unrestrained by disciplinary tracks or the significant impact of such things as professional accreditation. Or indeed by the requirements of a profession. Or even very much by the structures of credit requirements seen in majors and minors or similar. All this is seen to be most successful if the focus is on the experience of the student and impact of that experience on the lives, their outlook and their character.

Indeed, the world did change. And honors education did change too, more or less. But the changes that have been evident are not necessarily the changes needed today. It has been possible to introduce the technologies of the last quarter of a century into the honors environment. To launch and extend the use of social media. To embrace new social consciousness, where such has in any way been evident. To literally and figuratively travel further and wider in search of knowledge. However, the fact that honors education is so person-centered always asks us to consider not only the content of honors classes or the modes of delivery, not only what is taught and learnt to whom and by whom, but the ontological parameters that encompass and inform the lives of students. We have not yet done that thoroughly enough when it comes to honors education today.

Ontological change, changes in the nature of being, challenge our educational outlooks without necessarily changing them immediately or, some might say, changing them for some time. Educational institutions carry the weight of institutional systems and structures that can slow our ability to change, and to respond to change. Some also might say, more positively, that this provides protection against faddishness or against a mostly reactive education that would potentially undermine the validity of branches of knowledge, unsettle the bedrock on which they are based, or shift understanding from a contextual one to a transitory one, making such understanding flimsy or overly ephemeral. Regardless, one of the more prominent features of the past guarter of a century of human life, particularly in the developed and developing worlds, is the speed of change - a speed encouraged, influenced and supported by new digital technologies. Such speed of change and the breadth of such changes impacting on our social as well as our working lives, on modes of communication, the ability to create and manage human networks, access to information, and the volume of information that is now accessible -- has asked us to consider how what we experience in the world (that is, ontological conditions) is reflected in our epistemological strategies (that is, how we educate ourselves and those around us). In doing so, not only speed of recent change but the character of that change – heightening the interactive, connective, information-rich, influences well beyond the local or regional, greater immediacy and expectations of accessibility – needs addressing if we are to properly map epistemology onto ontology, the world we experience and what those living in it need to know to be successful in that world.

Dexterity, resourcefulness, resilience and adaptability are all personal and professional needs brought further to the fore by changes we have seen in the developed world over the past quarter of a century. These have thus become more pressing needs in the working population, as well as widely in communities and, specifically, in the work of leaders who by the nature of their roles aim to exert influence and make an impact. Because in honors education we make claims to be attuned to educational excellence, we are of course located at the forefront of developing that influence and impact. Innovation might be a component of honors, and excellence a widely understood goal within honors, but it is to ingenuity we must today turn in order to evolve the next iteration of honors, attuned to our contemporary world, in order to ensure the relevance of what we do.

An Ingenuity Guide: Honors Innovation with Excellence in Action

Clearly, we cannot simply insist upon ingenuity in honors education and ingenuity will happen. Clearly too ingenuity has a relationship with innovation, so much so that some commentators have grounded ingenuity *within* innovation, rather than as a separate concept, while others appear to use innovation and ingenuity synonymously and move freely between aspects of the two as if they are conceptually indistinguishable. A better method of addressing our contemporary need for honors ingenuity is to map ingenuity practices onto innovation principles and acts. By this method, to look to ways in which we can enhance our attention to creativity, inventiveness, newness and novelty to ensure when we speak of honors meeting the requirements of excellence (that is, by definition, being outstanding and being eminently good) that we mean *in the contemporary world* and *for current honors students*. To do this, we can create a simple guide using ingenuity-focused questions. For example:

- In what ways is your honors college or program adaptable and creating graduates who are adaptable?
- Have you a definition of dexterity that influences your classes, service, research, and any other of your requirements so that your realm of honors education is informed by such a definition? Dexterity is specifically about performing tasks and is therefore inherently methodological. Are there opportunities offered to delve deeply into methodological choices and the impacts of those choices?
- Simply, but significantly, have you created a "skills map" so that in a world in which resourcefulness and resilience are challenged by the speed of change and the breadth and complexity of connectivity these are clear?
- How do you assess astuteness and does this relate to how an honors student and, ultimately, an honors graduate responds to the world around them?

- Do you celebrate and reward flair? If so, how? Defining what we mean by flair can assist in creating rubrics for the assessment of ingenuity. Flair is defined as aptitude and originality.
- If resourcefulness is core to ingenuity what elements of your program or college develop and heighten resourcefulness?
- How is resourcefulness measured and, assuming a progressive educational narrative from freshman to senior honors student, is there a strategy to build chronologically on a resourcefulness ideal?
- Do you recognize and reward wit? Seemingly a strange question perhaps! But wit is a characteristic of ingenuity, and it is often a component of human empathy and successful communication. In a contemporary world where success is increasingly reliant on the ability of an individual to connect swiftly, with intention, with others, and often with others well beyond their immediate social or cultural group, wit is a worthy attribute and a frequent advantage.
- How do you develop gumption among your honors students? This question could, instead, be a reference to initiative or enterprise. But the advantage of using the word "gumption" is that it suggests a colloquial, anecdotal, informal aspect because, of course ingenuity is about application, about the doing of something, and the idea of a formalized "gumption" where initiative and enterprise are taught but mostly unused would be a contradiction. So, indeed, honors student gumption how it is developed in your program?
- If indeed the world changed and honors education changed, more or less: what are the elements related to the contemporary world with which honors students have adeptness, show expertise, have developed a command, show finesse, or have notable strengths?
- Ingenuity being defined by agility, and the contemporary world being one in which the speed of much we do and experience has increased, how is an enhancement of agility embedded into your honors college or program?

These are simply sample questions, framing questions that could be adopted or adapted to local circumstances. More so, they are offered here merely as a guide to the kinds of questions that a consideration of an ingenuity strategy brings about. Such a focus is not a challenge to pursuing honors innovation; rather, it is an enrichment of it. An enrichment that deals not only in the epistemological but in how we respond positively to ontological changes so that when we speak of excellence in honors education we are speaking not only of how knowledge is exchanged but how this relates to our actual experiences in the world.

Conclusion

As many know well, in the USA honors education at collegiate level harks back as far as the beginning of the 19th century. Its initial manifestations saw sundry attempts to give particularly motivated, high ability students access to more personal attention and to provide experiences that would most benefit these students who appeared to find the general level of college work less of a challenge than did their fellow students. By the time collegiate honors was recognized in more sustained ways in the American honors program work of the early 1920s, then the honors college foundations of the late 1950s, and ultimately in the launch of the National Collegiate Honors Council (NCHC) in 1966, the idea that a collegiate honors education should be a matter of close student-teacher alliances and active individualized learning was firmly established. Along with this came the notion that honors education should by its nature be in some sense better education, not least because it was recognizing the quality of the student with which it was dealing, but also because it was bound in concepts of opportunity that were to be afforded the gifted or high performing student.

To move from ingenuity being a note concerning our honors practices to a position where ingenuity is *noteworthy* within honors education needs more than our casual attention. It requires concerted, informed, welldefined thinking about what ingenuity is, how it works, and how it can be developed. This too is the case if we are to address what is emerging out of honors programs and colleges: that is, our graduates, their skills and their knowledge, as these pertain to the world in which they these graduates will live and will work. Because of the interwoven and lavered reality of all this - involving pedagogies, research practices, service learning, exposure to varied cultural perspectives, epistemological methodologies and ontological perspectives - it likely needs us to urgently address questions not of what honors education today is but of what it might now become. In doing this we will be ensuring an honors education for a world that has changed so rapidly, and with such widespread consequences, that to simply deal with knowledge and education in the ways we once did when honors education first became formalized is not good enough. It is certainly not good enough if honors education today, and in the future, is truly to be better education for students who seek to excel.

Notes

 1 Hanbury, George L. II, "Advancing University Core Values by Developing an Honors College" (2015). Journal of the National Collegiate Honors Council -- Online Archive. Paper 461, p.93 2 p.94

CHAPTER TWO

THE ROLE OF INTERDISCIPLINARY TEACHING IN THE HONORS CURRICULUM: INSIGHT FROM A PUBLIC LIBERAL ARTS UNIVERSITY

HEATHER N. TINSLEY, ANDREA ECKELMAN, ERIN CHANDLER AND CATHLENA MARTIN

A profound, enduring classroom experience occurs when students acquire foundational knowledge and skills, apply their knowledge and skills to real-world problems, integrate learned knowledge to construct a "big picture" world view, and connect their learning to themselves and the world around them (Fink 2003). These types of experiences allow students to gain valuable higher order skills such as analytical problem-solving skills and an appreciation for diversity. Time and again employers rate these skills as being far more important for career success than a college graduate's major or basic knowledge of a given field (Hart 2010, 2013, 2015).

Interdisciplinary instruction has emerged as one of the leading approaches due to its demonstrated ability to impact student motivation and learning well beyond the classroom. Interdisciplinary instruction is a form of integrated pedagogy that combines the knowledge from discrete disciplines in a way that demonstrates and fosters the connections between the disciplines (Klein 2005). It requires that an issue be examined from multiple viewpoints and that those viewpoints be integrated to form a unified perspective.

Traditionally, interdisciplinarity in American higher education is achieved through either learning communities or team-taught courses, each of which has its own advantages and disadvantages. Considering the dynamics at our institution – the University of Montevallo, a small public liberal arts university located just outside Birmingham, Alabama – we have found these traditional models to be limited in scope and effectiveness. In response, we have developed a composite model that augments our existing use of the traditional interdisciplinary approaches to allow for more flexibility within our honors curriculum. In this chapter, we describe each of these strategies for interdisciplinary instruction, discuss their impacts on students, and define their roles within higher education and honors curricula.

Our Institution

The University of Montevallo has an average annual enrollment of 2,700 students and a student-to-faculty ratio of 16 to 1. Located in Montevallo, Alabama – a small college town 45 miles south of Birmingham and 65 miles north of Montgomery – the University was founded in 1896 as the Alabama Girls' Industrial School with the purpose of educating women to be self-supporting. Although men began enrolling in the university in the late 1950s, the University still holds strong to its roots with a student body that is 70% female, significantly higher than the national average of 56%. The University of Montevallo also has higher percentages of low income and first-generation students compared to the national averages.

As a liberal arts university, the University of Montevallo follows the AAC&U's model of education as "an approach to learning that empowers individuals and prepares them to deal with complexity, diversity and change...[to] help students develop a sense of social responsibility, as well as strong and transferable intellectual and practical skills such as communication, analytical and problem-solving skills, and a demonstrated ability to apply knowledge and skills in real-world settings." We have a strong emphasis on interdisciplinary instruction with a number of interdisciplinary degree programs, including Interdisciplinary Studies, Game Studies and Design, Environmental Studies, and African American Studies.

We also have a robust Honors Program that is centered on interdisciplinary instruction with 150-200 high-achieving, academically motivated students. The mission of the University of Montevallo Honors Program is to provide intellectually talented students with specially designed academic offerings, co-curricular activities, and recognition. To this end, the University of Montevallo provides Honors students with four special features in their college experience: (1) Honors classes, with limited enrollment, specially designed and taught by supportive faculty, (2) community, time spent in one another's company, (3) recognition and encouragement, public and private, to persevere, and (4) additional opportunities outside of the classroom, including cultural/fine arts excursions and professional development workshops.

The Honors Program contributes to the intellectual and personal growth in the pursuit of meaningful employment and responsible, informed citizenship through content which helps students understand diverse social perspectives, human behavior, and national and international politics and situations. The program offers courses from numerous departments and colleges through a wide variety of faculty participation. The academic dimension of the program is composed of two types of honors classes – those that satisfy the university's general education requirements and upper-level courses that are intended to supplement the students' course work. This second group of courses are traditionally seminars on topics that are best considered within an interdisciplinary context. These courses may be taught by a single professor or team-taught but are typically cross-listed and create interdisciplinary learning experiences.

While our composite model adds a new and unique dimension to interdisciplinarity in our honors curriculum, it was developed in response to challenges related to our unique student population and campus climate, which we have experienced using traditional interdisciplinary approaches at our University. For example, as low-income students, a large portion of our students must work while in school and have demanding work schedules; many of our first-generation students live at home and have arduous family obligations outside of the classroom. These scenarios make the block scheduling that is often required of learning communities difficult to implement. Alternatively, our university boasts a low student to faculty ratio as well as a limited reliance on adjunct faculty. This restricts the ability of faculty to team-teach if doing so would prevent them from teaching a discipline-specific general education or major course.

Models of Interdisciplinary Instruction

Learning Communities

By definition, learning communities are part of a curricular approach implemented in America as early as the 1920s. They are grounded in a "collaborative learning effort by a learning team" that allows individuals from diverse backgrounds to come together to learn about the "complex systems in which they exist, affect others, and work" (Cox, 2004; Dufour 2004; Smith et al. 2004; Stewart 2012). As is described in the ERIC Digest on Learning Communities, learning communities can exist in five different formats – linked courses, cluster courses, freshman interest groups, coordinated studies, and federated learning communities (Kellogg 1999).

In linked courses, students co-enroll in two different courses, one of which is typically content based (i.e. history) while the other is typically skills based (i.e. writing). Instructors of the linked courses coordinate their material and assignments to complement one another. For example, a writing instructor may encourage students to draw on topics from their history course for their writing assignments.

Cluster courses are similar to linked courses, except students are enrolled in three or more courses simultaneously. The courses that make up the cluster are often redesigned around a shared theme such as a particular time period or issue.

Freshman interest groups build off of the cluster course model. Students co-enroll in three or more courses, but these courses are centered in a particular major. In addition to the traditional courses, students also participate in a seminar that includes a peer advising component to help students acclimate to the major.

In the coordinated studies model, content from multiple courses is taught in a large credit-hour umbrella course. The umbrella course centers on a particular interdisciplinary theme (i.e. nature), then content is presented within that theme by faculty teams in blocks. Students receive credit for disciplines that are represented in the course. In the case of the nature theme, students may receive credits in science, literature, and art, depending on how the course material is designed and presented.

In a federated learning community, students complete three or more courses as well as a seminar. The instructor of the seminar course completes the clustered courses with the students and uses the seminar to help students synthesize their learning from the linked courses.

While there are obvious differences in the formats of the different types of learning communities, the common theme is that a small group of students work together to learn and synthesize information from multiple disciplines. Like other forms of interdisciplinary teaching, learning communities link two or more courses, allowing students to begin identifying the complexity of social issues while gaining exposure to problem solving within complex social environments (Smith *et al.* 2004).

Unlike other forms of interdisciplinary teaching, students participating in learning communities are, together, deeply immersed in the content of multiple disciplines. This allows students to "build a sense of group identity, cohesiveness, and uniqueness that encourage continuity and the integration of diverse curricular and co-curricular experiences" (Schroeder 1994). The result of this is four-fold – students acquire social and

13

educational support networks that often sustain them through their higher education careers, students take on a more active role in their learning and the learning of others as they gain an appreciation of educational citizenship, the quality of student learning is enhanced, and students persist at significantly higher rates (Tinto 2000).

In addition to their impacts on students, learning communities also have the potential to profoundly impact an institution and drive institutional change (Smith et al. 2004). For instance, a 2015 study of learning communities that surveyed learning communities at four-year institutions describes curricula focused on understanding the institution and emphasizing civic discourse and engagement (Otto et al. 2015). This type of knowledge can extend beyond the courses of the learning community and impact other areas of both the academic and non-academic life at the university. In fact, the best practices guiding all models are community building, diverse perspectives, curricular integration, active learning, and ongoing reflection and assessment, values that extend beyond the learning community itself (Smith et al. 2004; Otto et al. 2015). Furthermore, by working together to link their courses through common themes, faculty who participate in learning communities are forced to shift their focus beyond teaching basic knowledge and skills to an emphasis on higher order skills like application and synthesis.

That said, learning communities face a number of limitations, particularly at a school like the University of Montevallo. For example, our strict student learning outcomes and current means of assessing those outcomes make large curricular changes as would be necessary to adopt a learning community model all the more difficult. Additionally, high teaching and advising loads limit the willingness and ability of faculty to devote the necessary time to developing such courses. Professors at our institution are also keenly aware of the issues that our particular student demographic faces: students who are working 20 or more hours a week and/or caring for family must have flexibility with scheduling classes, something that is not afforded by the blocked nature of learning communities. Moreover, the stresses faced by our students in both their academic and personal lives also limit their abilities to collaborate outside of class, preventing the community building that has been shown to be important for learning community success.

While these factors have prevented our adopting an official learning community model university-wide, other attributes of our institution have allowed us to establish pseudo living-learning communities within the Honors Program. Through collaboration with our Residence Life office, the Honors Program has a committed residence hall in which honors students can live together and get to know one another outside of the academic space. The Program also offers HNRS 100: Honors Introductory Experience, a one-hour seminar course that is required for all incoming honors freshmen each fall. This course is designed to introduce the approximately 40 incoming honors freshmen to each other, provide a common intellectual experience, and impress the Program's intellectual goals and mission. Additionally, this course promotes the integration of the freshmen into the honors community through the use of peer mentors. Through these activities. HNRS 100 strives to build connections: the student-to-student (peer) connection, the student-to-Program connection, and the student-to-campus (support service/co-curricular) connection. Furthermore, because of the sizes of our institution and our Honors Program, we only offer a single section of each honors course per semester. This means that many students will be enrolled simultaneously in multiple honors courses, again building the community and common intellectual experience of a learning community model. This also provides opportunity for faculty to collaborate on common themes; however, not all students are enrolled in all courses, so, while faculty can complement one another's courses, they cannot fully integrate their content and learning experiences.

Team Teaching

While team teaching has been a technique utilized on American college campuses since the 1960s, it did not fully take hold until the 1990s. This slow start is partly due to some disagreements over how to define the instructional approach. Hatcher, Hinton and Swartz (1996) define team teaching as "two or more instructors collaborating over the design and/or implementation of the same course or courses" (p. 367). On the other hand, Gurman (1989) asserts that team teaching is "an approach in which two or more persons are assigned to the same students at one time for instructional purposes" (p. 275). For the purposes of discussing team teaching from the perspective of interdisciplinary instruction, we will utilize Gurman's definition but add the caveat that the two instructors must be from distinct academic disciplines.

The popularity of team teaching has rapidly grown as scholars have outlined its many benefits for both students and faculty. With respect to students, this method has been shown to increase students' capacity for critical thinking, course performance, and personal satisfaction (Hamer and O'Keefe 2012). Possibly specific to team taught courses, students experience enhanced dialogue through exposure to multiple perspectives on a topic (Anderson & Speck 1991; Andersen 1991; Hale and Klaschus 1992). In a team-taught course, students witness their teachers being model learners by illustrating the value of multiple perspectives; this is something that can really only be adequately conveyed when instructors are interacting together in the classroom. Bowen and Nantz (1992), in their assessment of their experience, stated "...we frequently raised dissimilar issues in discussion. By displaying these alternative perspectives, we hoped that the students would see their own views as valid and worthy of discussion" (p.30). This type of experience is particularly valuable in today's political climate, wherein students are reticent to speak to each other when they know disagreement is possible. By having instructors model disagreement and discourse, the students learn how to talk effectively about a topic.

The benefits of team teaching do not end with the students. Faculty also experience personal and professional growth after a team teaching experience. Similar to learning communities, team teaching requires faculty to transition their instruction from basic knowledge and skills to the higher order skills of application, synthesis, and analysis (Hamer and O'Keefe 2012). By framing their content within a discipline other than their own, instructors are forced to consider the strengths and weaknesses of their own discipline and the discipline of their teaching partner while also considering how their discipline's methods can be used to reach the goals of another discipline and vice versa (Abbot and Nantz 2012). This exercise can significantly expand a faculty member's problem-solving toolkit in much the same way it does their students. Team teaching can also be a tremendous boost to a professor's professional life by providing an opportunity for cooperative educational research with the possibility of scholarly contributions like publications (Hamer and O'Keefe 2012).

Although team teaching poses an easier logistical hurdle than learning communities because it involves developing a single course rather than two or more, it is not without its own concerns. Namely, it requires twice the number of instructors than a traditional course. At a university like ours that strives to maintain a low student-to-faculty ratio and to limit use of adjunct faculty while still offering the necessary courses for timely graduation, it is difficult for faculty to commit to team teaching because it would require the instructor to abandon a course (possibly a general education course or upper level major course) that s/he would normally teach. This issue varies across the campus with some disciplines, particularly those in the humanities, having more flexibility to allow for team teaching, while other disciplines like the hard sciences and professional programs have less flexibility. The discipline-specific limitations are particularly problematic when the goal of interdisciplinary instruction is to instill in students a broad worldview.

Attitudes about team teaching can further complicate the issue. In their study of Masters of Business Administration faculty, Hamer and O'Keefe found that faculty resist team teaching because they view it as too radical, too soft, too difficult, and too time consuming (2012). Little and Hoel found that students are resistant to completing a team-taught course because they thought the course would be more work or brought in unnecessary concepts (2011). While students' attitudes changed after completing a carefully designed team-taught course, faculty attitudes did not. For this reason, it is important that this instructional method is not forced onto faculty. If administrators wish to build a team teaching program at their institution, they should offer professional development, financial incentives, and other resources to help faculty change their perspective before volunteering for this endeavor. Additionally, faculty who are team teaching should be transparent with their students about the benefits of the model and guide them through the process in order to amplify the gains that they experience.

Despite the logistical challenges of team teaching, we have built a robust team teaching program at the University of Montevallo. Many of our interdisciplinary programs, particularly Environmental Studies, rely heavily on the instructional strategy in their curricula. Team teaching is also a consistent presence in upper-level honors courses. For example, there have been four team taught 300/400 level honors courses offered in the last two academic years. These courses include Astronomy, taught by Mathematics and Philosophy professors; Environmental Justice, taught by Biology and Social Work professors; Social Change through Social Marketing, taught by Marketing and Social Work professors; and Current Environmental Issues, taught by Biology and Philosophy/English professors. Courses like these promote the Honors Program's goal of helping students understand diverse social perspectives.

Composite Model

Recognizing the limitations of learning communities and team-taught courses as outlined above but also realizing the importance of interdisciplinary instruction for our liberal arts mission, we have developed a composite model to interdisciplinary teaching that satisfies the needs of our University and solves many of the drawbacks of the other models. In our model, two or more courses are taught within their distinct disciplines (i.e. Political Science, English Composition, and Biology) but the students are brought together on a regular basis throughout the term to collaborate on a shared learning experience. This model requires that students draw on knowledge gained in their individual course's discipline in order to explore a theme or idea with links to all disciplines in the project.

Unlike the clustered learning community model where students are enrolled in all three courses at the same time, students are only enrolled in one of the three courses. This attribute of the model better suits our student demographic by allowing students exposure to interdisciplinarity without the strict blocked scheduling requirements of a learning community. This also means that students are immersed only in the content of one rather than two or three courses; however, the shared learning experience exposes them to the other disciplines, thus achieving the goals of interdisciplinary instruction. This exposure can take on different meanings depending on how the model is executed.

For example, we have used this model to link Political Science, Honors Introductory Biology, Literature, and/or Honors English Composition courses. The three classes were scheduled at the same times, meeting twice weekly during the semester. Each course met individually to cover course-specific content then all three courses came together every third class meeting for a shared learning experience. For the shared learning experience, students worked in cross-course groups to evaluate an ongoing pollution issue in North Birmingham. Over the course of the semester, student groups explored the underlying issues that lead to the pollution, evaluated the impact that the pollution had on the communities and culture of the area, and developed plans for short- and long-term solutions. The culmination of the semester was when students presented their proposals to a panel of community leaders. Students were expected to serve as "experts" representing the discipline corresponding to the course in which they were enrolled, i.e. biology students were responsible for relating scientific information to the group. This required that students apply their subject-specific knowledge to the greater issue under discussion. Issues raised during the shared learning experience also served as discussion topics during the individual class meetings, thus thoroughly engaging the students in the theme.

In this composite model, the students were only enrolled in one of the three courses but each of the courses is a component of our general education curriculum. Therefore, it is highly likely that the students have already been or will be exposed to the other disciplines at some point in their educational career. In this situation, the composite model helps students appreciate the relevance and interrelatedness of the various disciplines involved, i.e. knowledge of biology is important when drafting environmental policy, understanding both political climate and structure can be foundational for interpreting culture and place within a literary work. This is particularly important for general education courses, which many students view as a hassle and unnecessary due to the lack of relatedness of such courses to the students' own lives or their particular field of study (Abbot and Nantz 2012).

The composite model has also been considered for linking upper-level Social Work and Theatre courses. In this scenario, students in both courses would study mental illness but from different perspectives; the social work students would be interested in the clinical presentation and treatment of the illnesses while the theatre students would be interested in the behaviors and mannerisms of mentally ill persons. The students would then come together to simulate for the social work students a clinical encounter with a mentally ill patient. In this version of the composite model, students will be exposed to disciplines that they would not normally encounter. However, this exposure is relevant because it is promoting a deeper understanding of the students' own discipline while showing them alternative points of view.

The variability with which the composite model can be applied to achieve interdisciplinarity is one of the advantages that has eased its implementation for us. As demonstrated in the two examples above, it can be used with any level course, from an introductory-level general education course to an upper-level major course. This alleviates several of the issues that we have encountered with team teaching. Instructors no longer have to abandon a course that they typically teach; instead they can adapt one of their usual courses to fit this model. Additionally, disciplines with less course flexibility now have a means of incorporating interdisciplinary courses into their curricula.

A model similar to our composite model, called UBC Mix, has also been developed and implemented at the University of British Columbia. Students who completed the program found that "interdisciplinary learning offers new and different perspectives, opens opportunity for knowledge exchange and collaborative learning, and creates moments for 'real' world application" (Fox *et al.* 2014). While more research is necessary to fully elucidate the benefits of this new model, the assessment of UBC Mix confirms its validity as another approach to interdisciplinary instruction.

Unfortunately, the composite model does not eliminate all of the problems posed by the other models. One of the biggest issues that we have encountered is negative attitudes. Any form of interdisciplinary instruction forces students and instructors outside of their comfort zones. It requires everyone involved in the course to apply traditionally siloed concepts to new problems and to think about problems from different perspectives. Because it pushes learning to a higher level, it requires more work on the part of the instructors and the students. As is recommended for team teaching, institutions that wish to adopt this model should offer the appropriate training and incentives for faculty, and faculty who adopt this model should explain their rationale to their students deliberately and often.

Despite these issues, we found that this composite model can serve an innovative and unique place within the Honors Program curriculum. Prior to the development of this model, honors students were not necessarily exposed to interdisciplinary instruction until they reached the 300/400 level honors courses; this model allows students to gain exposure as early as their freshmen year. Moreover, this approach links the two types of honors classes that we offer and more effectively acclimates our students to interdisciplinary thinking. Additionally, because we have used this model to link honors and non-honors courses, honors students are provided a unique leadership opportunity in which they are able to model their higher order skills and academic motivation for traditional students, who may not be exposed to such traits in their peers otherwise.

Conclusion

Interdisciplinary instruction is a necessary component of college curricula in the 21st century, helping students develop skills required for the changing world. Learning communities and team teaching are two well established approaches to interdisciplinary instruction known to enhance student motivation, build higher order skills such as analytical thinking and problem-solving abilities, and increase appreciation for diverse perspectives. To the existing literature, we add the novel composite model, which allows for more flexibility while purportedly achieving comparable goals. In practice, the composite model replicates the ways in which knowledge is both field-specific but highly variable in the site it is implemented. In other words, what students may perceive as a general education class that is only a hurdle to jump through becomes instead a necessary precursor to understanding how deliberative practice functions in higher-level major-specific courses. The skill sets gained from the composite model enforce the necessity of these general education courses when students discover they have consistently been exposed to an interdisciplinary model of learning that need not sacrifice content-specific instruction. If implemented at multiple levels of the undergraduate

curriculum, the composite model allows students to have more contact with professors across the university, leading to better faculty-student relationships and demonstrating the ways professors in different disciplines can effectively communicate. To this end, students also are empowered to think in broader and more concrete terms about knowledge gained in all of their classes. The truth is that the more exposure students have to interdisciplinary instruction, the more transformative the higher education experience can be for the students and the more opportunity the students will be afforded to impact the communities in which they ultimately find themselves. The honors classroom—full of honest, motivated, and successful students—supplies the perfect laboratory space for developing these types of courses and longitudinally assessing the value of these models.

Works Cited

- Abbot, W. & Nantz, K. A. (2012). Building Students' Integrative Thinking Capacities: A Case Study in Economics and History. *Issues in Integrative Studies.* 30: 19-47.
- Andersen, L.R. (1991). Improve the quality of instruction through interdisciplinary internationally oriented faculty resource teams. Washington, D.C: Fund for the Improvement of Postsecondary Education. (ERIC Document Reproduction Service No. ED 369 309).
- Anderson, R. & Speck, B.W. (1998). Oh What a Difference A Team Makes: Why Team Teaching Makes a Difference. *Teaching and Teacher Education*. 14(7), 671-686.
- Bowen, B. & Nantz, K. (1992). Where the Breakthroughs Came: Team-Teaching Across the Disciplines. *Issues in Writing*. 5(1), 23-36.
- Cofflan, J., Hannemann, C. & Potter, R.L. (1974). Hassles and hopes in college team teaching. *Journal of Teacher Education*. 25(2), 166-169.
- Cox, M.D. (2004). Introduction to faculty learning communities. In M.D. Cox & L. Richlin (Eds.), *Building faculty learning communities* (pp. 5–23). New Directions for Teaching and Learning, no. 97. San Francisco, CA: Jossey-Bass.
- Crossman, D. & Behrens, S. (1992). Affective Strategies for Effective Learning. Paper presented at the Annual Conference for the Association for Educational Communications and Technology. (ERIC Document Reproduction Service No. ED 344 573).
- DuFour, R. (2004). What is a "professional learning community"? *Educational Leadership*, 61(8), 6–11.

- Engstrom, C. M., & Tinto, V. (2008). Access without support is not opportunity. *Change*, 40(1), 46-50.
- Fink, L. D. (2003) Creating Significant Learning Experiences. San Francisco, CA: Jossey-Bass.
- Fox, J.A., Baloy, N., & Sens, A. (2014). Mix and match: Promoting interdisciplinary teaching, learning, and community through classroom-level partnerships. *Collected Essays on Learning and Teaching*, 7(2).
- Gurman, E.B. (1989). The effect of prior test exposure on performance in two instructional settings. *The Journal of Psychology*. 123(3), 275-278.
- Hale, V. & Klaschus, C. (1992). Team teaching: Adventures in pedagogy. In Reithlingshoefer, S.J. (Ed.), *The Future of Nontraditional/ Interdisciplinary Programs: Margin or Mainstream*? (pp 299-306). ERIC Document Reproduction Service No. ED 346 789.
- Hamer, L. O. & O'Keefe, R. (2012). Innovative Team-Teaching: Faculty Perceptions and Administrative Policies. *Journal of Academic Administration in Higher Education*. 8(1): 59-68.
- Hart Research Associates (2010). Raising the Bar: Employers' Views on College Learning in the Wake of the Economic Downturn. Washington, DC: AAC&U.
- -. (2013). It Takes More than a Major: Employer Priorities for College Learning and Student Success. Washington, DC: AAC&U.
- —. (2015). Falling Short? College Learning and Career Success. Washington, DC: AAC&U.
- Hatcher, T., Hinton, B. & Swartz, J. (1996). Graduate student's perceptions of university team-teaching. *The College Student Journal*. 30(3), 367-376.
- Hertzog, C.J. & Lieble, C. (1994). Arts and Science/School of Education: A Cooperative Approach to the Teaching of Introductory Geography. *Proceedings of the National Conference on Successful College Teaching*, Orlando, FL. (ERIC Document Reproduction Service No. ED 390 470).
- Kellogg, K. (1999). Learning Communities, ERIC Digest. ERIC Clearinghouse [Retrieved 2018, January 24].
- Klein, J. T. (2005). Integrated Learning and Interdisciplinary Studies. *PeerReview*. Summer/Fall: 8-10.
- Letterman, M.R. & Dugan, K.B. (2004). Team Teaching Across a Cross-Disciplinary Honors Course: Preparation and Development. *College Teaching*. 52(2), 76-79.

- Little, A. & Hoel, A. (2011). Interdisciplinary Team Teaching: An Effective Method to Transform Student Attitudes. *The Journal of Effective Teaching*. 11(1): 36-44.
- Otto, S., Evins, M., Boyer-Pennington, M., Brinthaupt T., (2015). "Learning Communities in Higher Education: Best Practices" *Journal* of Success and Retention 2(1).
- Rinn, F. & Weir, S. (1984). Former Champ Makes Comeback: Yea, Team. *Improving college and university teaching*. 32(1), 5-10.
- Schroeder, C.C. (1994). Developing learning communities. In C. Schroeder and P. Mable (Eds.), *Realizing the educational potential of residence halls* (pp. 165-189). San Francisco: Jossey-Bass.
- Smith, B. L., MacGregor, J., Matthews, R. S., & Gabelnick, F. (2004). Learning communities: Reforming undergraduate education. San Francisco, CA: Jossey-Bass.
- Smith, P.L., & Ragan, T.J. (2005). *Instructional design* (3rd ed.). Hoboken, NJ: Wiley.
- Steward, M. (2012) "Instructional Redesign: Developing Learning Communities in Academia." *Performance Improvement* 51(3), 24-29.
- Tinto, V. (2000). Learning Better Together: The Impact of Learning Communities on Student Success. *Journal of Institutional Research*. 9(1): 48-53.