UNDERGRADUATE RESEARCH WITH INTERNATIONAL STUDENTS

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Abstract

Over the last decade, pedagogies have shifted toward high impact practices, asking students at US universities to engage in undergraduate research, for example. At the same time, the enrollment of international students, especially in the business and economics disciplines, has increased substantially until 2019. This study focuses on student performance and the pedagogical strategies of teaching a required undergraduate economics research capstone course with a majority of international students from China and South Korea. Differences between the pedagogical practices of the home and host countries are highlighted with reference to Confucian Heritage Learners. Ten years of performance data from the capstone course reveal that international students are more likely to successfully complete their undergraduate research experience than domestic students but earn lower grades in the process. This corroborates the hypothesis that Confucian Heritage Learners may struggle with undergraduate research requirements at US universities. A number of strategies are discussed that were implemented to help international students complete their capstone experience course. International students received focused help with ideation, application of the scientific method, language preparation and plagiarism, as well as cultural knowledge.

Key Words: capstone course, undergraduate research, international students, Confucian Heritage Learners

JEL Classification: A22

Introduction

In 2004, the economics department at a large comprehensive regional public university in the Western United States implemented a required capstone experience course for all economics majors. This course was added as 'Research Methods' to the major program and requires all students to conceive and complete an independent research project that demonstrates understanding of the scientific method, an approach that is outlined, for example, in the textbook 'Doing Economics' by Greenlaw (2006). By requiring a capstone experience that asks students to engage in original knowledge creation, the department sought a more deliberate approach to skill development and curricular planning, wanting to provide students with multiple opportunities to engage in aspects of undergraduate research. In that regard the department sought to become an exemplary economics program as described in Hoyt & McGoldrick (2017), DeLoach et. al. (2012) and Wagner (2015). Using the required capstone course as an assessment point for basic knowledge in micro- and macroeconomics, as well as an assessment of other departmental learning outcomes, helped this process of curriculum planning and skill development. Prior to the introduction of the required capstone course economics majors were

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rarely involved in undergraduate research.

In 2008, after the economics department had started to incorporate 'Research Methods' into its program, it placed in a small group of only 10% of all economics programs to require such a course (McGoldrick, 2008). Over time, required senior theses have become more prevalent among economics programs (Siegfried and Walstad, 2014; Hoyt and McGoldrick, 2017).

Just a few years after the described curricular change, the number and composition of economics majors within the department changed dramatically due to a successful implementation of an international transfer program that recruited economics majors from partner universities in China and South Korea. Through the creation of a program where international transfer students are able to complete two economics degrees, both at their home and host institutions within four years, the economics department saw the number of majors quadruple and the number of graduates double over a few years. Students in the Research Methods course were now predominantly from China and South Korea.

With more economics departments requiring a senior thesis to graduate, and substantial increases in enrollments of international students in business and economics within the United States until 2019 (Open Doors, 2021), the economics department is placed in the middle of these two national trends. This warrants an exploration of teaching undergraduate research with a student body that differs with respect to cultural, educational and language background.

This paper contributes to the literature on teaching a diverse student body by specifically exploring the concept of the Confucian Heritage Learner that can be found in the pedagogical literature and to-date is not reflected in the scholarship of teaching and learning economics. Students from China and South Korea are from countries whose cultural identities are shaped by Confucian thought. This paper will develop the hypothesis that the background of Confucian Heritage Learners may present those students with specific challenges in completing undergraduate research.

The first section of the paper gives a broader overview of undergraduate research in economics and the structure of the Research Methods course before the concept of the Confucian Heritage Learner is explored. After presenting the performance data in the Research Methods course for international and domestic students, the paper presents specific strategies in teaching the course with international students who have a background as Confucian Heritage Learners.

Undergraduate Research

Undergraduate research within the economics profession is still considered an innovative teaching practice as described in the teaching resources featured on the American Economic Association's website Startingpoint (AEA, 2021), and it fits well into the learning outcomes or 'essential competencies' for economists (Allgood & Bayer, 2017).

Undergraduate research within economics

Capstone experiences and undergraduate research are both practices that are identified as "high impact" and that have become a hallmark of fostering quality teaching within higher education settings in the United States. The original list of high impact practices, generated by Kuh (2008), has been adopted and expanded by national organizations such the American Association of Colleges & Universities (AAC&U), as well as regional organizations. For example, the Commissioner of Higher Education in Utah recommends that all students within the public higher education system participate in at least two high impact practices at the undergraduate level (USHE, 2017). While many of the identified high impact practices such as

undergraduate research have been part of curricula for a long time, Kuh (2008) is to be credited with providing a unifying theme to pedagogic strategies that focus explicitly on active learning together with a focus on empirical evidence that documents improvements in various student outcomes (Kinzie, 2012).

The Council of Undergraduate Research classifies economics under its general social science division, unlike psychology, a discipline with a longer history of undergraduate research that has its own division. With undergraduate research in economics being classified as an innovative teaching strategy by the American Economic Association, it is still relatively rare to see undergraduate research formalized as part of the required curriculum within economics departments. As of 2008, only about 10% of surveyed economics departments required students to complete a research methods course as a capstone experience in which students completed an undergraduate thesis (McGoldrick, 2008). A comprehensive survey of undergraduate economics major coursework conducted by Siegfried and Walstad (2014), notes that only 18% of all colleges and universities surveyed (n = 334) require a senior thesis to graduate and that only 10% of public bachelor's granting institutions (n = 72) require a senior thesis. In a more recent review of undergraduate research at the top 30 liberal arts colleges and top 30 national universities, Hoyt and McGoldrick (2017) find that 63% of those top liberal arts colleges and 27% of those national universities require a capstone or thesis from all their majors.

Economics learning outcomes and undergraduate research

The capstone course at the present institution was introduced with the intention of fostering a broader set of learning outcomes compared to the traditional curricular approach within economics programs that requires a number of field courses that focus explicitly on specific content areas such as labor, international trade, or game theory, for example. In contrast, the capstone course focuses on learning *how* to do economics, based on the textbook with the same name 'Doing Economics' (Greenlaw, 2006), with the goal of learning how to apply the scientific method and fostering general skills such as written and oral communication and quantitative literacy. This curricular change preceded and foreshadowed the development of the American Economic Association's framework of five essential competencies for all students in economics as described by Allgood and Bayer (2016, 2017). Specifically, the curricular change asked students to develop three of the five essential competencies, the 'Ability to Apply the Scientific Process to Economic Phenomena,' the 'Ability to Use Quantitative Approaches to Economics,' and the 'Ability to Communicate Economic Ideas in Diverse Collaborations'. In the capstone course, students are asked to develop their own topic that could draw on any field in economics. Through carefully structured assignments throughout the course, students find relevant academic papers that will inform their topic, relate their topic to relevant economic theories and develop an appropriate hypothesis. They then develop an empirical model, collect an appropriate data set, and finally analyze and discuss their results. All students are asked to apply quantitative tools that are acquired in statistics courses and often also in an elective econometrics course, requiring them to recall and transfer quantitative skills from earlier coursework. Finally, all students develop a research poster and present their project to a group of peers and departmental faculty. These course assignments match Seeborg's (2021) suggestions of how to motivate quality research in an economics capstone course. The structure of the course closely follows the outline of Greenlaw's (2006) 'Doing Economics' which provides a suitable framework for students by first introducing them to the research process in economics, guiding them in surveying the literature on a topic in economics, providing examples and advice on

writing in economics as well as critical reading. This textbook then moves on to explain how to apply appropriate economic theory to generate a research hypothesis, how to locate data and assemble a data set, and how to analyze the data through various empirical tests. The final chapter of the textbook focuses on communicating results.

Less explicit, but equally important as 'Doing Economics', is the goal of fostering the learning of values and habits in these students completing the economics program. In the context of the capstone course, habits such as self-regulation, perseverance, time-management, intellectual curiosity, and the ability to productively use feedback are part of the more implicit learning goals. The department decided on implementing the capstone course requirement as part of a communal pedagogy that could help in achieving discipline-specific goals, as well as broader learning outcomes or 'essential competencies'. Using the categories of established pedagogical approaches outlined by Peterson (2018) and the course description in McGoldrick (2008), the economics capstone course is an example of product- and process-oriented, inquiry-based learning that is to help in skill transfer, metacognition, self-management, and engagement. The economics department was particularly interested in fostering skill transfer in writing and statistical methods. Within the taxonomy of economics undergraduate research provided by DeLoach et. al. (2012), such a course provides a mentoring focus on the group as well as on the individual and provides a unique opportunity within the economics program to engage in adaptive teaching - an approach that encourages teaching "individuals within classrooms" as opposed to "teaching classes" (Corno, 2008). Such an approach combines whole group instruction with "differentiation practices" that capitalize on the strengths of individuals as wells as circumvents weaknesses. Differentiation may be justified based on a broad range of needs, skills and backgrounds.

The current paper will focus on differentiation techniques that accommodate students from a different cultural and linguistic background, specifically international students from China and South Korea studying in the United States in the context of the Research Methods course.

Confucian Heritage Learners – Are International Students Different?

A comprehensive attempt to systematically explore 'Chinese learners' goes back to Watkins and Biggs (1996) who study cultural, psychological, and contextual influences on the learning style of students from countries whose cultural identities are shaped by Confucian thought. Learners from China – as well as Hong Kong and Taiwan – and learners from Japan, Korea, and Southeast Asian countries are often referred to as Confucian Heritage Learners (CHLs) (Chan, 1999; Saravanamuthu, 2006; Wang, 2013). While much of that literature distills and explores features of the learning style of Confucian Heritage Learners, there seems to be a consensus that a student's cultural background does not predetermine their learning style, but that students are able to adapt to a changing context (Wong, 2004; Wu, 2015) when they participate in authentic learning experiences. It may be argued that part of the study abroad experience of CHLs at US universities is an expectation that those students adjust to different modes of instruction. The task for instructors of the receiving institutions, in this case US institutions of higher education, is to understand the learning beliefs and behaviors of the international students from Confucian heritage countries and to help students adapt to the changed context. To help instructors with this task it is useful to scan the existing literature for stylized features of the learning style of Confucian heritage learners. Issues encountered by instructors in the US teaching CHLs have also generally been covered in this literature.

Chan (1999) postulates that with cultural values focused on harmony within a collective

and a strong sense of maintaining face within the Confucian tradition the "participative approach commonly used in Western teaching may … cause a problem for Chinese learners" (Chan, 1999). Specifically, Chinese learners or Confucian Heritage Learners are used to a more teacher-focused model of instruction. The teacher is often the 'sage on the stage' and responsible to convey the correct knowledge. This may prevent those students in fully participating in classroom discussions or in group learning (Wu, 2015; Wong, 2004; Hodkinson and Poropat, 2014) as they are less confident in their own knowledge and experience and feel uncomfortable sharing in what they consider a traditional classroom setting. Chinese learners are observed to be more reluctant to ask spontaneous questions in class or to contribute a point of view, making it more difficult for instructors to explicitly engage students in their learning and to receive continuous feedback on students' understanding, a practice that is fairly common in classroom settings in the United States. Hodkinson and Poropat (2014) call this the phenomenon of the 'silent Chinese student' which makes the active co-creation of knowledge with students in a classroom harder for instructors teaching international students than it would be with students who are more used to interactive learning styles.

Another feature attached to the learning style of Confucian Heritage Learners is the prevalence of rote learning, which relies heavily on memorization and repetition (Chan, 1999; Wong, 2004; Wu, 2015). This style of learning does not mean that CHLs are not capable of deep learning or attaching meaning to the learned material, indeed Saravanamuthu (2008) characterizes Chinese learners as preferring to achieve deep learning through repetition. However, the reliance on rote learning or memorization may make it harder for learners from this cultural background to engage in more creative class assignments that require original thought or encourage a high level of individuality or differentiation in completing an assignment. In turn, this may lead instructors to assume that CHLs lack creativity relative to the students they are normally used to working with. Another issue that arises when students are used to relying on memorization is that it becomes more difficult for instructors at the host university to convey the importance of acknowledging the sources of information for student work (Watkins & Biggs, 1996). This difficulty may lead instructors to identify CHLs as engaging in plagiarism or cheating when students reproduce memorized information or conversely may make it more difficult for students to understand when they should acknowledge the source of information.

In addition, the assessment techniques that CHLs are accustomed to are high-stakes examinations. Examples are the nation-wide systems of standardized exams that largely determine the university placements for students from China and South Korea, and also course work that is primarily assessed through a final exam only. Compounding these stylized differences in learning styles and environments is the fact that CHLs have to adjust not only to different pedagogies but have to adjust to a different language. Inadequate language skills compound, but do not cause, all of the difficulties that CHLs face in classrooms at US or Western institutions of higher learning (Geide-Stevenson, 2018). Maybe not surprisingly in light of the different learning environments, Rao (2017) finds that international students struggle with "writing academic papers, enhancing class participation, and having local mentors" (Rao, 2017).

To be sure, good teachers in China and the United States share many common features and both can learn from each other. Relevant to the present study though, in comparing US and Chinese instructors Grant et al. (2013) conclude that Chinese teachers "can learn from their US peers about providing students more opportunities to explore and develop their own views" (Grant et al., 2013). However, the stylized features of students' learning behavior and beliefs from a Confucian cultural heritage as describe here should be seen as just that, a stylization that

is relevant for US instructors who are first faced with teaching a larger cohort of students from this background. More in-depth accounts of the learning of this group of students can be found elsewhere, for example in Wang (2013). As is true for any group of students, there are also individual differences among CHLs that need to be recognized by instructors. And, as the educational systems in other countries continue to evolve and undergo reforms, it remains to be seen how enduring those stylized features will be as the culture of Chinese higher education changes (Grant et al., 2013; Cosgrove et al., 2015). This study will work with the premise that the background of CHLs may be at odds with the requirement to complete an independent, individually conceived, undergraduate research thesis that requires the application of the scientific process and making an original contribution to the discipline.

Comparison of Student Performance

The data on course enrollments in the capstone course over the time period from fall 2010 through spring 2020 show that 389 students completed the course and received grades over this time period (excluding students who withdrew from the class). Of the 389 course completions, 30% were domestic students and 70% were international transfer students. All of the students are economics majors. Over this time period, the average grade earned in the course was a 2.96/4.0, slightly below a B grade average. The average grade earned for domestic students was 3.07 and for international transfer students 2.92. Those means are not statistically different. However, this picture changes when only students who successfully completed or passed the course are considered. Students need to earn a C- grade (1.67/4.0) for successful completion. For this group of students, the average grade for domestic students was 3.48, and 3.18 for international students. This grade difference is statistically significant at the 1% level. This grade pattern emerges due to a higher failure rate for domestic students at 12.2% compared with international students at 8.4%, also statistically significant. So, while domestic students are more likely not to pass the capstone course, if they do pass they earn on average a higher grade than an international transfer student.

The pattern of lower failing rates for international transfer students, but lower overall grades, may be explained by the substantially higher cost that international students face when they have to repeat a course at the end of their program of study at the host university. Most students take the capstone course during their last planned semester at the host university and would have to extend their stay for another term in order to be able to graduate. This would require additional costs of living in the United States, as well as a tuition rate that is above the in-state tuition rate paid by the domestic students. Some international students need to work around visa issues to be able to extend their stay, which imposes additional costs as well.

Teaching International Students

The issues in teaching a large percentage of international students stem from the differences between domestic and international students that are common across all universities, but also from the specific implementation of the transfer program for international students at the current university. The issues were identified through a short survey of departmental faculty who have been teaching the capstone course at the present university.

Getting Started – Finding a research question

While domestic students seem to accept the requirement of finding their own research topic and then a specific research question, it is more common for international students to wait for the course instructor to suggest a topic or research question. This is sometimes interpreted as

a lack of creativity on those students' part but may stem from the instructional model they have been exposed to at their home institution. In practice, it takes more effort on the instructor's part to provide specific examples of research projects along with group and one-on-one discussions with the international students to emphatically make the point that the students are to be in the driver's seat in terms of ideation. Just as identified in the literature, the phenomenon of the 'silent Chinese student' (Hodkinson & Poropat, 2014) has been observed in the capstone course. Faculty have adopted a strategy where every single student shares their idea for a research topic during a class session. This provides a chance for the domestic students to model asking questions and thinking out loud about the creation of a project. It will likely take several class sessions and additional one-on-one meetings to craft a feasible research question for all students, but some international students get positively excited once they truly believe that they can work on a project of their choosing. In terms of mentoring, instructors need more resolve in getting students to ideate, but in terms of final results, the effort is often very gratifying. To get students to open up about their personal interests, one avenue to find a research topic, it may be useful to have all students share an article they have read on social media, thus validating their interests and taking the opportunity to show how an economic research question may be arrived at. For example, several students have been very interested in issues of family dynamics such as divorce, the decision of how many children to have, or domestic violence. Because students are not aware that there exists an economic theory of family (Becker, 1991), they may not know how to turn their personal interest into a final thesis. Several international students have successfully found national data for China and the US to analyze projects along those lines. Some of the international students focus on their home country, but many students also study issues that are more peculiar to the United States such as obesity, specific welfare programs, or housing prices in their host community.

Pedagogical models – background in scientific method

While domestic students have been exposed to working with the scientific method at least since junior high school, often through science fair projects, the international transfer students in this department generally do not come with the same preparation. This group of international students indicate that they have never been asked to complete a significant project following the scientific method before studying in the United States. Most Chinese high schools require students to choose between a science or humanities track during their senior year in high school before taking the National College Entrance Examination in either of the two specialties (Gao, 2013). As all Chinese international transfer students major in economics at their home institution, they chose the humanities track in high school, thus reducing their chances of exposure to the applications of the scientific method in high school.

In practice, this requires instructors to pay close attention to the language of the scientific method and to relate this language to the specific research question chosen by the student. Especially for international students, the distinction between dependent and independent variables can be easily confused. Early during the class, this confusion can get in the way of an effective literature review that will lead the students to academic research papers that are helpful in completing the thesis. If students are confused about the terminology of dependent and independent variables, and cannot properly apply this terminology to the research question they have chosen, they may end up looking into the wrong literature. For example, one student wanted to study the impact of the yuan/dollar exchange rate on the price of gold. She needed to find literature on what types of economic variables drive the gold price in order to build an empirical model that would include the exchange rate as her focus variable. The student initially

started to look for academic research papers that explain the exchange rate, not finding much help for her project. This problem also arises with some domestic students but is more likely to be encountered with international students. It is important to check early during the semester that students are actually looking for the type of literature that will help them with their project.

Another common misconception, especially among international students, is that they will 'prove' their hypothesis. The fact that they may have to reject their initial hypothesis and have to conclude that their data does not support their initial thinking, even if supported by economic theory, seems even more disappointing to international students than domestic students. Instructors stress from the beginning that students are not graded on the outcome of their project, but on whether they can defend the methods they have employed. Instructors have to emphasize that finding no evidence for the research hypothesis is an acceptable result as long as students have checked for potential mistakes (e.g. econometric model, data coding) along the way. Once students present results it is important to reassure them that they are not graded on whether or not their research finding is affirmative. When the answer to their research question turns out to be contrary to their expected result, their confidence in content knowledge seems to get challenged more profoundly than for domestic students.

Despite the challenges of teaching students that are less prone to participate in class and who struggle with English, the present department has chosen to keep the course requirements and structure of the capstone course intact. The realization of the differences in student backgrounds has not led to a redesign in the course; if anything, it has strengthened the decision to have students choose their own topic, almost as a sort of pinnacle of their education in the United States. This requirement has served students who have completed the program and applied for graduate programs in the United States well. The motives of establishing transfer programs between Chinese and Western universities are manifold, but one stated objective from our partners is that they want their students to be exposed to Western methods. In fact, the Chinese partner university will now accept the capstone course paper and presentation as fulfilling their home thesis requirement. Illustrative of the difference in expectations for the performance of international students at their home versus host institutions is that their home institution seemed primarily concerned with the minimum word count of a student's thesis in contrast to the US faculty who were focused on the mastery of a process. In response to student questions about the required length of the thesis, the US faculty's approach has been to keep emphasizing that all elements of the paper have to be present and the research question has to be answered in a reasonable way in order for the thesis to be satisfactory. Another example that illustrates international student's difficulties in embracing the requirement to follow a process rather than more easily measured criteria such as a word count is found in a common question regarding their empirical regression model. Once students have identified a research question and are confident in distinguishing their dependent and independent variables, they will ask: "How many independent variables do I need?". Again, faculty at the host institution will revert back to emphasizing the process of following the scientific method and will ask students about their insights from the literature and economic theory.

Language preparation and plagiarism

International students differ most obviously in their preparation for the capstone course with respect to English. This affects the frequency and depth of contributions in class, the ability to comprehend journal articles or more professional writing in general, and their writing and presentation skills. Once a large number of international transfer students enrolled in the

capstone class, issues of plagiarism were magnified and the average quality of both written and oral presentations of material within the course decreased initially. With respect to plagiarism, the department uses Turn-It-In to detect plagiarism in students' final research papers. However, throughout the curriculum department faculty are encouraged to have students practice writing in many contexts. Also, the course now contains an explicit module on plagiarism. The philosophy is that students cheat because they do not understand what is expected from them, or do not understand what might qualify as plagiarism, embracing James Lang's (2013) approach that academic integrity issues are best addressed by a supportive classroom environment. For example, at the beginning of the course, students may be asked, with an example from another subject, to identify plagiarism. In this exercise students have to decide whether an original passage has been rephrased sufficiently. Students are instructed to carefully think about what it means to put something 'in their own words' with the caveat to look for sources that they can comprehend. In terms of class participation, instructors will call on students in order to make sure that all students have an opportunity to try out ideas. New class modules were also added to focus more on how to give an effective presentation with the help of presentation software.

While it is tempting to think of non-native speakers as being disadvantaged and requiring more resources and instruction in order to complete a paper, it is important to realize that their language skills can also be an advantage in giving them access to a wider range of literature than students constrained by their native language. Clear rules of using foreign language resources have to be agreed upon with students in order to make sure that instructors can reconstruct the literature review. Typically, students are instructed to use English-language material for their theory part of the paper, but especially when students study a topic that pertains to their home country they are able to consult foreign-language data and possibly also research papers that enter the literature review. If that is the case, individual meetings are a good way to have students explain their data and to check their understanding.

Cultural Knowledge

Through student interests, it is inevitable that course instructors will be more exposed to topics that center on China or South Korea, and this forces instructors to engage with institutional and cultural realties from a country they are typically not as familiar with. It is important to have students share some of their background and personal interests in their home country to help them craft a thesis that is meaningful to them. Conversely, individual mentoring of international students has to include a component on cultural differences and sensitivity when students attempt to study local issues in the United States that involve the design of a survey. International students may lack the knowledge of appropriate wording in asking about ethnic backgrounds, or they may have narrow views regarding marital status. They may also not be familiar with the appropriate brackets for income-related questions for their population. It becomes more important for those students to be pointed to good examples of surveys that pertain to their subject area. On the other hand, while lack of cultural knowledge may be a challenge in the research design stage in the presentation of their work, international students get the opportunity to showcase their new-found cultural knowledge. Especially during their oral presentations, students might infuse some humor or use colloquial terms in an appropriate way. Especially after working with those students over a two-year period, the value added by their education becomes broadly observable.

Cohort Model

Because of the specific structure of the international transfer program, international

students in the capstone course are likely to be in one cohort that has studied together for 4 years. Also, students tend to be very closely connected to senior students from their home country who might have taken on a strong peer mentoring role. This cohort model has advantages in that more recent cohorts seemed to have a better understanding of what is expected in the course. Those expectations are not just communicated by faculty and advisers but also by more senior students who have completed the course. A disadvantage of this cohort model, however, is that faculty have to be mindful of past projects that were completed by students because some students are tempted to marginally modify the past work of others. The information-sharing among students that helps in conveying expectations can also lead to students choosing to work on very similar topics, defying the goal of having students think about their own interests. At times, faculty teaching the course have even sequestered topics that were frequently chosen in past classes. An example of such a topic is the impact of exchange rates on the bilateral trade balance of a country. Another strategy in mitigating this issue is to identify students with similar topics and assign them the same faculty mentor in order to better monitor that those students work individually.

Faculty and department resources

With the increasing number of students who need to be mentored each year, the department has also increased the number of faculty teaching the capstone course and the number of times the class is offered during the year. Currently, the class is offered during both the spring and fall semesters and is also offered in the summer for students who did not complete their project in the spring semester. This gives students the option of graduating after the summer and enables them to start a graduate program in the fall instead of postponing their graduate studies. This is an option that is particularly beneficial for international students, but the increased frequency of class offerings benefits all majors in the program and has the potential to decrease the time it takes to graduate from the program.

In terms of faculty workload, during one semester two faculty members mentored a total of 34 individual projects, which proved overwhelming. In response to this high workload, in the subsequent year, three faculty members were assigned to 31 students with each faculty member receiving credit for teaching a regular course. As stated in the literature (McGoldrick, 2007), it is mostly senior faculty who champion and are willing to teach these kinds of capstone courses. However, with a wave of retirements and new job assignments, the average tenure of faculty within the department of this study is now relatively short. This means that the department was able to recruit new faculty who are interested in teaching a research-oriented course, but who need to be mentored in their role as advisers. This happens formally, by assigning new faculty to teach the class and sharing existing course materials from previously taught classes through the online learning platform with them, but also informally because students may seek out all faculty for advice on their topic. This fosters interdepartmental discussions between and among experienced and new faculty in terms of course design and expectations and provides an avenue for continuity on the one hand and course innovations on the other hand. Unlike any other curriculum change, the decision to offer a capstone experience has fostered interdepartmental communication in terms of overarching program learning outcomes, and the final student presentations have become a highlight on the departmental calendar. One innovation after the implementation of the international transfer program was a move to poster presentations instead of individual Power Point presentations. This decreased the time commitment for faculty who attend the final presentations and turned the presentations into a more communal, even celebratory event. By attending these student presentations, faculty are able to benchmark how

other faculty advise and mentor students and what students are able to accomplish and in turn incorporate this knowledge into their own work.

While there is no doubt that the workload of faculty has somewhat increased with the introduction of the capstone course, the department was successful in having a majority of faculty willingly participate in offering the capstone experience course. This has provided a natural avenue to observe student outcomes for both domestic and international students and is a model the department plans to continue at this point in time.

Conclusion

This paper works with the assumption that because of their home learning environment, international transfer students from Confucian heritage countries have formed learning styles and behaviors that may be at odds with the requirement of completing an independently conceived undergraduate research project, and this needs to be addressed by instructors. This assumption is corroborated by performance data from almost 400 students who completed the capstone experience course within the economics department in this study. The data indicate that international transfer students receive significantly lower grades than domestic students when only students who have passed the course are considered. On the other hand, international transfer students have lower course failure rates than domestic students likely because of the higher cost associated with repeating a course at the end of their program.

Faculty in the economics program have identified issues that present a relatively larger challenge for international transfer students than for domestic students. Those issues are insufficient exposure to ideation and the conception of a feasible research question, likely as a result of receiving their previous education in a more teacher-centered environment, as well as insufficient exposure to applications of the scientific method in their previous academic experiences. Maybe more obvious are challenges that center on cultural knowledge, for example in devising appropriate survey questions, and language problems which are sometimes reflected in plagiarism. The department in this study has found that those challenges can be addressed by appropriately mentoring individual students and by restructuring and emphasizing particular course assignments. Despite the increased effort required by the department faculty in mentoring a more diverse student group, the department has intentionally chosen to maintain its approach to the capstone course as it provides rich opportunities for both students and faculty.

This study is unique in recognizing a diverse student population in economics and exploring strategies to make economics a more inclusive discipline as envisioned by the American Economic Association (2020).

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