



How an Undergraduate Health and Wellness Course Improved First Year Student Success and Retention

Enhancing the First Year Experience for Adult Learners at University of Phoenix

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Abstract

Adult learners come with numerous traditional risk factors to college success, such as having dependents, being a single parent, working full-time, or being a first-generation college student. According to the U.S. Department of Education (BPS 2012/2017 Data) students with risk factors such as these have 6-year graduation rates as low as 19% (single parents), and only as high as 47% total. At University of Phoenix (UOPX), our average student has three or more of these risk factors, including being a first-generation college student (60%), working full-time (76%), and having dependents (87%). The average age of UOPX students is 38, 70% of students are women, and 59% are single parents. Serving a population with numerous risk factors to college success motivates us to consistently test new strategies to improve student outcomes. An outcome we track closely is course pass rates, particularly within students' first year. For newly enrolled students at UOPX, historical second course pass rates were 77.6% (Jan23-Dec23).

Our study aimed to test if moving a high-pass-rate health and wellness course earlier in the student journey could improve second course pass rates while maintaining or improving progression and pass rates in the two subsequent courses. We tested scheduling students for a 100-level health and wellness course as their second course, exposing them to content relevant to the needs of new adult online students and hidden curriculum in support of diverse learners. We conducted two rounds of testing, and the results of both tests showed significant improvements to second course pass rates and maintained or slightly improved progression and pass rates in the two subsequent courses. The round two test involved a larger sample size and showed a 9% higher second-course pass rate for the treatment group compared to the historical control group. The positive outcomes of our testing led the College to change the first-year course sequence. Six months post-change, improved outcomes persisted.

Background

As mentioned earlier, adult learners often have multiple risk factors to college success, which necessitates a strategic and thoughtful approach to the first-year experience for these students. The U.S. Department of Education reports 6-Year Graduation Rates for First-Time Post-Secondary students pursuing bachelor's degrees, and data shows students who are over the age of 25, have dependents, and those who are single parents, have significantly lower graduation rates – as much as 40% lower than the overall graduation rate (U.S. Department of Education, 2012/2017 BPS). Institutions primarily serving adult learners must address students' needs holistically and develop robust support mechanisms, including resources in and outside the classroom. It is particularly important for college and university leaders to monitor pass rates and assessment of learning data for undergraduate students in early courses. Measuring how students perform in General Education courses should drive strategic decisions to improve student success, including first-year course sequencing. General Education administrators should work closely with deans of undergraduate programs to understand the foundational skills students need to develop through completion of their General Education. Learning and skill building should scaffold across early courses, and decisions about course sequencing should be intentional and supported by student outcomes data.

The question the College of General Studies team at UOPX (hereafter referred to as the College) sought to answer is whether we could improve student second course completion rates by exposing students to health and wellness content early in their academic journey. Specifically, we hypothesized that by moving an existing high-performing science course (SCI/163T) to the second course in undergraduate student schedules, we could significantly improve second course pass rates and maintain or slightly improve progression and pass rates for the two courses that followed.

The decision to test an alternate first-year schedule came about after the College's Associate Dean, Dr. Jacquelyn Kelly, conducted tests of revised curriculum in SCI/163T that included hidden curriculum depicting character personas or *imaginaries* intended to normalize requests for and receipt of accommodations. In an article published in *Pedagogy and Health Promotion* (2025), titled "Supporting Self-Advocacy in Nutritional Health: Using Health Imaginaries to Navigate Student Wellness and University Resources," Dr. Kelly et al describes the goals of the SCI/163T hidden curriculum test this way, "This research aim targets the following: Research Questions: (a) Can implementing diverse, accommodation-eligible imaginaries in a general education course support students receiving accommodations and (b) Can implementing diverse, accommodation-eligible imaginaries improve student familiarity with how to receive university support?" (Kelly et al. 2025).

In this article, Dr. Kelly et al explains that data collected from first-year undergraduate English Composition courses showed a strong inverse correlation between the number of accommodations in place at the beginning of a course and lower student withdrawal rates (Kelly et al, 2025). However, discussions with the university's Student Accommodations Office revealed that students may delay or deny receipt of accommodation due to a lack of

awareness that they can receive that kind of support, or negative student stigma related to accepting an accommodation, (Kelly et al, 2025). The hidden curriculum test, conducted in SCI/163T in February 2021, revealed that including accommodated character personas in the course curriculum increased student awareness of how to request accommodations and the types of conditions that qualify, as well as decreased student stigma about receiving accommodations. These results were observed within the treatment population; however, further analysis would be needed to determine if the effect can be inferred to the larger population, (Kelly et al, 2025).

The results of this hidden curriculum test and historically high pass rates in SCI/163T motivated the College's decision to test the efficacy of scheduling the course earlier in the student journey. The goals of our study included the treatment population experiencing SCI/163T as their second course, which we anticipated would improve course pass rates, while maintaining or slightly improving progression and pass rates in the two courses that followed.

Methods

The College tested whether adult online undergraduate student pass rates could be improved by scheduling a technology-enhanced health and wellness course, with hidden curriculum to de-stigmatize accommodations, earlier in the student journey. More details on the effort to destigmatize accommodations can be found in the article, "Supporting Self-Advocacy in Nutritional Health: Using Health Imaginaries to Navigate Student Wellness and University Resources," (Kelly et al., 2025) published in the *Pedagogy and Health Promotion Journal*.

The College ran two rounds of tests where the treatment population (N=1864) took Elements of Health and Wellness (SCI/163T) as their second course, and the control population (N=6692) took Psychology of Learning (PSY/110) as their second course, which was the standard second course at the time. Round one of testing ran in May 2023 and round two in October 2023.

The College measured course completion outcomes for all students as well as isolated data for students who had between 0-12 applied college credits from transfer or University of Phoenix credits, to evaluate the impact to students with less college experience. The first test in May 2023 controlled for seasonality by AB testing on the same start date with about half the students who successfully completed their first course taking SCI/163T as their second course, and the other half taking PSY/110 as their second course, which was the standard second course for most undergraduate programs. To increase the treatment sample size, the second round of testing assigned all students who started their first course, Foundations for University Success (GEN/201) on 9/12/23 to SCI/163T as their second course on 10/17/23. We used a historical control group of students who took PSY/110 between August and October 2023 to compare against students who took SCI/163T as their second class on 10/17/23.

Challenges we experienced during testing included operational complexities associated

with shifting student schedules manually, ensuring advisors provided accurate and up-to-date guidance to students, communicating pilot details and implications to faculty teaching our first-year courses, identifying and accounting for scheduling exceptions, and having to sift through large sets of individual student data to measure results. Results from both rounds of testing revealed that students taking SCI/163T as their second class had higher pass rates in that class compared to PSY/110, as well as higher rates of progression into their next two courses (measured as meeting attendance in any next course without taking a break longer than 15 days), and higher pass rates.

We hoped to provide better early support to adult learners facing challenges acclimating to college and managing the stress that can result from adding school responsibilities to their already busy lives. We wanted to know if students taking a second course focused on wellness, with content that de-stigmatized accommodations, could improve completion rates. The goal was to improve the second-course completion rate by a minimum of 5%, while maintaining the progression and pass rates of the third and fourth courses.

Testing and Full Implementation

The College launched its first test of SCI/163T as the second course for undergraduate students in May 2023. As with any tests involving students, the College makes every effort to ensure the treatment will not cause harm. In this case, we had ample data to suggest that students were highly satisfied with the SCI/163T curriculum and performed well in the course. The SCI/163T average pass rate for the 6 months leading up to the test was 94% with a student enrollment of 4,113. Student satisfaction with the course, measured through Net Promoter Score, indicated 79% of students were promoters for questions related to the course content between August 2022 and April 2023. Strong student performance and sentiment data, along with positive faculty feedback gave us confidence to move forward with testing.

The standard first year for undergraduate students consisted of six classes taken in a preferred order, which were Foundations for University Success (GEN/201), Psychology of Learning (PSY/110), English Composition I (ENG/110), Critical Thinking in Everyday Life (HUM/115), Everyday Economics and Finances (FP/100T), and English Composition II (ENG/210). We planned to run an AB test in which about half the new students scheduled to start GEN/201 on 9/12/23 would experience an adjusted first year sequence, which was GEN/201, SCI/163T, PSY/110, ENG/110, HUM/115, ENG/210, and the other half would experience the standard first year sequence. Our first step in planning our scheduling test was to determine how students would be assigned to the treatment or control population and how we would adjust schedules for students in the treatment group.

We met with partners in the rosters and calendaring department to discuss strategies for adjusting student schedules and encountered our first limitation. Due to staff and workload constraints, our calendaring team was unable to adjust all student schedules manually, so the decision was made to use a scheduling system that would automatically build student schedules based on an academic plan specific to their degree program. This freed up our calendaring staff to make manual adjustments for the small percentage of students who

were scheduled to start GEN/201 on 9/12/23 before we adjusted academic plans.

With the decision to adjust the academic plan tool that automatically builds out courses for specific degree programs, we had to designate which programs would be part of the treatment group and which would be in the control group. There were notable differences among programs in terms of pass rates in the first two courses, so we analyzed enrollment and pass rate data by program and assigned programs to treatment or control with the goal of equity between the groups. This was a limitation we accounted for as the assignments were not perfectly equitable, nor was this a randomized sampling method. We also had one program opt out of the test due to specific Science requirements.

Another noteworthy limitation of our first test is that due to increased sections from a higher-than-normal volume of students who would be taking SCI/163T, we had to recruit additional adjunct science faculty to teach the course. About half of the faculty who taught the course on the pilot start date were teaching it for the first time, which has potential to impact student outcomes.

In our second test, conducted in the Fall of 2023, undergraduate students in all programs who started GEN/201 on 9/13/23 were scheduled to take SCI/163T as their second course. We again employed the process of updating the course sequence in the academic plan template tool that automatically builds student schedules based on program. For this test, we had enough existing approved faculty to teach all the sections that were needed to accommodate the volume of students we expected.

Communication plans were a critical component of our testing. Stakeholder groups included college leaders under the Provost Office, student enrollment and academic advisors, and faculty teaching classes in our Phoenix Success Series (PSS). In both tests we made the decision not to inform students that they were part of a scheduling pilot to avoid unnecessary concerns from students and to avoid skewing the data. Student advisors were informed about the test and were provided with talking points about the content of the course to enable them to address questions, particularly for re-entry students who had experienced the standard sequence of courses previously.

All PSS faculty were provided with general information about the pilot, and specific direction was provided to faculty teaching GEN/201 on 9/13/24, faculty teaching SCI/163T on 10/17/23, and faculty teaching the PSS courses that followed SCI/163T. Advisors and faculty were instructed not to inform students that they were participating in a pilot, but rather to support them with the content of the course they were enrolled in and information about their next course to come. Faculty teaching SCI/163T were made aware that they would be instructing students much earlier in their educational journey; however, they were asked not to alter their facilitation practices.

Results and learnings from the pilot are discussed in the sections that follow.

Findings and Insights

Round I Pilot Results (Summer 2023)

In the first round of the pilot, we identified three key metrics we would measure to evaluate the success of our test, which were student withdrawal/fail (WF) rate (the inverse of pass rate), next course progression rate, and the rate at which students contacted technical support for assistance. Additional metrics we considered included assignment data (submission rate and average scores), accommodations data (request rate), and student and faculty feedback via our end of course survey mechanism. As previously noted, our goal was to improve the second course pass rate by at least 5% while maintaining or slightly improving progression and pass rates in the next two courses. We also expected to see lower technical support call rates than historical for the standard second course (PSY/110).

Round I Pilot Results:

DAP Category	Treatment: SCI/163T (N=364)				Control: PSY/110 (N=791)			
	#Students	% of Students	W%+ F%	W/F%	#Students	% of Students	W%+F%	W/F%
0-12	280	71%	13.46%+1.15%	14.61%	515	65%	18%+11%	29%
13-24	39	11%	7.69%+0%	7.69%	142	18%	11%+8%	17%
25-36	23	7%	4.35%+0%	4.35%	67	8%	1%+3%	4%
37-48	13	4%	15.38%+0%	15.38%	27	3%	11%+7%	18%
49-60	14	4%	7.14%+0%	7.14%	17	2%	18%+0%	18%
61-90	14	4%	0%+0%	0%	22	3%	9%+0%	9%
90+	1	.2%	0%+0%	0%	1	.1%	0%+0%	0%
TOTAL	364	100%	11.54%+1.82%	12.36%	791	100%	15%+9%	24%
95% Confidence Interval for			Lower Limit	Upper Limit			Lower Limit	Upper Limit
	TOTAL		8.98%	15.74%			21.02%	26.98%
	0-12 DAP		10.32%	18.90%			25.08%	32.92%

The above table shows WF rates for the treatment population (N=364 students who took SCI/163T as their second course) compared to the control population (N=791 students who took PSY/110 as their second course). Students are broken out by degree applied credits (DAP), which includes prior college transfer credits and credits completed at UOPX. This view shows how students with different levels of college experience performed in SCI/163T compared to PSY/110. Students with 0-12 transfer or completed credits showed a 14% lower WF rate in SCI/163T compared to PSY/110. For students with all levels of experience, reflected in the total row of the above table, SCI/163T showed almost a 12% lower WF rate than PSY/110.

The college also looked at data broken out for students who took each course at a specific point in their sequence. In the treatment group, 31/364 (9%) of students took SCI/163T later

than their second class, which could have happened for a variety of reasons as schedules could be adjusted if a student did not need science credits, planned to fulfil their science credits with alternative-credits, or if students did not want to take the course on the 5/30 start date. In the control group, 310/791 (39%) of students took PSY/110 later than their second class. Of the students who took SCI/163T as their second course, the withdrawal (W) rate was 10.3%, the failure (F) rate was .91%, combined WF rate was 11.2%. Of the control students taking PSY/110 as their second course, the W rate was 12.2%, the F rate was 8.4%, and the combined WF rate was 20.5%. This is strong evidence that SCI/163T improves outcomes when taken earlier in the student journey. Running the confidence interval, we are 95% confident that the WF rate for SCI/163T for all DAP categories would fall within the range of 8.98%-15.74% compared to 21.02%-26.98% for PSY/110.

Progression Rate of the treatment population into course three was 5% higher compared to the control group, and progression into course four was 6% higher. Third Course Pass Rate for the treatment population was 3% higher than the control group, and Fourth Course Pass Rate was 1% higher. The rate at which students in the treatment population contacted technical support was .31% compared to .88% for the control group. In addition, student sentiment in the treatment group was on par with that of students in the control group.

We were encouraged by the Round I pilot results, but the sample size was smaller than desired and there were faculty implications that may have skewed the treatment data, so we decided to test again.

Round II Pilot Results (Fall 2023)

In the second round of the pilot, all new students who started their first undergraduate course (GEN/201) on 9/12/23 had a prescribed schedule that included SCI/163T as their second course (Treatment Population N=1500). Only students who did not need science credits or who had a program-specific exception were excluded from the treatment group and scheduled for an alternate second course. The Control Population N=5901 was comprised of students who had taken PSY/110 as their second course between August and October 2023. We selected the same key metrics used in the Round I test, which included WF rates, progression and pass rates for two subsequent courses, and the rate at which students contacted technical support. We also reviewed student sentiment and SCI/163T faculty feedback.

Round II Pilot Results:

DAP Category	SCI/163T (N=1500) 10/17/23 Start Date				PSY/110 (N=5901) Aug23-Oct23			
	#Students	% of Students	F%+ W%	W/F%	#Students	% of Students	F%+W%	W/F%
0-12	953	63.5%	1.4% + 16.8%	18.2%	5225	88.5%	10.0% + 15.9%	25.9%
13-24	192	12.8%	0% + 7.3%	7.3%	310	5.3%	3.5%+ 1.0%	4.5%
25-36	149	10.0%	0% + 7.4%	7.4%	196	3.3%	2.6% + 2.0%	4.6%
37-48	95	6.3%	0% + 7.4%	7.4%	81	1.4%	1.2% + 0%	1.2%
49-60	52	3.5%	0% + 3.8%	3.8%	49	.83%	0% + 0%	0%
61+	59	3.9%	0% + 10.2%	10.2%	40	.68% ⁰	0% + 0%	0%
TOTAL	1500	100%	.87% + 13.3%	14.2%	5901	100%	9.1% + 14.2%	23.4%

The above table shows WF rates for the treatment population (N=1500 students who took SCI/163T as their second course) compared to the control population (N=5901 students who took PSY/110 as their second course Aug-Oct23). Again, students are broken out by degree applied credits (DAP). Students with 0-12 transfer or completed credits showed 8% lower WF rate in SCI/163T compared to PSY/110. For students with all levels of experience, reflected in the total row of the above table, SCI/163T showed a 9% lower WF rate than PSY/110. This is strong support of our hypothesis that SCI/163T would improve second course pass rates for students.

Progression Rate of the treatment population into course three was 4% higher compared to the control group, and progression into course four was 3% higher. Third Course Pass Rate for the treatment population was 3% higher than the control group, and Fourth Course Pass Rate was within .1% of the control group. The rate at which students in the treatment population contacted technical support was 3% compared to 5% for the control group. Student sentiment in this round of testing was slightly lower for the treatment group compared to the control group (2% lower than historical for PSY/110). Student comments did not point to anything in the curriculum that would account for this difference. Feedback from faculty teaching SCI/163T was strongly positive on standard questions about how the course materials support student learning and align to the learning objectives of the courses.

Results from our second pilot again strongly supported our hypothesis that moving the SCI/163T course earlier in the journey would improve second course pass rates and slightly improve or have no impact to student performance in the two subsequent courses. The College proceeded to share results with stakeholders in the Provost Office, with a recommendation to implement a permanent change that would make SCI/163T the preferred second course in the first-year sequence for new students. The College committed to continuing to closely monitor second-course pass rates and progression and pass rates of subsequent classes, as well as monitoring student feedback.

Next Steps (Implications)

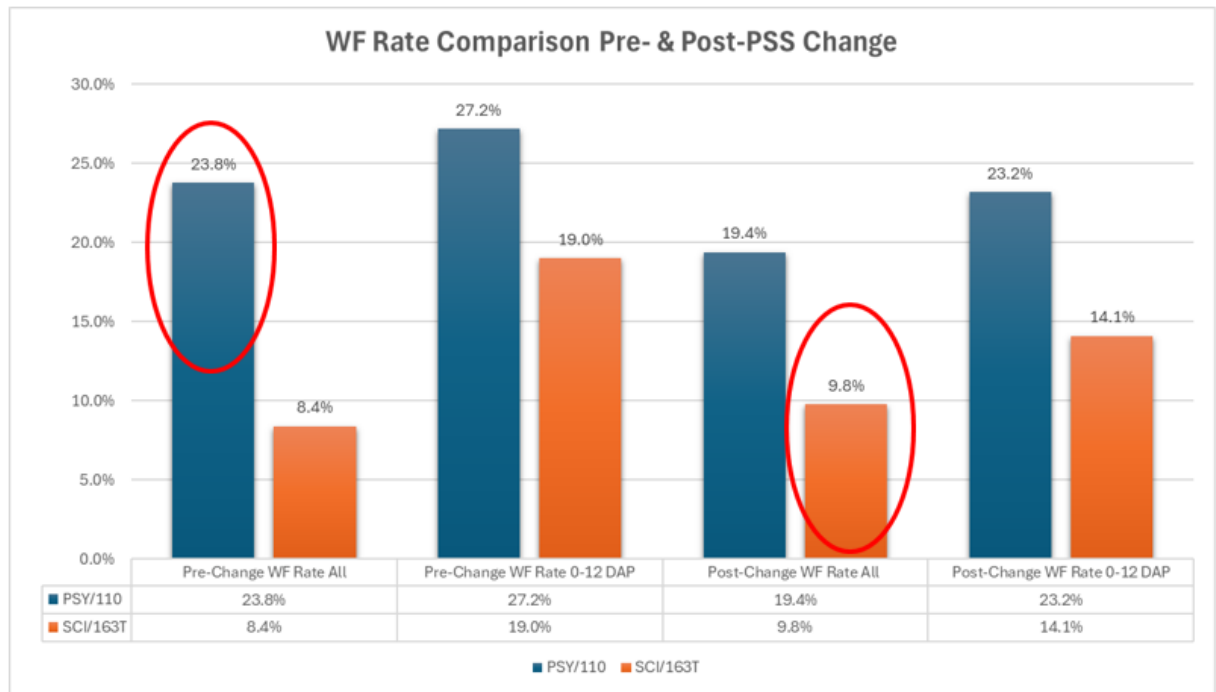
There were several limitations we had to account for in our tests since it was not a randomized controlled trial, including scheduling variations and unknown impacts of inexperienced new faculty. Our test was conducted within the context of a functioning educational institution, which did not allow us to control for the impact of transfer credits and therefore we could not guarantee that all students in the treatment population would take SCI/163T as their second course or that all students in the control population would take PSY/110. This reduced our original sample size as we accounted for variations within our results. In addition, moving SCI/163T from a class typically taken later in a student's schedule to one taken as class two significantly increased the section count and created a need for more faculty to be brought on to teach the course. Bringing on new faculty to teach the course could have skewed the test data since new faculty may not have been as effective in teaching the class compared to experienced faculty.

We accounted for the limitation of scheduling variations by pulling data specifically for students who took SCI/163T or PSY/110 as a second course and comparing the pass rates for those students. We accounted for the potential impacts of new faculty by reviewing student satisfaction data and faculty feedback. Positive student sentiment about SCI/163T supports that bringing on new faculty did not appear to negatively impact the student experience. Feedback from faculty teaching the class for the first time also showed that they were able to quickly pick up the material and felt confident teaching the course. Despite these limitations, the results of our two rounds of testing showed that moving SCI/163T to the second course improved second-course pass rates and slightly improved student progression and pass rates in the two courses that followed. Student sentiment and reliance on technical support was improved in SCI/163T when compared to PSY/110.

The strong correlation between those who completed SCI/163T as a second course and the higher pass and progression rates gave the College confidence to move forward with full implementation of the change to make SCI/163T the preferred second course for most new undergraduate students. This change also involved moving PSY/110 from the preferred second to third course, and an additional course was removed from the first-year experience to maintain a six-course series. Preparation for this change included a governance process whereby the College proposed a change to the Phoenix Success Series (the first-year experience), in which SCI/163T would be added to the series and a 100-level finance course would be removed. The permanent change to the Phoenix Success Series happened through a policy change approved by the University's Academic Council in January 2024. Implementation steps also included recruiting and onboarding new faculty, updating preferred scheduling plans for numerous undergraduate programs, and preparing stakeholder communications.

This change was implemented for new students who enrolled and signed an enrollment agreement on or after April 1, 2024. Results since implementation support that the content of a health and wellness course with hidden curriculum to destigmatize accommodations is not only relevant for students early in their academic journey but may help them reflect on and adopt behaviors necessary for early college success. Post-implementation results are

depicted in the below table. Moving PSY/110 from the second to third preferred course reduced the WF rate in that course by 4.4% across all students, and 0.6% for students with only 0-12 Degree Applied Credits (DAP). As expected, moving SCI/163T to the preferred second course versus one taken later in the student journey, increased the WF rate by 1.4% compared to historical across all students taking the course. However, when compared to historical rates for PSY/110, the WF rate was 14% lower over the period of May-Oct 2024.



The College is continuing to monitor student pass outcomes in SCI/163T and the progression and pass rates of the courses that follow. Kelly et al reports the following results related to the hidden curriculum, “For both the first research question, (1) “Can implementing diverse, accommodation-eligible imaginaries in a general education course support students receiving accommodations,” and the second research question, “(2) Can implementing diverse, accommodation-eligible imaginaries improve student familiarity with how to receive university support?,” the results indicate that while the effect sizes were small, they were statistically significant and reflected meaningful improvements in student knowledge around key dimensions such as awareness, knowledge, perceptions, and timeliness regarding accommodations for both resources associated with accommodations and self-reporting” (Kelly et al, 2025). The College continues to gather data to evaluate the impacts of the hidden curriculum on student attitudes towards accommodations and the rate at which they are requested. Future innovations may involve the use of siloed Artificial Intelligence (AI) accommodations-eligible imaginaries interacting with course participants to dive deeper into health and wellness concepts, (Kelly et al, 2025).

Conclusion

As outlined earlier, educational institutions serving non-traditional adult students face unique challenges in meeting their needs. Most adult students have work and family responsibilities that can make college success more difficult. The stresses of competing priorities can overwhelm students, particularly in the first year when they are acclimating to being a new college student. Institutions serving non-traditional student populations must be open to continuous testing of new approaches to meeting student needs during this critical time. Our tests show that even without adding costly support resources, it is possible to improve first-year student outcomes by making strategic decisions about which courses students take and in what order. We sought to solve the problem of lower than desired pass rates in the preferred second course for undergraduate students. Results of an earlier test of an innovative design for one of our 100-level health and wellness courses led to a hypothesis that the course content and design could be useful for students earlier in their journey. We sought to understand how a course with hidden curriculum to destigmatize accommodations and content that addresses wellness topics like stress management, healthy eating, and sufficient sleep might positively contribute to student preparation and course outcomes.

Our testing of a solution for higher than desired second course pass rates led us to permanently move an introductory health and wellness course to the preferred second course for most undergraduate students. In doing so, we have seen significant improvements in second-course pass rates and improved performance beyond the second class. This test was conducted at an active educational institution and was not a controlled experiment, so replicability is unknown. Moving up any health and wellness course may not be the answer to improving second course outcomes; institutions are encouraged to make data-driven decisions based on how students at their institution perform in General Education courses taken at various points in their educational journey. Students tend to perform better as they gain more college experience, so it is typical for courses taken later in the journey to have higher pass rates.

Decisions to move a course earlier in the student journey must be made thoughtfully and with attention paid to the content and course outcomes, or these moves can result in lower pass rates. If there is a high-performing course with highly relevant content that is leveled appropriately for the first year, but is taken later, it may make sense to explore moving the course up in the sequence. Institutions may also want to consider how they can address student reluctance to request accommodations, as a lack of support in that area is correlated with poorer student outcomes. Our health and wellness course includes hidden curriculum to destigmatize accommodations, and our data supports that has improved student sentiment about requesting accommodations. However, for students taking the class, we do not have data that shows an increase in the rate at which students request or receive accommodations. We cannot say that students who completed the class request accommodations at a higher rate than those who did not. Finally, institutions considering similar tests should review transfer credit data for their student population to ensure that any course moved earlier in the journey does not fulfill a credit bucket typically fulfilled through transfer credits to avoid students taking courses they do not need.

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