San Antonio College Case Study

San Antonio, Texas



Study Specifics

School Name
San Antonio College

Educator
Dr. Henry Griffith

Course Name
Elementary Algebra, College Algebra (Coreq), College Algebra (STEM Track), Precalculus, Elementary Statistics.

Program
ALEKS Math

Bridging Knowledge Gaps: How ALEKS Elevated Student Outcomes

The Study

Dr. Henry Griffith of San Antonio College faced a persistent challenge: variability in student preparation and knowledge gaps that widened as the semester progressed. Traditional methods of remediation often fell short, leaving some students unprepared for college-level content. To address these challenges, Dr. Griffith and his team pivoted more of their portfolio into McGraw Hill's ALEKS Math platform due to its adaptive delivery capabilities.

Dr. Griffith had three primary goals when implementing ALEKS:

1. Leveling student knowledge of prerequisite material.
2. Efficient content delivery through adaptive technology.
3. Improved retention throughout the course of the semester.

Implementation

Dr. Griffith implemented ALEKS by integrating adaptive prep modules within both the corequisite and stand-alone versions of his college-level math courses. "By integrating the prep modules into both college-level and corequisite sections, we now have assurance that all students have access to the necessary resources to master the prerequisite material," Dr. Griffith noted.

The integration of ALEKS provided a dual benefit: ensuring students were not overwhelmed by content and helping them retain knowledge throughout the semester. The initial Knowledge Check identified gaps in student understanding early on, allowing ALEKS to personalize learning modules tailored to each student's needs. Additionally, knowledge checks conducted across the semester reinforced retention of math topics and ensured that students built a solid foundation for future learning.

For instructors, ALEKS provided valuable support through its analytics and reporting features. "The summary analytics detailing aggregate student performance help optimize the efficiency of content delivery in lecture," Dr. Griffith stated. These reports allowed him to identify where students struggled and tailor lecture content accordingly.



Results

The impact of ALEKS on student success at San Antonio College was significant. By enforcing mastery of concepts through adaptive modules and providing just-in-time resources within the platform, student comprehension of core concepts increased.

Dr. Griffith emphasized the value of ALEKS in shaping lecture content, "By providing aggregate analytics about student comprehension, we are able to prepare lecture content that is optimally matched with student knowledge gaps." This alignment resulted in a more efficient use of class time and allowed Dr. Griffith to focus on addressing the most pressing challenges faced by his students.

Automation of grading through ALEKS not only reduced instructor workload but also allowed the institution to increase class sizes while maintaining high-quality instruction. "By automating the grading process, we have been able to increase class sizes, thereby positively impacting the budget of our institution, while still spending adequate time with each student outside of the classroom," Dr. Griffith said.

The impact of ALEKS on student outcomes was reflected in the improvement of productive grade rates (PGR), the percentage of students who successfully complete the course with an A, B, or C grade across multiple courses. The table below highlights the changes in PGR after adopting ALEKS prep modules in Fall 2023.

Conclusion

The integration of ALEKS Math has had a transformative impact on student success and instructor efficiency at San Antonio College. "Beyond the direct impacts mentioned above, the integration of ALEKS within our courses and associated focus on aggregate analytics has further increased our adoption of data-centric pedagogy and administration policies within our math program," Dr. Griffith reflected.

ALEKS not only improved student comprehension and retention but also allowed instructors to customize content delivery and optimize class time. Additionally, the robust customer support provided by the ALEKS team ensured seamless implementation and ongoing success. "We are greatly appreciative of the tremendous customer support which is available through the ALEKS team. This support is essential in driving our progress forward."

Through its adaptive technology, just-in-time resources, and actionable insights, ALEKS has empowered Dr. Griffith and his team to bridge knowledge gaps and elevate student success across the math program at San Antonio College.

Course Name	Fall 2022 PGR (without ALEKS)	Fall 2023 PGR (with ALEKS)	PGR Improvement
Elementary Algebra	64%	68%	4%
College Algebra (Coreq)	65%	70%	5%
Elementary Statistics	67%	77%	10%
College Algebra (STEM Track)	66%	70%	4%
Precalculus	56%	65%	9%



Instructor Bio

Dr. Henry Griffith is Chair of Mathematics, Architecture, Physics, and Engineering at San Antonio College (SAC), where he has led course redesigns, integrated emerging technologies, and secured funding from Google and Meta to enhance student learning. He holds a PhD in Electrical Engineering from Michigan State University, along with an MS in Management Science and an MBA in Project Management from Wright State University. Dr. Griffith also lectures part-time at the University of Texas at San Antonio, where he has improved course success rates through innovative curriculum redesigns. His extensive research portfolio includes publications in AI, machine learning, and edge computing, supported by grants from the NSF, Google, and Facebook. With a passion for advancing STEM education, Dr. Griffith continues to drive innovation and student success in higher education.



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