

REPORT OF THE APhA-ASP RESOLUTIONS COMMITTEE

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PROPOSED RESOLUTION & BACKGROUND STATEMENTS

2024.1 Loan Repayment Eligibility

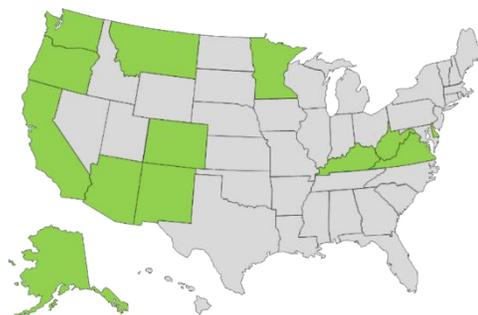
APhA-ASP calls for pharmacists to be eligible for loan repayment funds in a manner consistent with other healthcare providers.

Background Statement

The cost of earning a doctorate level pharmacy degree has continued to rise over the last decade, placing an escalating financial burden on student pharmacists. During the 2022-2023 academic year, tuition and fees for public schools of pharmacy ranged from \$15,309-\$48,631 for in-state tuition per year and \$21,396-\$60,876 for out-of-state tuition. For students attending a private school of pharmacy, their costs are even higher ranging from \$27,915-\$86,580 per year for in-state students and \$31,315-\$86,580 per year for out of state students¹. Simultaneously, pharmacist salaries have not kept pace with the increasing student debt, exacerbating the financial strain on professionals entering the field. Between 2009 and 2018, an AACP Graduating Student Survey conducted by the Bureau of Labor Statistics reveals that the average student loan debt of graduating student pharmacists has surpassed their salaries². Despite this, the annual income of pharmacists has fallen behind in recent years relative to the overall burden of student debt. For example, in 2015, the average pharmacist salary was \$119,270 with an average amount borrowed for a graduate in the class of 2015 of \$149,320³. This continued concern has impacted other healthcare professions, such as physicians, dentists, and nurse practitioners. To address this issue, loan forgiveness programs have been established across the nation to provide financial relief to healthcare professionals in exchange for service, often in primary care or rural communities. Generally, programs require pharmacists to work full-time for a specified duration in designated Health Professional Shortage Area (HPSA) or rural areas. For example, Alaska's SHARP program offers loan assistance to pharmacists working in underserved communities for at least two years, and the California State

Loan Repayment Program offers loan repayment assistance to pharmacists who commit to working in a designated HPSA for reimbursement of up to \$50,000 for a two-year service agreement.

Unfortunately for pharmacists, the eligibility criteria for loan repayment programs tends to be inconsistent, resulting in limited loan repayment program opportunities for pharmacists as compared to their counterparts in other healthcare professions. Approximately 13 states have existing loan repayment programs that include pharmacists as eligible providers⁴.



*States with loan forgiveness programs for pharmacists.
AK, AZ, CA, CO, KY, MN, MT, NM, OR, RI, VA, WA, WV*

In contrast, there are loan repayment programs in most states for other healthcare professionals. As an example, 34 states that currently have state-specific student loan forgiveness programs for physicians⁵.

As the healthcare landscape continues to evolve, pharmacists are increasingly providing essential primary care to their communities, such as immunizations, test and treat services, and chronic disease management. In many rural communities, pharmacists may serve as the sole accessible healthcare provider, further underscoring the importance of recognizing their contributions and supporting their ability to practice at the top of their license. The Pharmacy and Medically Underserved Areas Enhancement Act (S.1491) was introduced to the Senate in 2023 and exemplifies the current efforts to recognize the provider role of pharmacists in medically underserved communities⁶. If passed, this bill would allow pharmacists in underserved areas to bill Medicare Part B for services within the pharmacist's scope of practice delivered to Medicare beneficiaries at 85% of the current physician fee schedule. In line with recent progress towards granting provider status to pharmacists, loan repayment initiatives targeting medically underserved regions should also mirror this advancement.

Educational debt-to-income ratios in the United States increased considerably over the past decade among pharmacists, dentists, and veterinarians and can negatively impact health professionals as well as patient care. Innovative strategies are needed to alleviate the educational debt burden.⁸ Worry over future debt burden can serve as a deterrent to applying for pharmacy school and pursuing a career as a pharmacist.

In recognizing the substantial positive influence that pharmacists exemplify and model, especially in underserved rural communities facing limited healthcare access, APhA-ASP advocates for equal eligibility for pharmacists alongside other healthcare providers in qualifying for loan repayment programs and funds. This resolution statement seeks to rectify the current disparities in loan repayment eligibility criteria at a state level, acknowledging the evolving role of pharmacists in healthcare delivery, and ensuring that the financial barriers faced by pharmacy students and professionals are addressed comprehensively. By aligning loan repayment eligibility with the expanding scope of pharmacy practice, this resolution statement advocates

for a fair and inclusive approach that recognizes the vital contributions of pharmacists to the healthcare ecosystem.

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2024.2 - Artificial Intelligence in Healthcare Education

APhA-ASP encourages the judicious use of artificial intelligence in healthcare education with an ethical and human-centered approach that expands the abilities and knowledge of educators and students.

Background Statement

The launch of public-facing, easily accessible generative artificial intelligence (AI) tools—such as OpenAI’s ChatGPT, OpenAI’s DALL-E, and Google’s Bard—in late 2022 and early 2023 made use of and conversation about AI ubiquitous. While various forms of AI have been developed since the 1950s and previously implemented across sectors, from transportation to finance, and in technologies, like Google Maps and Facebook, the generative AI boom before us now is unique in its ability to capture global attention and inspire imagination. Less than one year after launch, ChatGPT boasts over 100 million weekly users, and over 90% of Fortune 500 companies are developing tools with its API.¹ Further, a recent report from McKinsey demonstrates that over 30% of companies are already using generative AI in at least one business function.² In higher education, 49% of surveyed students used generative AI writing tools in Spring 2023—which is nearly double the amount in Fall 2022, showcasing the rapid growth and adoption of the technology.³

Generative AI is characterized by its ability to generate novel content, typically either text or images, in response to natural-language prompts. ChatGPT and similar tools are types of general-purpose, pre-trained transformers colloquially referred to as “large language models (LLMs)” because of the large amount of data they are trained on and developed from. While these LLMs can generate new content, it is important to note that they are not capable of generating new thoughts or solving unique problems. LLMs are, in simple terms, pattern identifiers and amplifiers, and they merely replicate common patterns that emerge repeatedly in training datasets.⁴ It is this “pattern amplification” methodology that gives rise to many common ethical concerns about AI:

- **Transparency and Explainability:** Because the underlying architecture of LLMs is immensely complex and is often the product of “unsupervised learning,” it is challenging to explain why or how certain patterns or outputs are amplified and produced. General concepts about LLMs are well understood, but because LLMs typically utilize billions of parameters in their decision-making, the exact patterns that any particular model uses are not explainable by humans. In this way, LLMs are “black boxes,” opaque to even those who have a hand in their development.⁴
- **Accuracy:** LLMs simply reproduce patterns in training datasets, regardless of whether those patterns reflect accurate information; if inaccurate information is “fed” to an LLM, it will continue to amplify that inaccurate information. Further, because LLMs combine patterns of information in unpredictable ways, LLMs can create inaccurate information by creating relationships between information in ways that don’t reflect true relationships, even if trained entirely on accurate inputs.⁴

- **Bias:** LLMs simply reproduce and amplify what they were trained on. Biased datasets that either overrepresent or underrepresent certain types of data will thus yield a biased LLM that produces biased outputs when prompted.⁴

Indeed, in a review of 200 global guidelines and recommendations for the governance of AI, these three themes—transparency, accuracy, and bias—were the most frequently discussed, suggesting a common agreement that AI must be developed and used in an ethically sound manner and with an approach that is human-centered.⁵

Per IBM, human-centered AI describes AI that is designed to “amplify and augment rather than displace human abilities” and “preserve human control in a way that ensures artificial intelligence meets our needs while also operating transparently, delivering equitable outcomes, and respecting privacy.”⁶ In their landmark *Guidance for Generative AI in Education and Research* report, UNESCO advocates for a human-centered approach to using AI, arguing that such an approach is vital “to ensure [AI’s] ethical, safe, equitable, and meaningful use.”⁴ Their definition of “human-centered” is in line with that of IBM’s and reflects the values and principles of ethical AI use—such as do no harm, proportionality, safety, fairness, non-discrimination, privacy, explainability, human oversight, and responsibility—previously adopted by the United Nations.⁷

The ethical and judicious use of artificial intelligence in healthcare education is essential, as AI can serve as an innovative tool to further advancements in teaching methods and has the potential to revolutionize medical training by enabling personalized learning experiences. Already, medical education utilizes technology such as simulations—some of which incorporate AI—for teaching and assessment. Simulations readily allow for creation of medical clinical scenarios, risk free, on demand, and in high quantity, allowing students to practice their skills as much as they deem necessary.⁸ Harvard Medical School encourages medical educators to see that this evolving “technology can bring real value” and “to embrace the potential” of AI.⁵ Within the medical community, there are discussions on how AI can be used to enhance students’ learning capabilities and teaching styles. Jeremy Richards, Harvard Medical School’s program director for training to teach in medicine, advocates for the use of AI, as it brings “exciting new capabilities to how we, as educators, teach the next generation of medical professionals.”⁹ AI, for example, could generate unlimited realistic patient cases, which could provide valuable practice for and confidence to students when they are training. In the *American Journal of Pharmaceutical Education*, Cain and colleagues similarly advocate for using AI in pharmacy education to “create efficiencies in...teaching and learning” and describe how AI could be used to create content outlines for lectures, draft questions about literature and course material, and create clinical cases for use in laboratory activities.¹⁰

While AI use in pharmacy education, globally, has been limited thus far, at least one Spanish and one Australian institution have tested implementing AI in courses to provide students with immediate feedback on assignments and activities. Additionally, one domestic institution (UNC Eshelman) has piloted using AI in the admissions process to predict academic performance, one Jordanian institution has assessed AI’s medical content generation abilities, and one

Japanese institution has used AI in pharmacy communication training for counseling patients. In those institutions studied, students generally found the incorporation of AI into their education useful, and AI-generated feedback on course assignments was associated with better learning outcomes.¹¹

Over 85% of medical and dental students and 72% of undergraduate pharmacy students desire increased education on AI, and 99% of surveyed students say they plan to use AI in their future practice.¹¹ Similarly, a survey of 106 pharmacy students at West Virginia University demonstrated that more than 80% of students believe AI can be used for long-term medication management.¹² In pharmacy, professional associations have recently taken actions that forecast a growth in the adoption of digital health solutions; ASHP recently announced a new “Digital and Telehealth Practitioners” membership category, AACP plans to host its inaugural “Use of AI in Pharmacy Education Institute” in April 2024, and FIP recently published a report demonstrating a lack of digital health education in pharmacy that lags behind the demonstrated global need.¹¹ Collectively, these findings suggest both a projected growth in the role of digital health solutions, such as artificial intelligence, in pharmacy and student intent to use these tools in practice.

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2024.3 Interpretation Services

APhA-ASP supports policies within healthcare settings and legislation that increase the utilization and quality of medical interpretation services to improve patient care and outcomes.

Background Statement:

Medical Interpreter services are described as “providing for the communication needs of patients who have limited English proficiency (LEP) or are deaf/hard of hearing in which medical interpreters render messages spoken or signed for those who do not have English as their first language.”¹ These services are crucial for delivering adequate care and ensuring patient safety. Healthcare literacy is vital in allowing LEP patients to understand and seek proper care. A 2021 survey from the U.S. Census Bureau reported that 21.5% of people in the United States spoke a non-English language at home. Furthermore, 8.2% of people spoke English less than very well, meeting the definition of limited English proficiency.² In 2018, a study from the American Cancer Society found that adults aged 18-64 with LEP had worse access to care compared to non-LEP adults. For instance, adults with LEP were less likely to have visited a healthcare provider within the last year and were more frequently overdue for receiving preventative services (i.e. flu vaccination, mammogram).³ Thus, the availability and high-quality implementation of medical interpreter services have a significant impact on ensuring LEP patients are served in healthcare settings.

Per Title VI of the Civil Rights Act of 1964, institutions receiving federal funding must take “reasonable steps to make their programs, services, and activities accessible” by LEP individuals.⁴ The Department of Human and Health services (HHS) funds these programs to ensure access for LEP patients through means ranging from document translation to interpreter services. In 2023, President Biden urged to increase access to government services to address barriers in federal programs and services.⁴ The result of this was a new report from HHS to further improve services and access for LEP.² The new equity plan included addressing potential barriers of access to HHS programs for people with LEP including:²

1. Access to in-language content through webpages, listserv announcements, and public outreach material
2. Telephonic interpreter services
3. Program and benefit information in other languages
4. Federal funding for recipients of HHS to provide language access services; and
5. Restore and strengthen the HHS Language Access Plan

Federal involvement within sanctions regarding LEP is crucial in ensuring adequate care for our patients. Without legislation and further urging of these resolutions, we are unable to help multiple LEP patients resulting in worsened health outcomes in many medical settings.

Effective implementation of these services supports patient-provider relationships and ensures LEP patients have access to needed care. Poor communication between providers and LEP patients has been shown to decrease patient satisfaction, complicate interventions and diagnoses, and increase morbidity and mortality.⁵ A 2022 retrospective analysis also found that readmission rates for LEP patients was 20.4%, compared to 18.5% for English-speaking patients.⁶ Similarly, a 2021 study also found that transitions of care from a clinical setting to home found patients with LEP that received discharge instructions in English to have more issues with refilling prescription, concerns about medications, new and worsening symptoms, and have lingering questions regarding follow up care.⁷

Although medical interpretation services are available, they are underutilized in many cases. Such reasons for underutilization include cost and quality of interpreters, clinicians’ or patients’ belief of not utilizing one, organizational culture and policies, and impact of external organizations to enforce/audit healthcare organizations.⁸ A study in 2020 reviewed the rates of utilization of medical interpretation services in a clinical setting. They found that less than one-third of outpatient physicians reported using a professional interpreter with 40% reporting never utilizing interpreters and had low utilization of translated material available despite legal mandate.⁹

When these services are used appropriately, there is a clear impact on patient outcomes. One study examining emergency department visits by LEP patients found that use of professional interpreters resulted in a lower proportion of potentially harmful errors (12%) compared to both ad hoc interpreters (22%) and no interpreters (20%).¹⁰ The Oath of a Pharmacist state: “I will promote inclusion, embrace diversity, and advocate for justice to advance health equity.” Providing medical interpretation services is a way we can ensure patient safety and improve clinical outcomes.

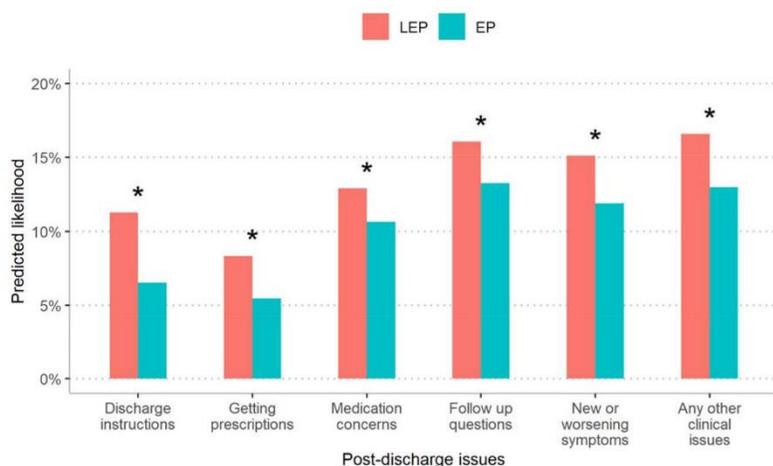
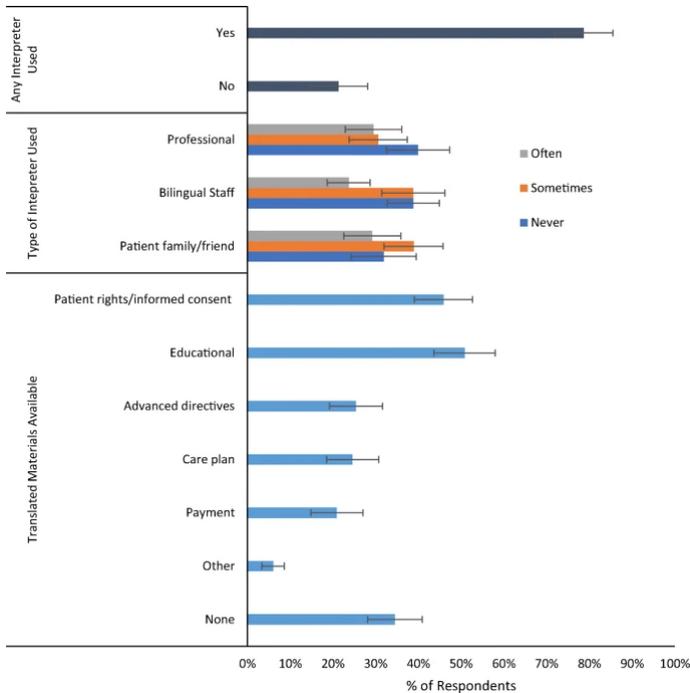
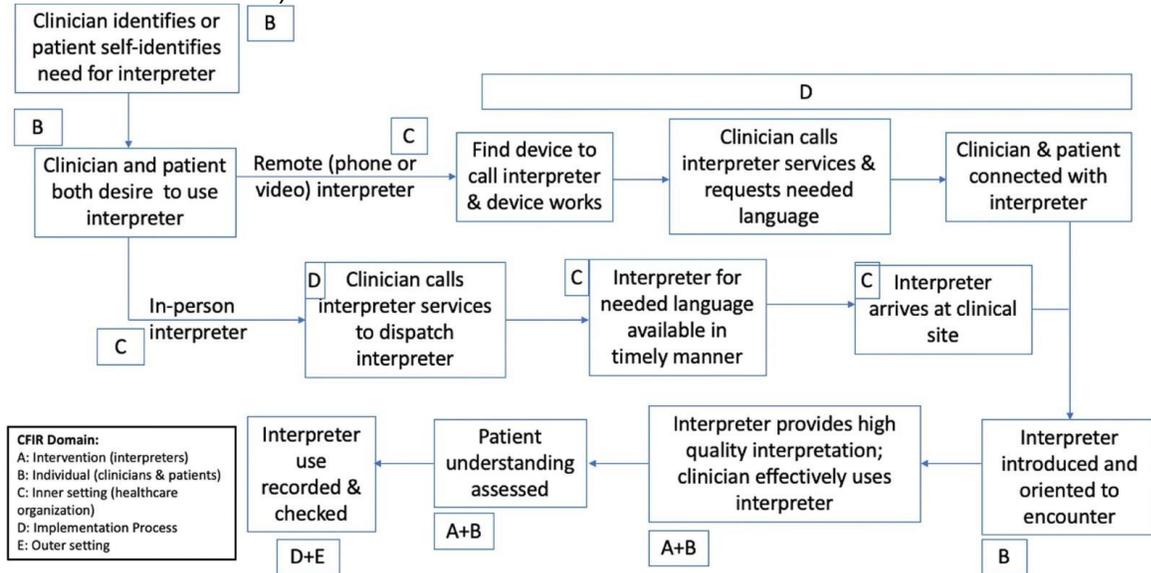


Figure 1 (Malevanchik L, Wheeler M, Gagliardi K, et al. Disparities After Discharge: The Association of Limited English Proficiency and Post-Discharge Patient Reported Issues. *The Joint Commission on Quality and Patient Safety*. 2021; 47(12):775-782.)



Example algorithm of how an LEP patient may utilize interpretation services (Figure 1, Khoong EC and Fernandez A):



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2024.4 Financial Planning Education

APhA-ASP advocates for the inclusion of financial planning education early in the curricula of schools and colleges of pharmacy to equip student pharmacists with the essential knowledge and skills needed to manage personal finances proactively and responsibly.

Background Statement

Background Statement

The American Association of Colleges of Pharmacy (AACCP) stated that from the years 2021-22, 13,323 Doctor of Pharmacy degrees were awarded.¹ At the same time these students, whether they graduated from a public or private institution, had an average student debt of \$170,444.² The U.S Bureau of Labor Statistics states that the mean average salary of a pharmacist in the year 2022 was \$132,750 per year.³ This growing average of debt compared to the average starting salary for a pharmacist, underlines the need for early financial education for student pharmacists. The Accreditation Council for Pharmacy Education (ACPE) does not currently require schools and colleges of pharmacy have a set course in financial planning and education, but rather that the information on financial aid be provided to student pharmacists and guided by a trained professional.⁴ This provides colleges of pharmacy the ability to present financial information to students however they see fit, whether that be a set course or access to a financial aid advisor.

There are currently a total of 140 Doctor of Pharmacy (PharmD) programs within the United States according to the ACPE and of those 140 programs, only a handful such as Northeast Ohio Medical University (NEOMED), and the University of Georgia, offer a course related to personal finances.^{5,6} NEOMED has offered a personal finance elective course in its curriculum in the hopes that it will better equip its students with knowledge and skills in financial decision-making. There was a course evaluation study done from the graduating Classes of 2018 through 2021 from NEOMED, who completed this elective in which students reported a higher financial literacy in managing personal finances.⁵ Student pharmacists who took a similar financial education course at the University of Georgia reported after the completion of the course a 15% increase in the proportion of students with more than one type of savings, a 14% increase in student pharmacists with more than \$10,000 or more in savings, and an increase from 21% reporting “good” or “excellent” knowledge of personal finances to 82%.⁶ Financial literacy is the ability of an individual to make well-informed decisions regarding finances. In these courses, financial literacy was measured by self-reporting confidence and understanding of personal finance. This positive correlation between the completion of the course and the attitudes of the graduated students shows that a personal financial education elective is highly regarded and found to be rewarding in its content and application to personal life after pharmacy school.

These financial education topics, whether they be integrated into other required curricula or a separate course itself have been found to improve one’s financial literacy and students’ attitudes

toward the topic have been well received.^{5, 7, 8} Improved financial literacy, especially among students, can help them make better loan borrowing decisions and how to properly manage that debt after graduation.⁸ This is especially important among student pharmacists and other graduate or professional school students, who on average, have a higher debt-to-income ratio after graduation. Financial education is a tool that can be used to impact and increase financial literacy among these target populations.⁸ Early financial education, within the first or second year of pharmacy school, is especially impactful so that students are better aware of the options they have when it comes to borrowing loans, creating plans to manage their debt, and building financial confidence.

The lack of a financial education course leaves students with academic and social consequences that can impact their pharmacy careers. Students have found that the accumulation of debt and uncertainty of financial knowledge has led them to financial stress and the inability to prioritize studies over work, having stress as a distraction over academics, and the inability to further career goals. A study conducted through the University of Tennessee College of Pharmacy wanted to analyze pharmacy students' attitudes towards debt and its correlation to stress, amount of student loan debt, actual federal student loan debt, and estimated time to repay student loan debt. Using the 10-item Perceived Stress Scale, the team found that "fear of debt" was greatly correlated with increased stress, estimated total student loan debt, total federal loan debt, and pharmacy school loan debt. They also found that "contemplation and knowledge about loans" was correlated with lower total student loan debt, total federal loan amount and pharmacy school loan amount. Also, the students that were on the higher end of "contemplation and knowledge of loans" had a shorter time frame to repay loans. Overall, they found that there is a correlation in increased perceived stress and higher student loans for students who had "fear of debt" while students who had an increase of "contemplation and knowledge of debt" will have lower total loans. The team suggests educational programs that could benefit and increase overall understanding of loans, debts, and personal finances which might help students manage stress and the amounts they borrow during their student career.¹⁰ It has also been found that new pharmacists with larger debt accumulated work longer hours post-graduation to sustain their debt, leading to increased stress levels.¹¹ Level of indebtedness can potentially impact a student's practice site during school, whether they choose to pursue residency/fellowship, and what employer they select (usually based on higher-paying opportunities).¹² Students will debate and choose careers/jobs that offer larger paychecks rather than a job that provides enjoyment and matches their educational interests.

The consequences of not having a financial literacy/planning course has been shown to have impacts that can affect all levels of a pharmacist's life, during school and post-graduation. There must be a clear understanding that the addition of a new course can overall beneficially impact the current curriculum in more ways than one. NEOMED and others have already shown us the strengths of having such a course for their students and the multitude of benefits that come with it. Students should have the ability to build financial confidence that lasts throughout their careers, enhance their mental and academic health, all while building a platform that can propel them into a successful future with less financial burden.

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