Developing and Managing Non-Traditional Academic Programs: A Case Study of Northeastern State University's Environmental, Health, and Safety Management Program

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Traditional academic programs such as chemistry, engineering, and business administration have long been the backbone of higher education institutions. These programs are well-established, recognized by students and parents, and supported by a strong faculty and student body. However, as workforce needs evolve, traditional academic programs may need to be modified or new programs developed to suit to emerging industries and specialized professional demands. Northeastern State University (NSU), a regional teaching university in Oklahoma with campuses in Tahlequah and Broken Arrow (BA), recognizes the importance of adapting to these changes. NSU's Environmental, Health, and Safety Management (EHSM) program is an example of a non-traditional academic program designed to cater to regional employment needs with a student body largely populated with working adults and experienced professionals. This article aims to share key learnings, tips, and challenges encountered while developing and managing the EHSM program. While the case study focuses on EHSM at NSU, the strategies discussed can be applied to other non-traditional programs at universities aiming to meet the demands of today's dynamic workforce.

Keywords: traditional students, non-traditional students, traditional academic program, non-traditional academic program, environmental, health, and safety management

INTRODUCTION

Higher education institutions are increasingly expanding traditional academic programs to accommodate the evolving demands of modern industries and technological advancements. Traditionally, university education has mostly addressed recent high school graduates enrolling in programs with well-established disciplines such as English, Chemistry, Engineering, or Accounting, where learning occurs in a physical classroom under the guidance of a professor. However, contemporary shifts in workforce needs and educational technology have led to the emergence of non-traditional academic programs. These programs often cater to diverse student demographics, incorporate flexible learning modalities, and address newly emerging fields that extend beyond conventional academic boundaries.

Northeastern State University (NSU) offers a Bachelor of Science in Environmental, Health, and Safety Management (EHSM) on its Tahlequah and Broken Arrow campuses. This program represents a non-traditional academic model in several respects: it has a relatively short history compared to other programs at the university, serves a student population composed largely of non-traditional learners, and employs instructional methodologies that extend beyond physical classroom settings through the use of digital

communication technologies. This case study examines the challenges and strategies associated with developing and managing a non-traditional academic program at the university level, using the EHSM program as a focal point.

Identifying Potential Non-Traditional Academic Programs

Evolving industry trends often drive the demand for new academic programs at national and regional levels. While traditional programs may introduce new emphases or elective courses to address emerging academic needs, entirely new programs may be warranted when such modifications prove insufficient. The decision to establish a new program necessitates carefully considering the appropriate degree level, ranging from certificates to doctoral degrees, to align academic depth with industry expectations. As degree-granting institutions, universities are uniquely positioned to provide academically rigorous programs that confer greater prestige and credibility than certifications from professional organizations or training agencies.

Table 1 provides examples of relatively new academic programs within Oklahoma.

TABLE 1
NON-TRADITIONAL PROGRAMS WITHIN THE STATE OF OKLAHOMA

Program	University	Start Year
Data Science and Analytics	University of Oklahoma	2014
Business Analytics and Data Science	Oklahoma State University	2011
Cannibus Studies Minor	University of Tulsa	2024
Cannibus Studies Certificates (various)	Tulsa Community College	2024

The emergence of data science as a prominent discipline exemplifies how universities respond to industry trends, with Oklahoma's largest institutions offering degrees and certificates in this field. Similarly, the legalization of medical cannabis in Oklahoma in 2018 created employment opportunities that prompted institutions such as the University of Tulsa and Tulsa Community College to introduce cannabis studies programs. These new programs often begin as certificate or minor offerings, requiring fewer resources and allowing institutions to assess demand before expanding to more comprehensive degree programs.

At the undergraduate level, a baccalaureate degree typically serves as the cornerstone for establishing a new academic program. The EHSM program at NSU began as a bachelor's degree program to align with workforce demands.

Many companies (especially larger corporations) employ Occupational Health and Safety professionals to ensure a safe workplace and compliance with environmental regulations. The Bureau of Labor Statistics (BLS) indicates there are 153,500 jobs for Occupational Health and Safety Specialists as of 2023 with 14% job outlook projected to 2033, which indicates a strong demand for these professionals. The BLS indicates that Occupational Health and Safety Specialists typically require a baccalaureate degree with at least a high school diploma. Northeastern State University's EHSM program is well situated to support the surrounding job market and fill a non-traditional academic need not well covered by the state's larger institutions.

Aligning Non-Traditional Programs Within University Structures

Traditional academic disciplines are typically housed within clearly defined colleges, such as Chemistry within the College of Science or Accounting within the College of Business. Non-traditional programs may not fit neatly into existing academic structures and must be positioned within a college that maximizes interdisciplinary collaboration, resource sharing, and curricular synergy.

Curriculum overlaps with other academic programs are particularly valuable at smaller universities that emphasize teaching over research. Many students have uncertainty in their career paths upon their initial entry into an academic program. Having some fluidity between academic programs within the college

makes it easier for students to pivot to other programs of study without losing progress towards their degree if they shift within the college. Providing students with multiple options within the college also helps the programs recruit and retain students collaboratively.

The Environmental, Health, and Safety Management (EHSM) program at Northeastern State University (NSU) has some overlapping curriculum with programs in the College of Science and College of Business and Technology but is largely a unique curriculum. Therefore, it could be perceived to align with the Colleges of Science or Business or neither. The relatively small number of program overlaps makes it difficult for students to transfer between programs. This obstacle becomes more pronounced as the student progresses within a program. Over the last ten years (2014 to 2024), a much smaller number of students have transitioned in or out of the EHSM program to the other programs in the College of Business and Technology compared to other inter-college program transfers.

The EHSM program at NSU advantageously shares many classroom and administrative resources with the other programs in the College of Business and Technology.

Accreditation Considerations

Accreditation is a critical factor in establishing the credibility of any academic program. However, obtaining accreditation for non-traditional programs can be complex. While NSU's College of Business and Technology is accredited by the Accreditation Council for Business Schools and Programs (ACBSP), the EHSM program is not accredited. Comparable programs at other institutions are often accredited by the Accreditation Board for Engineering and Technology (ABET), which imposes rigorous math, science, and engineering coursework and no business course requirements. The ABET requirements challenge EHSM's alignment within a business-oriented college.

TABLE 2
ACCREDITATION OF COMPARABLE EHSM PROGRAMS

Program	University	College	Accreditation
Environmental, Health, and Safety Management	Northeastern State University	College of Business and Technology	
Occupational Safety	University of Central Oklahoma	College of Education and Professional Studies	
Occupational Safety and Health	Southeastern Oklahoma State University	Department of Occupational Safety & Health	
Environment, Health, Safety, and Sustainability	University of Findlay	College of Sciences	
Environmental Health Safety	Oakland University (Michigan)	School of Health Sciences	ABET
Occupational Safety and Health Management	Grand Valley State University (Michigan)	Seymour and Esther Padnos College of Engineering	ABET
Occupational Safety and Health	University of Central Missouri	College of Health, Science, and Technology	ABET
Occupational Safety and Health	Murray State University (Kentucky)	Jesse D. Jones College of Science, Engineering and Technology	ABET
Occupational Safety and Health	Montana Technical University	Lance College of Mines and Engineering	ABET

Environmental Health and Safety	North Carolina Agricultural and Technical State University	College of Science and Technology	ABET
Occupational Safety and Environmental Health	Millersville University (Pennsylvania)	College of Science and Technology	ABET

Faculty Recruitment

Non-traditional academic programs, such as those in Environmental Health and Safety Management (EHSM), face unique challenges in faculty recruitment due to the limited availability of Ph.D. programs directly aligned with these fields. While traditional programs often consist of faculty members with Ph.D. degrees from specialized disciplines within the same field, non-traditional programs are frequently composed of faculty holding doctoral degrees in related disciplines, such as Environmental Engineering, Chemical Engineering, and Psychology. For example, none of the faculty in the EHSM program at NSU hold a Ph.D. specifically in the EHSM field. Tenured faculty in these programs typically possess at least a Ph.D., while individuals often fill adjunct and instructor positions with lower degrees but extensive industrial experience.

Recruiting new faculty for non-traditional programs presents additional difficulties. Recent Ph.D. graduates, who typically seek academic positions, often focus on opportunities that closely match their specialized fields of study and may not initially consider non-traditional programs as viable career options. Furthermore, because the EHSM field is closely tied to industry, many qualified professionals are employed in high-paying positions within the sector, where salaries may exceed what small, non-traditional universities can offer. These factors make it challenging for non-traditional programs to attract and retain faculty with the requisite expertise.

Student Demographics

NSU has multiple campuses. The headquarters campus is in Tahlequah, Oklahoma and a satellite campus is in Broken Arrow, Oklahoma located in the greater Tulsa metro area. The EHSM program is taught from both campuses. The main campus teaches classes mostly in the day and caters to the traditional student body. The Broken Arrow campus teaches mostly evening classes catering to the working adults near the Tulsa area.

The distinction between traditional and non-traditional students is outlined in Table 3.

TABLE 3
CHARACTERISTICS OF TRADITIONAL VS. NON-TRADITIONAL STUDENTS AT NSU

Student Type	Characteristics
Traditional	Recent high school graduates; reside on campus; attend daytime classes
Non-Traditional	Older students; intermittent enrollment history; employed full-time; attend evening classes

The EHSM program serves a student body comprising approximately 50% non-traditional students, many of whom are working professionals. The EHSM program at NSU seeks to heavily recruit and retain the non-traditional student base. Flexible enrollment options and class times are critical for students who work during the day. The EHSM program offers evening classes and various course delivery modes such as blended and fully online courses to maximize enrollment flexibility, which is a high priority for working students.

Curriculum Development

Non-traditional curricula often include courses for which suitable textbooks are either unavailable or insufficient, placing an additional burden on instructors to select appropriate resources from limited options or to develop entirely custom course materials. In the EHSM program at NSU, many classes rely heavily on instructor-created notes, supplemented by textbooks that are only partially utilized, with specific chapters referenced as needed. In addition, instructors must create and maintain homework problem sets and test banks, as course-building tools and teaching supplements to textbooks are often scarce for such specialized subjects.

The diverse academic backgrounds of students, coupled with a significant proportion of non-traditional learners, require a tailored approach to teaching. Some students may have completed prerequisite courses a significant time before enrolling in the following courses, resulting in a wide range of math and science skill levels among students at the start of the course. As a result, instructors often find it necessary to dedicate part of the course time to reviewing and reinforcing prerequisite skills. This approach is essential to alleviate academic intimidation and prevent students from withdrawing due to perceived challenges in keeping up with course content.

Given the occupationally focused nature of the EHSM program, courses are designed to prioritize active problem-solving rather than theoretical lectures, with a significant portion of class time dedicated to working through practical problems. This hands-on approach aims to engage students directly in the application of concepts and ensure that they develop the skills needed for real-world challenges in the field.

Program Goals and Effectiveness

Postgraduate success and gainful employment are critical measures of a program's effectiveness. The program's size must align with the employment needs of the industry to ensure its success. If the program is too small, it may fail to meet the demands of the industry or lack the necessary scale to achieve financial sustainability within the university. Conversely, if the program is too large, students may struggle to secure employment in their field of study, diminishing the return on their educational investment. Maintaining strong industry relationships is essential for connecting graduates with potential employers, thereby enhancing the program's effectiveness and relevance.

Non-traditional academic programs are often overshadowed by the dominance of traditional programs at universities. For example, the EHSM program at NSU currently enrolls around 45 students, comparable to similar programs nationwide. For instance, the Environmental, Health, and Safety program at North Carolina Agricultural and Technical State University had 36 students enrolled during the 2022–2023 academic year. While the enrollment numbers for non-traditional programs may appear small and may seem unremarkable to administrators, these programs still generate credit hours and revenue for colleges and universities while meeting the unique needs of specific workforce sectors.

Administrators and faculty need to recognize that non-traditional programs often cater to a significant number of non-traditional students, each with unique characteristics and goals. Non-traditional students prioritize learning goals, as opposed to their counterparts in traditional programs, who tend to focus more on performance goals (Hovert & O'Dell, 2009; Jinkens, 2009). Understanding these distinctions is crucial for the long-term development and growth of non-traditional programs, as it allows for more effective alignment of resources and support to meet the student population's needs.

Non-traditional programs should be viewed as integral components of a diversified portfolio within a college or university, where large programs contribute more significantly to overall revenues and smaller, non-traditional programs contribute in a more modest, yet valuable way. Effective management and flexible planning are essential to strengthening and sustaining non-traditional programs, especially during periods of declining enrollment in higher education (Scott, 1985).

CONCLUSIONS

Non-traditional academic programs are crucial in diversifying university offerings and addressing workforce demands. While these programs may have smaller enrollments than traditional disciplines, they

contribute to institutional revenue and fulfill critical industry needs. The case of NSU's EHSM program illustrates the challenges associated with program alignment, accreditation, faculty recruitment, and student engagement. Effective management of non-traditional programs requires institutional flexibility, strategic planning, and a deep understanding of the student populations they serve. The insights from this case study can inform higher education administrators and faculty members seeking to establish and sustain non-traditional academic programs in response to evolving educational and occupational landscapes.

The Environmental, Health, and Safety Management (EHSM) program at NSU is a successful example of how universities can address the evolving workforce landscape through non-traditional academic programs. Institutions can create programs that effectively serve adult learners and industry professionals by identifying workforce needs, designing flexible curricula, leveraging technology, and building strong faculty support systems. While there are challenges such as student retention, accreditation approval, and unique course development, the long-term benefits of meeting workforce demand and ensuring student post-graduate success make these efforts worthwhile.

It is hoped that the experiences from the NSU EHSM program, though specific to the state of Oklahoma, may provide valuable insights for other administrators and colleagues seeking to develop and grow non-traditional programs on their campuses.

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