Tribal Colleges and Their Impact on Indian Country

Nueta Hidatsa Sahnish College (NHSC)

A Case Study

Prepared by
ROI Institute, Inc.
www.roiinstitute.net

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About American Indian College Fund

Founded in 1989, the American Indian College Fund has been the nation's largest nonprofit organization supporting American Indian and Alaska Native (AIAN) students' access to higher education.

About Tribal Colleges and Universities

For nearly 50 years, Tribal Colleges and Universities (TCUs) have provided a path for AIAN students to access higher education and the opportunities it provides. TCUs allow AIAN students to take their first steps towards earning a degree on, or near, the reservation communities they call home. In addition to receiving an accredited higher education, students thrive in a learning environment in which the culture, traditions, and experiences of Indigenous people are woven into the DNA of the institutions—providing a space for them to learn and be understood.

In order to assure the sustainability of TCUs, the American Indian College Fund has embarked on a project to determine the impact and return on investment of its partner colleges, which includes Nueta Hidatsa Sahnish College (NHSC).
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About Nueta Hidatsa Sahnish College

The mission of NHSC is to provide quality cultural, academic, and vocational education and services for the Mandan, Hidatsa, and Arikara Nation. NHSC is a TCU located in New Town, North Dakota. NHSC was established in 1973 as a community college by the three affiliated tribes of the Fort Berthold Reservation. In 2011, NHSC expanded its degree programs to include four-year degrees in Elementary Education, Environmental Science, and Native American Studies. Currently, NHSC offers the following types and numbers of degree programs:

- Bachelor of Arts (BA) – 1
- Bachelor of Science (BS) – 2
- Associate of Arts (AA) – 7
- Associate of Science (AS) – 4
- Associate of Applied Science (AAS) – 2
- Vocational Certificates – 6

NHSC is comprised of 25 faculty members. Students attending NHSC average 23.5 years old. The school admits 20 to 30 students per year. Business and General Studies are the largest two programs at NHSC.

About ROI Institute

ROI Institute, Inc., founded in 1992, helps organizations evaluate the success of projects and programs, including measuring the financial return on investment (ROI). Serving for-profit, nonprofit, government, and nongovernmental organizations, ROI Institute's work includes workshops, consulting, coaching, research, and publications. It operates through a network of more than 100 partners and associates in the U.S. and in more than 70 countries ROI Institute, ROI Methodology, ROI Certification, and Certified ROI Professional are registered trademarks owned by ROI Institute, Inc.

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Nueta Hidatsa Sahnish College

RESEARCH REPORT
ROI Institute, Inc.

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Foreword

The North Dakota Tribal College ROI project had its start in the early 2000s. I was a newly minted program director for United Tribes Technical College's Tribal College (UTTC) and University Program through the National Science Foundation. At my first midpoint evaluation, a member of the evaluation team asked me the following question: "We have given you $2 million dollars and you only have two graduates to show for our investment. Why should we continue to fund you?" I was taken aback; this was one question that I did not expect. I thought for a moment and responded that success wasn't only measured in the number of graduates, but the way that the program had changed the landscape of STEM education at UTTC and changed the lives of the program participants. The evaluator then pushed me to explain myself. I stated that our graduates many times are the first person in their family to go to college. They represent families, extended families, and communities that are enhanced by the students attending and completing college. We went on to complete the evaluation and passed with flying colors.

However, the question of how to prove return on investment continued to percolate in my mind. I was also completing my Ph.D. program during this time. We had to study evaluation models for education in one of my classes. At this time, I was introduced to several models, one of which was the Phillips Return on Investment Model. I must admit the model really made sense to this non-business minded STEM program director. As luck would have it, or as spirits guide things, I received a flyer in the mail about ROI training. A colleague and I signed up to attend the class, and there I met Dr. Patti Phillips. During the training, I asked to visit with her about my idea for using their ROI model for evaluating programs at a Tribal College. I stated that I wanted a way to honor the local tribal values within the framework. She gave me some great ideas and agreed to serve on my dissertation committee as the content expert.

I spent the next 18 months gathering ideas, values, and perspectives through talking circles at UTTC. The participants were students, faculty, staff, and administrators, along with several alumni. We created a Tribal ROI conceptual framework through this process. Several of the Phillips' levels of evaluation were changed to more closely reflect the TCU values. In 2007, my committee approved the framework and the dissertation. In 2008, Patti and Jack nominated my dissertation for the ROI Research Award, awarded to an outstanding ROI research dissertation.

Life went on and, in 2016, I was approached by Cheryl Crazy Bull for a copy of my dissertation. She was looking at models of evaluation for tribal colleges and universities. In 2017, the American Indian College Fund, through the work of Dr. David Sanders, was awarded a Strada Network Education Grant to take the conceptual TCU ROI framework that I had developed for my dissertation and bring it to life for use with the North Dakota Association of Tribal Colleges. The following TCUs agreed to be part of the study: Cankdeska Cikana Community College, Nueta Hidatsa Sahnish College, Sitting Bull College, Turtle Mountain Community College, and United Tribes Technical College. Each institution provided information about numbers of

students, student satisfaction, learning, experiential learning, traditional and contemporary American Indian cultural values, impact on Indian Country, ROI, and intangibles. The data were gathered through records, talking circles, and individual interviews.

I am so excited for you to see what great things our Tribal Colleges and Universities do each and every day, and the return on investment for monies spent is well worth it. It is every Ph.D. candidate's dream to see their work come to life. Thank you, American Indian College Fund, Dr. Patti Phillips, and the NDATC presidents for seeing the value in showing our value.

Jennifer Janecek-Hartman, Ph.D.
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Executive Summary

For nearly 50 years, Tribal Colleges and Universities (TCUs) have provided a pathway for American Indian Alaska Native (AIAN) students to access higher education and the opportunities it provides. TCUs allow AIAN students to take their first steps toward earning a degree on or near the reservation communities they call home. In addition to receiving an accredited higher education, students thrive in a learning environment in which the culture, traditions, and experiences of Indigenous people are woven into the DNA of the institutions, providing a space for them to learn and be understood.

The American Indian College Fund and participating Tribal Colleges and Universities located in North Dakota want to better understand institutional outcomes and how these outcomes reflect a return on investment (ROI) in these institutions. Additionally, the American Indian College Fund wanted to test the efficacy of the Tribal College University ROI Process, an adaptation of ROI Institute's framework and ROI Methodology®. These efforts were funded by a Strada Network Education Grant. In 2018, ROI Institute was given the opportunity to develop case studies for five tribal colleges.

The research comprises five case studies describing the first application of the TCU-ROI Conceptual Framework and outcomes associated with Cankdeska Cikana Community College, Nueta Hidatsa Sahnish College, Sitting Bull College, Turtle Mountain Community College, and United Tribes Technical College. The focus of the study is on outcomes associated with the 2016-2017 school year and students who graduated during Spring and Summer 2017. Results in this report represent those from Nueta Hidatsa Sahnish College. Below are the key findings.

- Approximately 228 students were enrolled during Fall 2017.
- 185 (82%) of students registered in 2017 were classified as AIAN.
- Students indicated that they were very satisfied with their courses during that period, scoring them a 4.28 out of 5 on overall satisfaction. As importantly, graduates described that the smaller classrooms were beneficial, and that faculty and administrators care about student success.
- 79% of students passed courses with an A, B, or C; 21% received failing grades. Graduates report that, while faculty and administrators make it difficult for them to fail by supporting them when life gets in the way, they don't make it easy for them to pass. Expectations for performance exist, and they exist in a safe environment.
- Students learned about traditional and contemporary American Indian Cultural Values, particularly what it means to be an American Indian, humility, and the importance building relationships. While the teachings are not always explicit, they exist in the behaviors of faculty, administrators, and other students.
- Students learned job skills. Graduates reported applying what they learned during school on their jobs after graduation. They described the importance of Internships,

giving students an opportunity to practice what they learn and a chance to engage with the community.

- 21 students graduated in Spring, Summer, and Fall of 2017.
- 14 (67%) of the graduates attained jobs upon graduation.
- The average annual income for the 2017 graduates was $36,461. This is a $21,381.00 differential over that of high school graduates.
- When prorating the NHSC operating cost over the number of students that attended during the evaluation period, $689,298.75 in costs can be allocated to the 21 graduates from 2017.
- Graduates from the 2014-2017 cohorts invested an average of $8,268.67 per year to earn their degree.
- The payback period for the investment in NHSC is 2.3 years based on first year wage income of 14 out of 21 (67%) graduates who attain and retain jobs one year after graduation.
- NHSC is a safe place. Faculty and administrators care about their students. They make it difficult for students to fail without making it easy for them to succeed. Faculty and administrators recognize that students bring their lives to the classroom and support them as they work through their day-to-day challenges and opportunities. By employing graduates, NHSC can avoid recruiting costs by utilizing graduates for school vacancies. These graduates-turned employees make it easier for new students by serving as mentors helping new students acclimate. Additionally, school employment helps drive tribal employment which supports the sustainability of the community.

Introduction

Background

Measurement systems that focus on the success of colleges and universities are changing. This shift from measuring inputs and activities to outcomes is being made as a result of higher education. Table 1 compares the traditional versus the emerging measures of higher education success.

Table 1. Traditional and Emerging Ways of Evaluating Success

Traditional	Emerging
• Enrollment	• Graduate Rates
• Number of Courses Taken	• Time to Graduate
• Grades	• Placement Rates
• Diversity of Programs	• Student Success
• Quality of Faculty	• Real Work Experiences
• Investment in Facilities	• ROI in Degree Programs
• Student Activities	• Student Debt Load
• Student Satisfaction with Experience	• Student Career Satisfaction
• Reputation of College or University	• Donations

Source: Phillips and Phillips, 2019, p. 94.

The emergence of new measures has never been as important to the Tribal College and University community as it is today. Tribal Colleges and Universities were created in response to the higher education needs of American Indians. They generally serve geographically isolated populations that have no other means of accessing education beyond the high school level. TCUs have become essential to educational opportunity for American Indian students (American Indian Higher Education Consortium, 1999; p. A-1). In recent years, however, they have been criticized for failure to produce results relative to the cost associated with their existence (Butrymowicz, 2014).

Tribal Colleges are funded primarily through Title III of the Higher Education Act. This act is administered by the U.S. Department of Education and the Tribally Controlled College or University Assistance Act of 1978, which is administered by the U.S. Bureau of Indian Affairs (Fact Sheets, 2017). Additionally, the American Indian College Fund states that their mission is to invest "in Native students and tribal college education to transform lives and communities" (American Indian College Fund, 2018b; p. 2). Currently, 14% of all Native people have college degrees as compared to approximately 34% of the US population (Statista, 2018). By 2020, an estimated 67% of job openings will require postsecondary education or training; 35% will require a bachelor's degree (Carnevale, et al, 2019a). Even manufacturing jobs, in which high school graduates have flourished in the past, while fewer in numbers, now require a higher

level of education (Carnevale, et al, 2019a). These factors, coupled with the disparity that exists between academic opportunity for the affluent and that for the less affluent (Carnevale, et al, 2019b) leave Native Americans at a disadvantage. The American Indian College Fund seeks to address this gap (American Indian College Fund, 2018c).

Life on the Reservation: 2013-2017 Average Key Statistics Compared to US Benchmarks

Reservation communities are some of the least developed in the United States. Fort Berthold Reservation, home of the Mandan, Hidatsa, and Arikara Nation (the Three Affiliated Tribes), has the lowest unemployment rate of the five TCUs under study and is slightly above that of the US. Household income performance is strongest for Fort Berthold Reservation due to the recent windfall in the oil industry and surrounding areas. Unemployment and poverty is higher than that of the US overall.

	Unemployment Rate	Median Household Income	Poverty Rate
Fort Berthold	7.35%	$ 63,093.00*	20.60%
Spirit Lake	9.65%	$ 31,875.00	45.87%
Turtle Mountain	8.97%	$ 28,688.00	37.10%
Standing Rock	24%	$ 36,406.00	42.30%
United States	**6.55%**	**$ 57,652.00**	**14.60%**

* Figure influenced by the recent windfall in the oil industry in the surrounding area

Sources: (Center for Indian Country Development, 2019)

Figure 1 shows the distribution of students enrolled in 2016 across all 35 TCUs. It also compares the number of AIAN students to non-AIAN students enrolled. The total enrollment in the 35 TCUs is 16,857 students of which 13,163 students are AIANs students or 78.1%. The high AIAN enrollment numbers are evidence that these institutions are highly visible and important to AIANs earning postsecondary degrees.

In order to close the gap between Native Americans with and without degrees, it is vital to support tribal colleges because they are the first education option for Native students. The American Indian College Fund contributed a grant of $235,915 to NHSC (American Indian College Fund, 2018a) to help achieve this goal.

Because of the nature of their funding stream, however, TCU resources are at risk (Janecek-Hartman, 2007); therefore, demonstrating the benefits of investing in TCUs is important, as is focusing on emerging outcomes. While success can be defined in different ways, the ultimate value for investing in TCUs is the impact they have on the Indian Nation itself. This impact influences the sustainability of the citizens of the nation. This study attempts to describe that impact by balancing metrics and money with the voices of those who benefit the most.

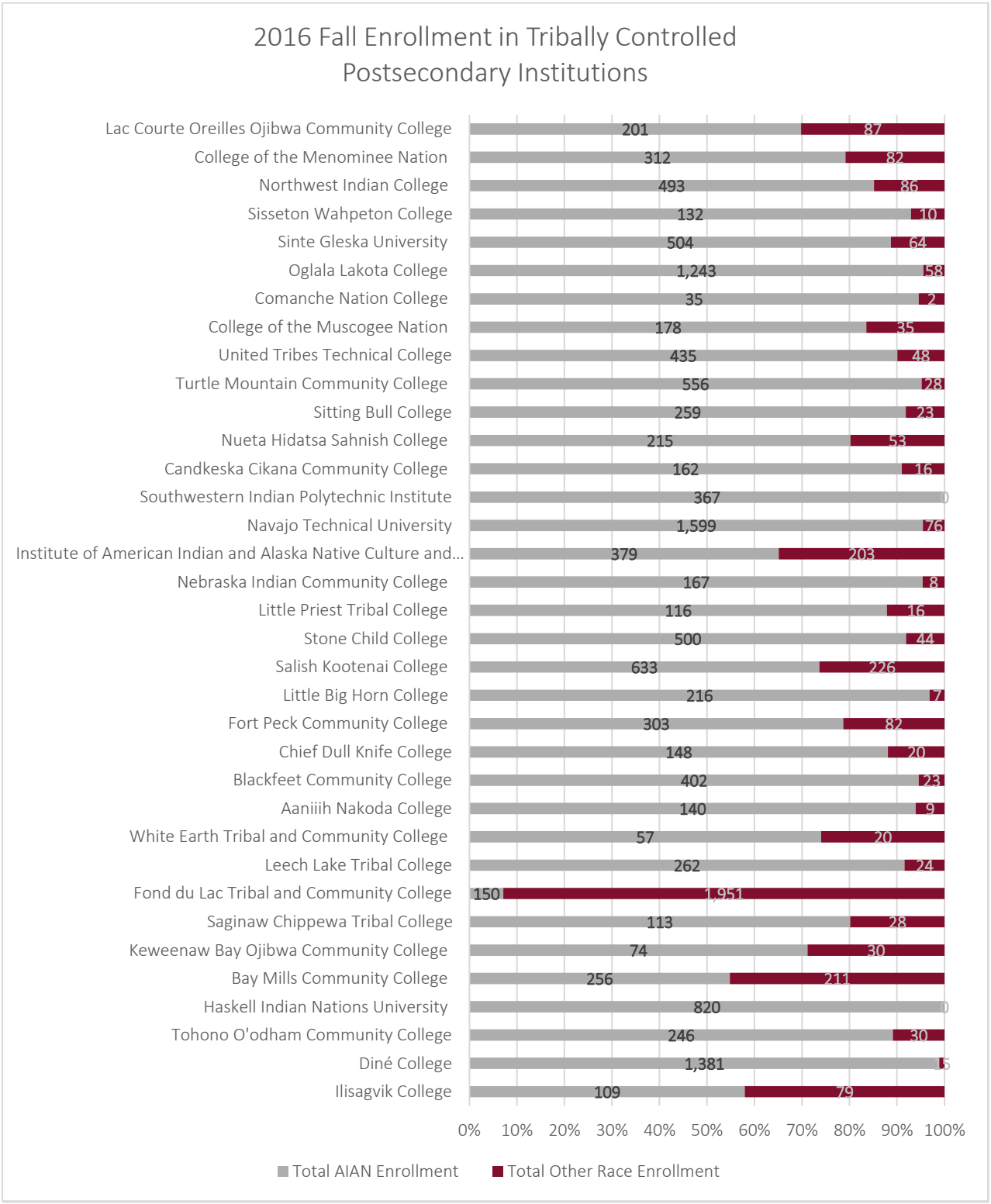

Figure 1. 2016 Fall Enrollment in Tribally Controlled Postsecondary Institution (U.S. Department of Education, 2017)

Research Objectives

There are two purposes for this research. First, the research is intended to describe the impact tribal colleges have on the Indian Nation as defined by graduates and their earnings upon graduation. Second, the research should demonstrate the efficacy of the Tribal College and University (TCU) Return on Investment (ROI) Conceptual Model. Research objectives include:

1. Determine the institutional return on investment outcomes based on wage earnings and employment for the five (5) North Dakota Tribal Colleges. These five institutions are: Cankdeska Cikana Community College, Nueta Hidatsa Sahnish College, Sitting Bull College, Turtle Mountain Community College, and United Tribes Technical College.

2. Describe outcomes categorized based on the TCU-ROI Conceptual Model for the five (5) participating North Dakota Tribal Colleges. This framework categorizes data as:

    - Indian Student Count
    - Student Reaction and Satisfaction
    - Student Learning and Traditional and Contemporary American Indian Cultural Values
    - Experiential Learning and Internships
    - Impact on Indian Country
    - Return on Investment
    - Intangible Benefits

Stakeholders

The results of this evaluation are important to a wide variety of internal and external stakeholders who are critical to supporting Tribal Colleges and AIAN students. Stakeholders for this project are:

- Internal
    - American Indian College Fund Office of Research and Sponsored Programs
    - NHSC Staff and Administrators
    - NHSC Faculty
    - NHSC Students
- External
    - Mandan, Hidatsa, and Arikara Tribal Members
    - Tribal Colleges and Universities
    - AIAN Students
    - Tribal Governments
    - College Preparation Programs (like Upward Bound)
    - Employers

Research Methodology

A Comprehensive Approach

The ROI Methodology® is a comprehensive approach to evaluating programs, projects, and initiatives. Developed in 1973 by Dr. Jack J. Phillips, it is applied in nonprofit, nongovernmental, government, and for-profit organizations located in more than 70 countries (Phillips and Phillips, 2019). Application of the ROI Methodology spans a variety of types of programs and projects, including those associated with higher education institutions. Projects evaluated using the ROI Methodology from higher education include, but are not limited to, faculty development, apprenticeship programs, process improvement initiatives, and student advisement. Its use is expansive because it:

- reports a balanced set of measures;
- follows a methodical, step-by-step process;
- adheres to standards and philosophy of maintaining a conservative approach and credible outcomes; and
- places focus on process improvement.

Three components help ensure data captured through the process are credible, reliable, and useful to those who apply it. Those components are the framework, process model, and standards. While the ROI Methodology has been applied to some higher education programs, it has not been applied at the overall institutional level of higher education organizations, particularly that of TCUs.

Janecek-Hartman (2007) adapted the three components of the ROI Methodology to reflect the norms and practices of the Native American community. The research funded by Strada Network Education through the American Indian College Fund is the first application of the Tribal College and University ROI Conceptual Model.

Framework

Framework is fundamental to the research methodology. It represents a method that allows organizations to logically categorize data so that a theory of change is evident as participants engage in programs, courses, and processes.

Table 2 presents the ROI Methodology framework of data. Level 0 represents the investment in programs, courses, and other activities. Level 1, Reaction, represents outcomes from the participant or student perspective. Measures in this level indicate that the content presented is relevant and important and that participants are committed to applying it. They may also indicate satisfaction with delivery of that content and how improvements can be made in the

delivery. Level 2, Learning, categorizes learning outcomes and can be measured by test scores, demonstrations, simulations, observations, case studies, and other less formal processes.

Level 3, Application, data represent actual use of knowledge, skill, and information gained through a program. Level 4, Impact, data represent the consequence of that application. These measures may indicate improvement in output, quality, cost, or time as well as improvement in stakeholder satisfaction, innovation, or work habits. Level 4 measures may also include gains in funding, employment, community economic development, and other outcomes that results from the application of new knowledge, skill, and information. Level 5, Return on Investment (ROI), compares the monetary benefits of improving Level 4 measures to the cost of the program, course, or process in question. The ROI formula is a standard financial equation developed through finance and economics, as shown in Figure 2. The most fundamental indicators of return on investment are the benefit-cost ratio (BCR) and the ROI percentage. These metrics are useful in evaluating any type of program.

Table 2. Framework of Data Representing Theory of Change

Level	Measurement Focus
0 Input	Investments, activities, and outputs from a program, initiative, or other activity.
1 Reaction and Planned Action	Measures participant satisfaction with the program and captures planned action.
2 Learning	Measures changes in knowledge, skills, information, and attitudes.
3 Application and Implementation	Measures changes in behavior and performance.
4 Impact	Measures changes in impact measures.
5 Return on Investment (ROI)	Compares the monetary benefits to the costs.

$$\text{BCR} = \frac{\text{Monetary Benefits}}{\text{Costs}}$$

$$\text{ROI (\%)} = \frac{\text{Net Monetary Benefits}}{\text{Costs}} \times 100$$

$$\text{Payback Period} = \frac{\text{Costs}}{\text{Monetary Benefits}}$$

Figure 2. ROI Formulas

ROI measures the efficiency of an investment or how efficient one investment compares to another.

Using participatory-based research, Janecek-Hartman (2007) worked with various stakeholders to modify the ROI Methodology framework for use in evaluating TCUs and their impact on Indian Country. This would ensure AIAN value systems drive the success indicators in the TCU-ROI Conceptual Model. Table 3 presents the TCU-ROI Conceptual Framework and key questions asked at each level.

Table 3. TCU-ROI Conceptual Framework

Category	Key Questions
Counts	How many participants enter or utilize the program? How many participants are served or complete the program? Success rates?
Student Satisfaction	What relevance does the program have to job or mission? What is the importance of the program to job or mission? What new information was provided? Do participants intend to use the new information? Do participants recommend program to others? What are recommendations for program improvement? What opportunities for collegial discussions exist?
Student Learning	Have participants acquired new skill or knowledge? Do they know how to apply what they have learned? What is the confidence level in their ability to apply what they have learned?
Traditional and Contemporary American Indian Cultural Values	How long does the program contribute to lifelong learning? How does the program promote the participant to give back to the community? How does the program promote the participants to take calculated risks? How does the program contribute to the participants' spiritual growth? How does the program contribute to the participant's understanding of what it means to be American Indian? How does the program promote a sense of volunteerism? How does the program promote a value of humility? How does the program promote respect for connectedness to the land? How does the program contribute to the development of an attitude of respect for diversity? How does the program contribute to the understanding of Tribal Sovereignty? How does the program help participants build collegial relationships? How does the program engage participants in leadership activities? How does the program promote the development of traditional tribal and contemporary leadership attributes? How does the program support the concept of participant wellness?
Experiential Learning and Internships	How effective are participants at applying what they have learned? How frequently are participants applying what they have learned? If they are applying what they have learned, what is supporting them? If not, why not and what are the barriers?

Impact on Indian County	To what extent did the program contribute to the individual's success? To what extent did the program contribute to the organization's success? To what extent did the program contribute to the community's success? To what extent did the application improve the measures the program was intending to improve? How did the program affect output (i.e. quality, time, cost, customer satisfaction, employee satisfaction) and other measures? How do you know it was the program that improved these measures? How does the program enhance the quality of life for participants?
ROI	Do the monetary benefits of the program outweigh the costs of the programs?
Intangibles	Benefits that the institution has chosen not to attach a dollar value.

Table 4 compares the ROI Methodology framework of data with the TCU-ROI Conceptual Model categories.

Table 4. Evaluation Framework Comparison

ROI Methodology Framework (Mainstream)	**TCU-ROI Conceptual Model Categories (Indian Country)**
0 Input	Indian Student Count
1 Reaction and Planned Action	Student Reaction and Satisfaction
2 Learning	Student Learning
	Traditional and Contemporary American Indian Cultural Values
3 Application and Implementation	Experiential Learning and Internships
4 Impact	Impact on Indian Country
5 Return on Investment (ROI)	Return on Investment
*Intangibles are included in Level 4 Impact	Intangible Benefits

There are several similarities between the two models, including Level 1, Level 2, and Level 5. Notable differences include incorporating the count of AIAN students attending the institution being evaluated at Level 0, focusing on cultural values and experiential learning at Levels 2 and 3, and placing focus on Indian Country at Level 4. In both frameworks, intangible benefits are defined as those measures not converted to money. The ROI Methodology framework includes intangibles at Level 4 Impact but, when reporting ROI, it also requires that the intangibles be highlighted. The TCU-ROI framework categorizes intangibles separate and apart from Impact on Indian Country. "The principal difference between the ROI Methodology framework and the TCU-ROI Conceptual Model is the embedded and overarching importance of traditional and contemporary American Indian cultural values" (Janecek-Hartman, 2007, p. 107). The TCU-ROI Conceptual Model helps to assure AIAN cultural values are at the heart of the evaluative process.

Process Model

The ROI Methodology process model, shown in Figure 3, provides step-by-step guidance for the researcher. This process simplifies what is otherwise a complex process by moving sequentially from evaluation planning, to data collection, to data analysis, and, lastly, reporting and data optimization. The ROI Methodology begins with the foundational blocks of clarifying the organization, community, and/or individual needs that align with the framework of data. Further analysis helps determine the best solution for those needs. Program objectives are developed, which, ideally, serve as the blueprint for program or project design, as well as evaluation.

When the foundation has been laid, the evaluation plan can be developed and approved. After the planning is complete, the data collection for the evaluation begins. Data collection occurs at various points in the program's lifecycle (e.g. before, during, and after). With data in hand, the evaluation proceeds to data analysis. The data analysis steps are important because they allow the researcher to determine whether the changes in key business metrics are attributable to the program or project under investigation. The process concludes with data reporting and optimization. The last step in the process, optimization, is one of the most critical in that it comprises execution of strategies to improve programs and projects based on results.

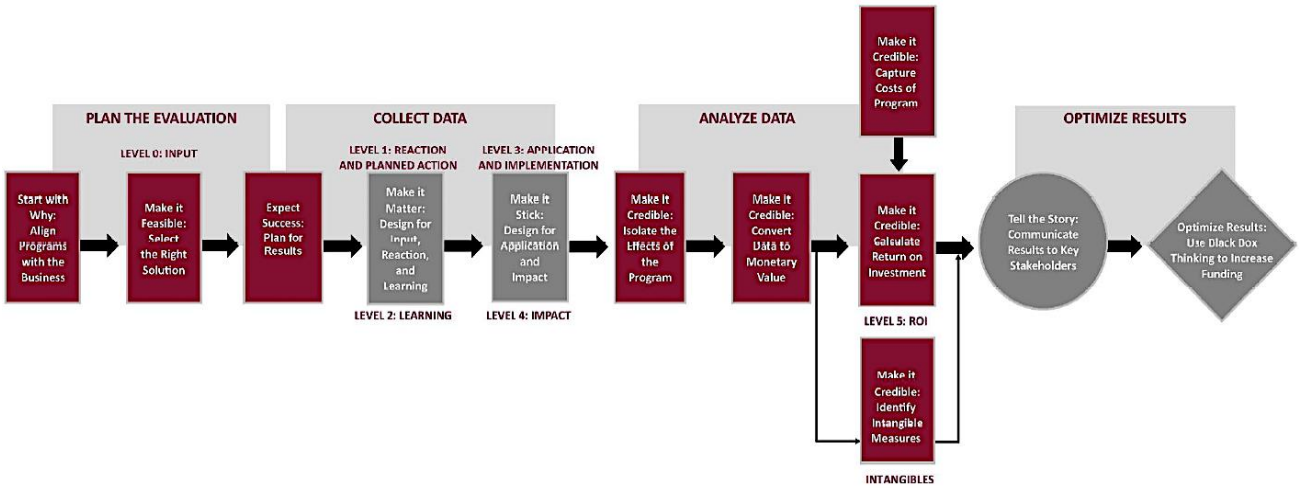

Figure 3. ROI Methodology Process Model

This linear design of the ROI Methodology was modified as part of the development of the TCU-ROI Conceptual Model to reflect a more cyclical process. Figure 4 illustrates the elements of the TCU-ROI Conceptual Model and how they interact with one another.

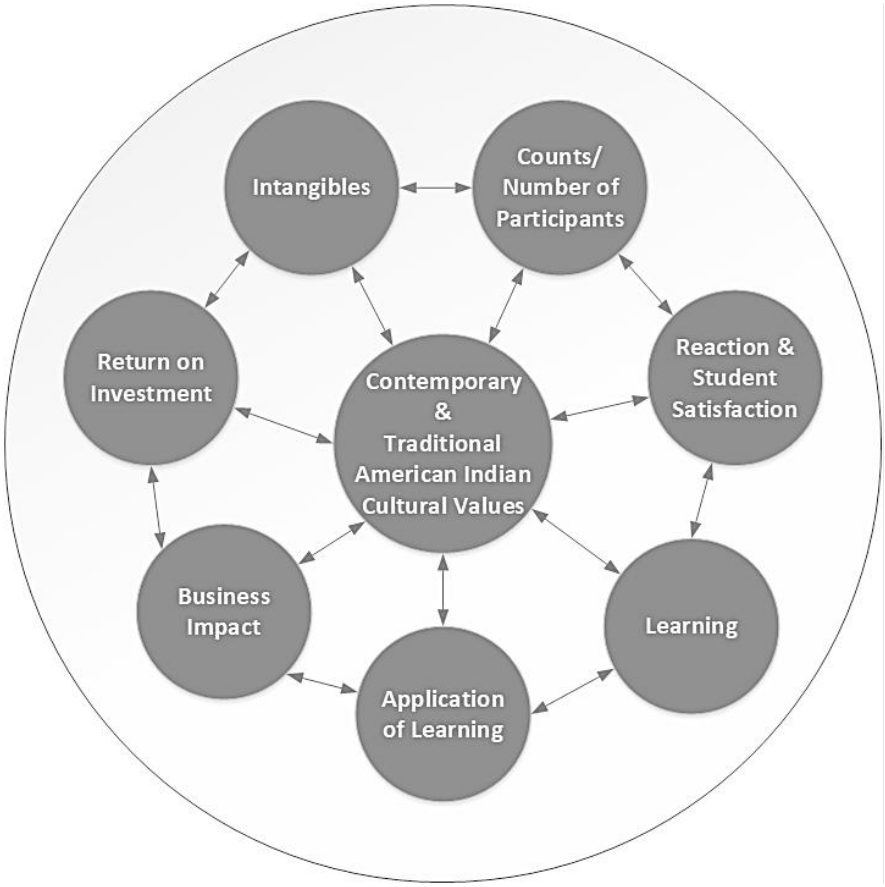

Figure 4. TCU-ROI Conceptual Model, adapted from Janecek-Hartman, 2007.

The TCU-ROI Conceptual Model is centered around contemporary and traditional American Indian cultural values. This category is interconnected with all the other data collection categories. The TCU-ROI Conceptual Model ultimately adheres to the same primary steps that are included in the ROI Methodology (see Figure 3), but it is driven by cultural values and is more fluid.

The process begins with evaluation planning and the establishment of overall goals for all levels of the evaluation. Next, Level 0 data is reported as the aggregate number of AIAN students enrolled in the TCU. This aligns with the way most Federal programs judge success. Data collection starting with Level 1 data regarding student satisfaction is next. Allowing the students to assert their own opinions reflects the cultural value of personal sovereignty. Learning is at Level 2 and was included from the ROI Methodology because building knowledge is a key objective of TCUs. Application via experiential learning is at Level 3 and reflects cultural values because, as graduates start to apply their new knowledge in their communities, Indian Country starts to benefit. Level 4 data reflects impact not on a business but, instead, on the individual, institution, family, and community. The TCU-ROI Conceptual Model concludes with data analysis, including effect isolation and the familiar benefit cost ratio (BCR) and ROI calculations

from the ROI Methodology. This evaluation will adhere to the steps and data collection categories of the TCU-ROI Conceptual Model.

Standards and Guiding Principles

Guiding Principles, or standards, are used throughout the lifecycle of the evaluation and provide an additional level of standardization leading to credible, reliable output. The ROI Methodology 12 Guiding Principles were used to guide the evaluation process. Table 5 presents the Guiding Principles that support the ROI Methodology.

Table 5. ROI Methodology Guiding Principles

1.	When conducting a higher-level evaluation, collect data at lower levels.
2.	When planning a higher-level evaluation, the previous level of evaluation is not required to be comprehensive.
3.	When collecting and analyzing data, use only the most credible sources.
4.	When analyzing data, select the most conservative alternative for calculations.
5.	Use at least one method to isolate the effects of a project.
6.	If no improvement data are available for a population or from a specific source, assume that little or no improvement has occurred.
7.	Adjust estimates of improvement for potential errors of estimation.
8.	Avoid use of extreme data items and unsupported claims when calculating ROI.
9.	Use only the first year of annual benefits in ROI analysis of short-term solutions.
10.	Fully load all costs of a solution, project, or program when analyzing ROI.
11.	Intangible measures are defined as measures that are purposely not converted to monetary values.
12.	Communicate the results of ROI Methodology to all key stakeholders.

Janecek-Hartman (2007) proposed two additional guiding principles to assure the credibility of conducting an ROI evaluation in Indian Country:

1. Ensure the culture of the community is always considered.
2. Ensure the TCU-ROI process is participatory in nature.

Further details regarding how the ROI Methodology Guiding Principles were applied will be discussed more fully in the appropriate sections later in this report.

Data Collection Procedures

Data collection includes clarification of objectives and measures, data collection methods and instruments, data sources, and timing for data collection.

Objectives and Measures

Objectives and measures are the basis for data collection. They describe the type of data to be collected and targets for success. Ideally, these objectives evolve from a comprehensive needs assessment which includes categories of needs or goals reflective of the data categories assigned in the framework. Figure 5 is the alignment model that supports the development of objectives and measures.

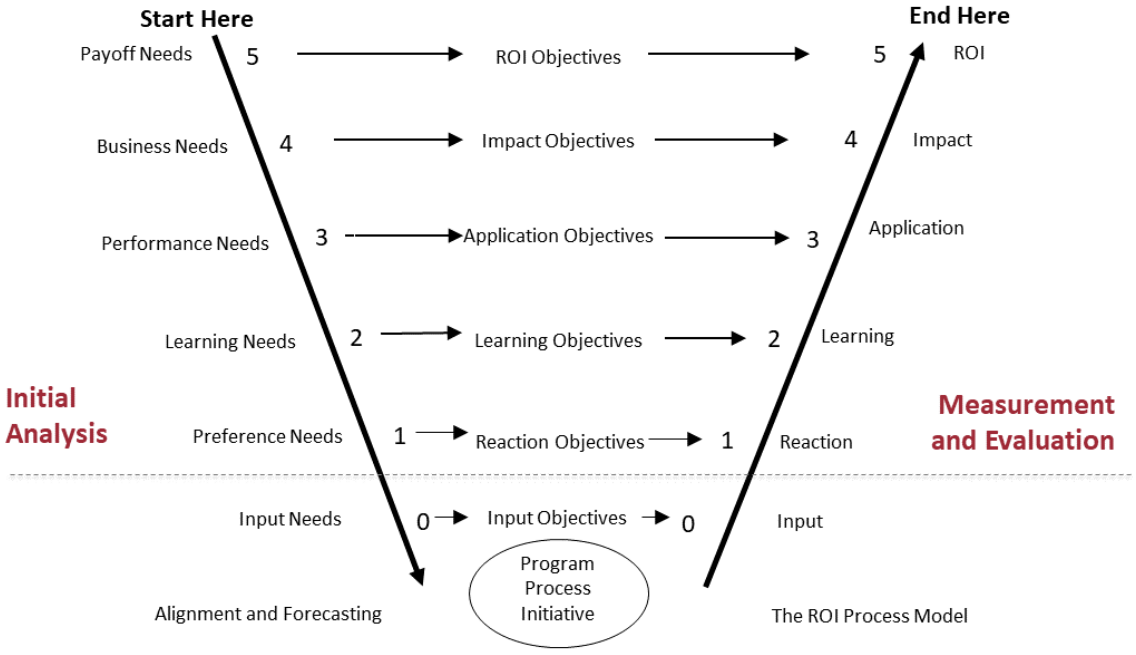

Figure 5. ROI Methodology Alignment Model @Copyright 1994-2019 ROI Institute, Inc.

The payoff need for TCUs is sustainability of the Indian Nation, as well as the growth and well-being of the tribe and its members. Specific business needs or impact needs focus on contribution to Indian Country as indicated by jobs and income among other measures that, if improved, will lead to sustainability and well-being. Performance needs are those actions, activities, processes, and projects that, if changed, will address the business/impact needs. From there, solutions (e.g. courses, technology, projects) are identified, followed by learning needs, which indicate what people need to know to make the solution work. Preference needs reflect how best to present or implement a program, project, or initiative. Input, activity, and output needs represent the resources required to make the program work.

After the needs are clarified, the specific, measurable objectives are developed. While there are many needs that a TCU can address and the objectives are numerous, this study focused specifically on the following measures:

- Indian Student Count
    - Number FTE enrolled
    - Number of graduates
    - Demographics of graduates
- Student Reaction and Satisfaction
    - Instructor Ratings (4.0/5.0)
    - Teaching Strategies (4.0/5.0)
    - Overall perception of attending TCU
- Student Learning and Traditional and Contemporary American Indian Cultural Values
    - Self-report measures of learning
    - Grades overall
    - Grades by division
    - Overall perception of learning acquisition by attending TCU
- Experiential Learning and Internships
    - Specific examples of application
    - Overall perception of experiential learning opportunities
    - Use of knowledge, skills acquired on the job
- Impact on Indian Country
    - Jobs attained by graduates under study
    - Income one-year post graduation
    - Overall perception of impact due to TCU
- ROI
    - Income differential (high school versus college graduate)
    - Operating cost of TCU

It is important to note that income as a measure of impact on Indian Country is a proxy for many other benefits that come with graduates attaining and retaining jobs. Given the purpose and scope of this research, the design intentionally omitted other measures of impact (e.g. innovation, safety and health, community development, etc.). Job attainment and perception of other impacts are also important measures of impact on Indian Country. Specific targets were available for reaction and learning measures based on school standards. The target for income differential was the difference between the income of an AIAN high school graduate versus the average income of NHSC graduates. Targets for other measures were unavailable as this was the first analysis of this type for TCUs.

Data Collection Methods/Instruments

Data were collected for each of the levels of evaluation. NHSC records were the primary method of data collection for student count, demographics, and types of degrees (Level 0). Records included 502 graduation records of NHSC students from Spring 2000 - Summer 2018, from which data for the target audience (Fall 2016 through Spring 2017) were obtained. Demographic data regarding enrollments at NHSC were sourced from Integrated Postsecondary Education Data Systems (IPEDS), which are available online from the US Department of Education (2019). Student reaction (Level 1) data came from end of course surveys for courses taken by the target audience. A copy of the end-of course survey is found in Appendix B. Additional reaction data describing overall perception of attending NHSC were obtained during the talking circles.

What is a talking circle?

Talking circles are used by many AIAN tribes to discuss ideas in such a way that all stakeholders are heard and all ideas are respected (Janecek-Hartman, 2007). Talking circles are similar to focus groups in that they allow for consensus building in a group. However, they are different in that they allow each participant to talk as long as he/she wants and have a distinct connection to AIAN ritual. The questions asked during the talking circles can be found in Appendix C.

Learning data (Level 2) were collected through NHSC records of student performance in classes from Summer 2016, Fall 2016, and Spring 2017. Data included course names, departments, final grades, and student ID number. Additional insight into learning and traditional and contemporary American Indian cultural values were captured through talking circles.

Experiential learning and Internships (Level 3) were measured primarily through the data collected during the talking circles with graduates of NHSC. Data reflective of Impact on Indian Country (Level 4) were collected from NHSC records, Bureau of Labor Statistics, National Center of Educational Statistics (NCES), and IPEDS. Additional impact data were collected during the talking circles. Data important to the ROI calculation, including cost data and monetary benefits, were collected through TCU operations records, receipts for expenses, previous studies, and the US Bureau of Labor Statistics.

Table 6 shows how the data collected using the different approaches were integrated.

Table 6. Data Integration

	Level 0	Level 1	Level 2	Level 3	Level 4	Level 5
NHSC Records	X		X		X	
IPEDS	X				X	
End of Course Surveys		X				
Talking Circles		X	X	X	X	
US Bureau of Labor Statistics					X	X
NCES					X	X
TCU Operations Budget						X
Receipts for Expenses						X
Previous Studies						X

Sources

An important standard of the ROI Methodology, as with any research report, is to collect data from the most credible source of information (Guiding Principle 3). Credibility is defined as the source or sources that are most informed about the measure being taken.

Sources for the data collected in this study include:

- NHSC School Administrator
  - NHSC Institutional Records
- State of North Dakota representative
  - Bureau of Labor Statistics data
- Databases
  - IPEDS
  - Previous Research
  - National Center of Education Statistics
- Students of Specific Courses
- Graduates of NHSC

The target audience for the evaluation included graduates of NHSC from Spring 2017, Summer 2017, and Fall 2017. There were 13 graduates in Spring 2017, six in Summer 2017, and two in Fall 2017, for a total of 21 graduates.

On November 11, 2018, Dr. Jennifer Janecek-Hartman, director and vice president for Campus Services, NHSC, and Dr. Patti Phillips, CEO of ROI Institute, facilitated a talking circle at NHSC. Seven people attended the 90-minute session. The seven students completed a degree at NHSC between 2016 and 2017. Two students graduated with degrees in business. One participant graduated from the two-year liberal arts program. Another has two years left for an elementary

education degree. The New Town school district representative majored in Native American Studies; this was previously a two-year program but is now a four-year program. Participants in the talking circles were either working at NHSC or working on the reservation in New Town. One person was not working at the time the talking circle was conducted. All graduates represented employment from mainstream organizations off the reservation.

Employment data from the Bureau of Labor Statistics was used in the analysis at Level 4. Data were produced by a representative of the State of North Dakota in partnership with an NHSC administrator. The data provided for the evaluation tracked graduates of NHSC. There were 13 graduates in Spring 2017, six in Summer 2017, and two in Fall 2017. The employment status of these graduates was tracked for four quarters after the time of their graduation.

Timing

Data are typically collected during and after implementation of a program or project. This case study uses data from 2016-2017. The data, however, represent data collected during and after engagement with the school. Reaction and learning data were originally collected while students were in school. Employment and income data were collected at the time or soon after graduation in 2017.

Responsibilities

Responsibility for data collection is under the project lead. However, convenience with data collection is also a consideration. Reaction and learning data are collected during and after each course; therefore, the responsibility is with the instructor to ensure the data collection occurs. Collection of application and impact data is the responsibility of the project lead who sometimes relies on other sources to assist in ensuring the data are available.

Table 7 summarizes the data collection procedures.

Table 7. Data Collection Plan

Level	Program Objective(s)	Measures	Data Collection Method/Instruments	Data Sources	Timing	Responsibilities
0	**Student Count**	• # graduates demographics % grad versus non grad • Type major	• NHSC records • IPEDS	• NHSC school administrator	• Onset of evaluation	• NHSC school administrator
1	**Student Reaction and Satisfaction**	• Instructor rating (4.0/5.0) • Teaching strategies (4.0/5.0) • Overall perception	• Course evaluation • Graduate survey • Talking circle	• Students when in class • Graduates with jobs	• During courses • Onset of evaluation	• NHSC school administrator • ROI Institute
2	**Student Learning and Traditional and Contemporary American Indian Cultural Values**	• I learned a great deal • Courses most excelled • Grades overall • Grades by division • Self-report learning	• Student evaluation • Fall grades 16-17 • Fall grades by division 16-17 • Spring grades 16-17 • Spring grades by division 16-17 • Summer grades 16-17 • Talking circles	• NHSC school administrator • Graduates with jobs	• During courses • During evaluation period	• NHSC school administrator • ROI Institute
3	**Experiential Learning and Internships**	• Specific examples of application • Overall perception of exp learning opportunities • Use of knowledge and skills on job	• Talking circles	• Graduates with jobs	• During evaluation period	• NHSC school administrator • ROI Institute

4	**Impact on Indian Nation**	• Jobs attained by graduates • Income • Student funding and support • Overall perception of impact due to TCU	• NHSC records • IPEDS • Previous research • US Bureau of Labor Statistics • National Center for Education Statistics • Talking circles	• NHSC school administrator • State of ND representative • Graduates with jobs	• During evaluation period	• NHSC school administrator • ROI Institute
5	**ROI:** 0%	**Comments:** Zero is the breakeven ROI target. Income is the proxy for impact on Indian Country. Income differential is the value-add and will be used as the basis for ROI. Other benefits will be identified through analysis. Recommendations for improvement and future research will be identified.				

Analysis Procedures

The ROI Analysis Plan, shown in Table 8, provides details regarding how impact data were isolated to NHSC. It also describes other elements important to the ROI calculation.

Isolation Methods

The step to isolate the effects of a program, course, or other intervention, including graduating from tribal college, is important in ensuring accuracy of results. By standard (Guiding Principle 5), this step is always taken when evaluating to impact or ROI. Various techniques were discussed during the planning of this research project. Techniques such as control/comparison group analysis, trend line analytics, and creating mathematical models are ideal. While not a control group, a comparison of jobs attained between graduates and non-graduates was conducted to determine if a difference exists. Trend line analysis was useful in comparing AIAN income trends but, given the variety of other factors that can influence differences in incomes, it was not useful in isolating income performance to college attendance and graduation. In working with the leadership of NHSC, the other four participating colleges, it was decided that this step in the analysis would rely on the input from graduates themselves.

Data Conversion Methods

The ROI calculation requires impact data to be converted to monetary values. There are various techniques to convert measures to money. Monetary values for the performance measure of importance to this study – income — was provided by the State of North Dakota. Through the state, researchers were provided quarterly wage data for NHSC graduates from Spring and Summer 2017. Data were not available for Fall 2017 graduates because it was not yet reported to the State of North Dakota at the time of this evaluation. Earnings varied from quarter to quarter for Spring and Summer 2017 graduates of NHSC. Therefore, all the quarterly data provided was averaged to create an overall yearly earning average. The precise values for the quarterly values that were used to calculate the overall averages can be found in the Impact on Indian Country section.

Cost Categories

This evaluation is concerned with the ROI of attending and graduating from NHSC. While the benefits are from the student perspective (jobs and income), the denominator reflects costs of operating the college. During the planning stage, the tribal college leaders and the ROI Institute research team agreed that jobs and income differential would serve as a proxy for the impact investment in TCUs has on Indian Country. Therefore, the entire college's general fund expenses for fiscal year 2017 were considered when developing project costs. The final total was prorated according to the total enrollment of NHSC from the Fall 2017 semester (228) because this budget was ultimately used to ensure students make progress towards degree completion. The resulting figure was then assigned to the number of graduates from the Spring, Summer, and Fall 2017 semesters to determine the final program costs associated with graduating the 21 students.

Intangible Benefits

Intangible benefits are those benefits of investing in TCUs that are not part of the ROI formula. Sometimes, the intangibles are important enough to offset less than desirable short-term ROI. Intangible benefits better reflect the reality of the impact made by TCUs because some of the most important things to Native communities are very difficult to convert into dollars. For example, it is very difficult to place value on people feeling a part of their culture and learning their native language. It is also difficult to place value on students feeling safe at school and recognizing their ability to contribute to their community. These types of benefits are critical to strengthening the fabric of Native communities. Oral tradition has always played a central part in Native cultures. These stories should always be a part of telling the story of TCUs.

Communication Targets

Key stakeholders will receive the initial findings of this research. These stakeholders include:

- American Indian College Fund Office of Research and Sponsored Programs
- NHSC Administrators

Additional stakeholders will receive the results as deemed appropriate by NHSC leadership.

Table 8. ROI Analysis Plan

Data Items (Usually Level 4)	Methods for Isolating the Effects of the Program/Process	Methods of Converting Data to Monetary Values	Cost Categories	Intangible Benefits	Communication Targets for Final Report	Other Influences/Issues During Application
Jobs	• Compare those who have jobs but did not complete to those that did complete and have jobs • Estimations	N/A	School operational budget – inclusive of all costs Other expenses associated with evaluation project	Graduate perceived impact on Indian Country	• American Indian College Fund Office of Research and Sponsored Programs • NHSC Administrators	A variety of other factors exist that can influence outcomes important to this study including type of degree, job opportunities, family situation, and others.
Income	• Estimations	Database: BLS data National Center of Educational Statistics				
Overall perception of impact	• Estimations	N/A				
Comments: When converting income to money for the ROI formula, use income differential between high-school graduate vs college graduate.						

Limitations

As with all research, limitations exist in this research. First, the project focused on one specific time frame, 2016-2017, and does not reflect the total economic contribution of tribal college participation and graduation. It was determined that a focus on small groups from the five colleges would be more beneficial than a macro-level study replicating other similar research projects. This is also the first implementation of the TCU-ROI Conceptual Model and it was decided that a small, limited-in-scope project would be the best use of resources. While the ROI Methodology has been applied to a variety of higher education programs and projects, the Indian Nation adaptation by Janecek-Hartman remained theoretical until this point in time.

Another limitation is that the objectives and specific targets for success were not defined through analysis, but rather qualitatively and assumptively. Therefore, comparing outcomes to the desired state is challenging and offers the TCUs an opportunity to more methodically define measures and set targets for success.

From a data collection standpoint, it would have been helpful to include a survey or interview of the supervisors of graduates to allow different viewpoints to enter the conversation. This perspective is important because supervisors are focused on business results and can identify how well applied skills drive value.

Impact data (i.e. jobs and earnings data) were collected and reported so quickly that not all of the 2017 cohort had time to find employment after graduation in time for the figures to be reflected in the State of North Dakota's reporting that was critical to this study. Therefore, future studies should allow enough time for graduating cohorts to become employed and for that data to populate in source databases prior to calculating benefits.

Lack of access to students limited scope of perspective and opportunity to determine additional benefits. While students who graduated and still work on the reservation (and particularly at the school) were relatively easy to locate, an important part of the story should be the success graduates have in mainstream professions and how attending tribal college contributes to their success as well as their contribution to the Indian Nation.

It is important to note that income as a measure of impact on Indian Country is a proxy for many other quantifiable benefits that come with graduates obtaining and retaining employment. Given the purpose and scope of this research, the design purposefully omitted other measures of impact. However, qualitatively, graduates of the college provided insight into their job attainment and other impacts they believe occur as a result of attending and graduating from a TCU.

In summary, data collection and analysis were limited by the scope of this project. Many of the limitations can be addressed with time, access to data, and resource availability.

Delimitations

Despite the limitations in the research, this study offers a baseline recap of success of graduates within a specific timeframe. Project parameters enabled the researchers to remain focused and to develop evaluation case studies that provide new and pertinent insight for leadership and other stakeholders. The lead researcher and analyst from ROI Institute are not from Indian Country, nor do they have a bias toward the success of tribal colleges. This perspective added a layer of objectivity during the talking circles and the analysis.

This study adhered to the central tenants of conducting ROI evaluations in Indian Country by engaging in talking circles with graduates. The talking circles provided the opportunity for the community to speak to cultural considerations and was also inclusive of community members, thus, making the activity participatory at its very core. Engaging in talking circles reflects the Native value of personal sovereignty which "realizes that a community member is able to contribute to the community and that he/she was valued for his/her skills" (Janecek-Hartman, 2007, p. 83).

Highlights regarding how this evaluation specifically followed ROI Guiding Principles include adhering to the third principle by using credible sources for data used in this evaluation. Using the access and expertise of an NHSC administrator, as well as a representative of the State of North Dakota, allowed the evaluators to use only the most solid and reputable data.

Furthermore, this study follows Guiding Principle 10 by including all of the costs from the entire NHSC budget when calculating the cost used in the ROI calculation. On the benefits side of the calculation, income differential was used as the basis for the monetary values. Also, in compliance with Guiding Principle 6, assumptions were only made for those students who had jobs at the point in time that the income data were reported, rather than projecting benefits for graduates who would, hopefully, attain jobs in the future. Further details regarding how the ROI Guiding Principles were applied will be discussed more fully in the appropriate sections later in this report.

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Results

The objectives for this study were:

1. Determine the institutional Return on Investment outcomes based on wage earnings and employment for the five (5) North Dakota Tribal Colleges
2. Describe outcomes for the five (5) participating North Dakota Tribal Colleges. Outcomes are categorized based on the TCU-ROI framework. This framework categorizes data as:

- Indian Student Count
- Student Reaction and Satisfaction
- Student Learning
- Traditional and Contemporary American Indian Cultural Values
- Experiential Learning and Internships
- Impact on Indian Country
- Return on Investment
- Intangible Benefits

Indian Student Count

This first level of data describes the student enrollment, graduation, and types of degrees. The first datapoint is enrollments of AIANs at NHSC. The reason this datapoint is important is described by Janecek-Hartman (2007), who states that funding for NHSC and Tribal Colleges in general is heavily based on the number of full-time equivalent and unduplicated enrollments.

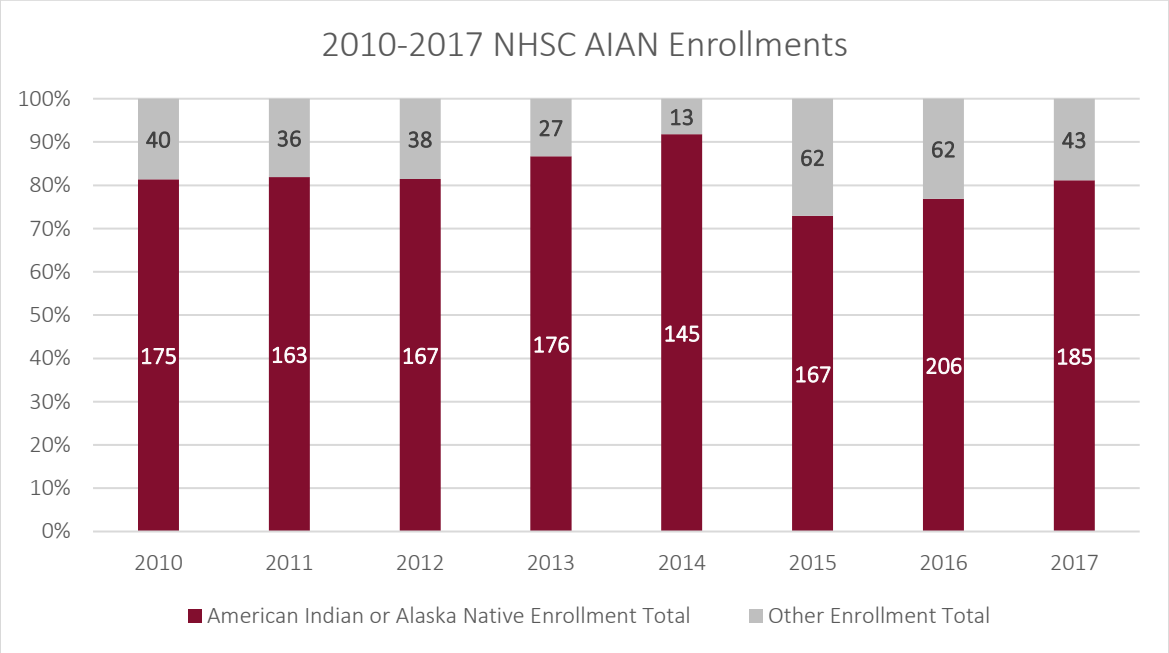


Figure 6. 2010-2017 NHSC AIAN Enrollments (U.S. Department of Education, 2019)

Most enrollments at NHSC are AIANs. Enrollments of AIANs at NHSC ranged from 73% to 92%. The average percentage of AIAN enrollments at NHSC is 82%.

During Spring 2000 to Summer 2018, 502 students graduated from NHSC academic programs. Figure 7 presents the distribution of these graduates according to the semester in which they completed their degrees.

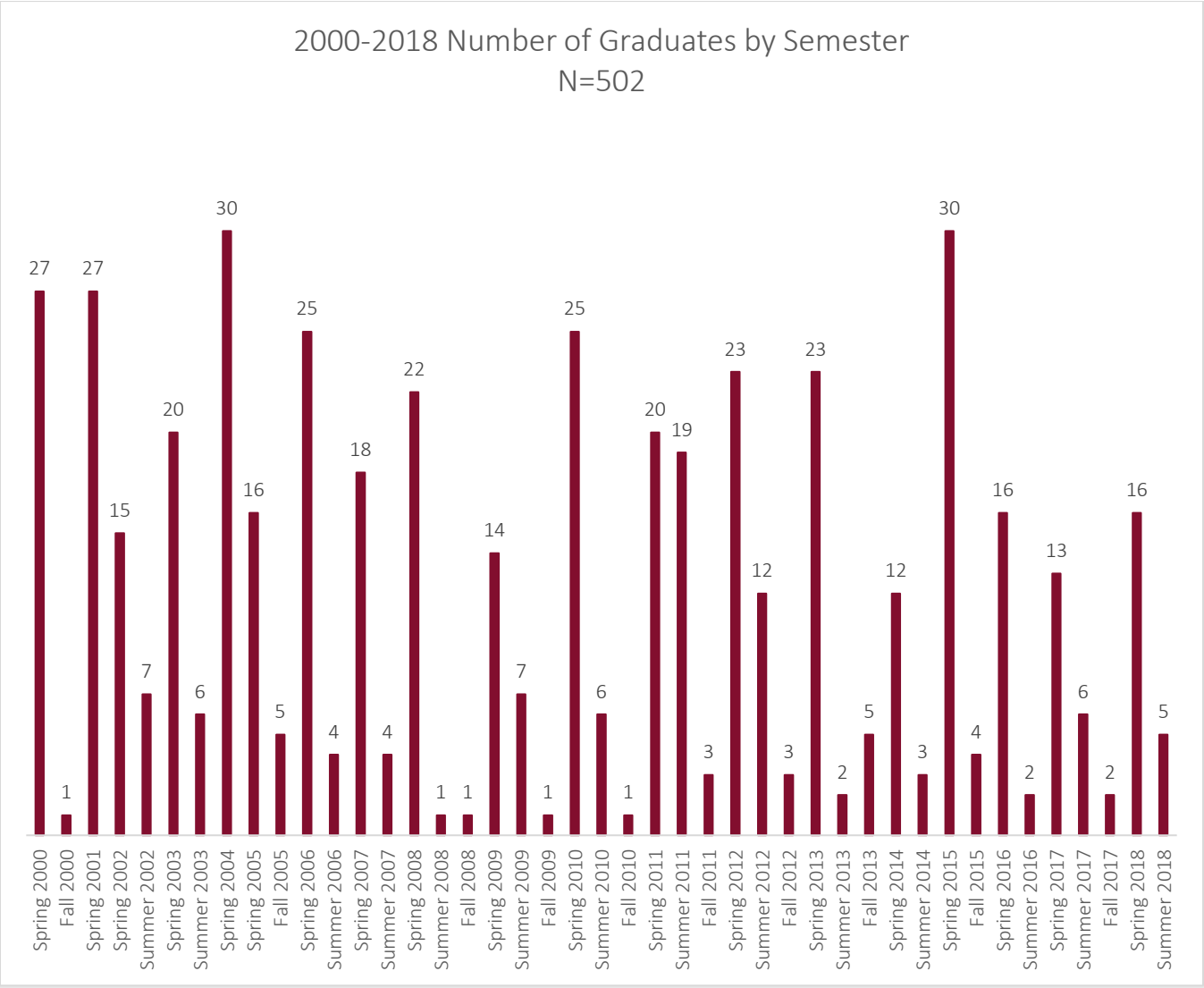


Figure 7. 2000-2018 Number of Graduates by Semester

An overwhelming majority of graduates from NHSC finish their degrees in spring semesters. On average, NHSC graduated 20.63 students per spring semester. Spring graduates account for 77.9% of total graduates.

Further delineation regarding the total number of graduates from NHSC is provided by considering how many students earned multiple degrees. Figure 8 provides an overview of how many students earned single and multiple degrees as NHSC.

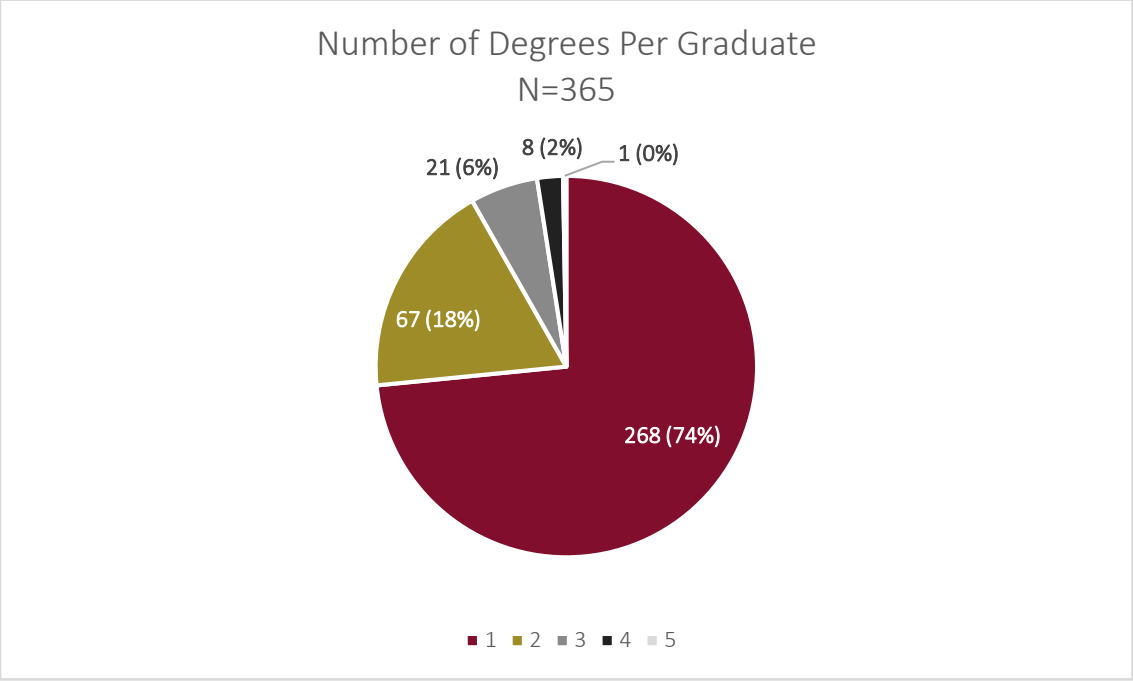


Figure 8. Number of Degrees per Graduate

74% of students completed one degree at NHSC. A total of 26% of students completed two or more degrees at NHSC.

Figure 9 provides an overview of the types of degrees earned by NHSC graduates from Spring 2000 – Summer 2018. Note that a full accounting of the acronyms used in this figure can be found in the Degree Name Acronyms section of Appendix A. Definitions, Terms, and Acronyms. The most popular degrees were BU, LA, and PN. These programs accounted for 28.6% of the total number of degrees awarded by NHSC.

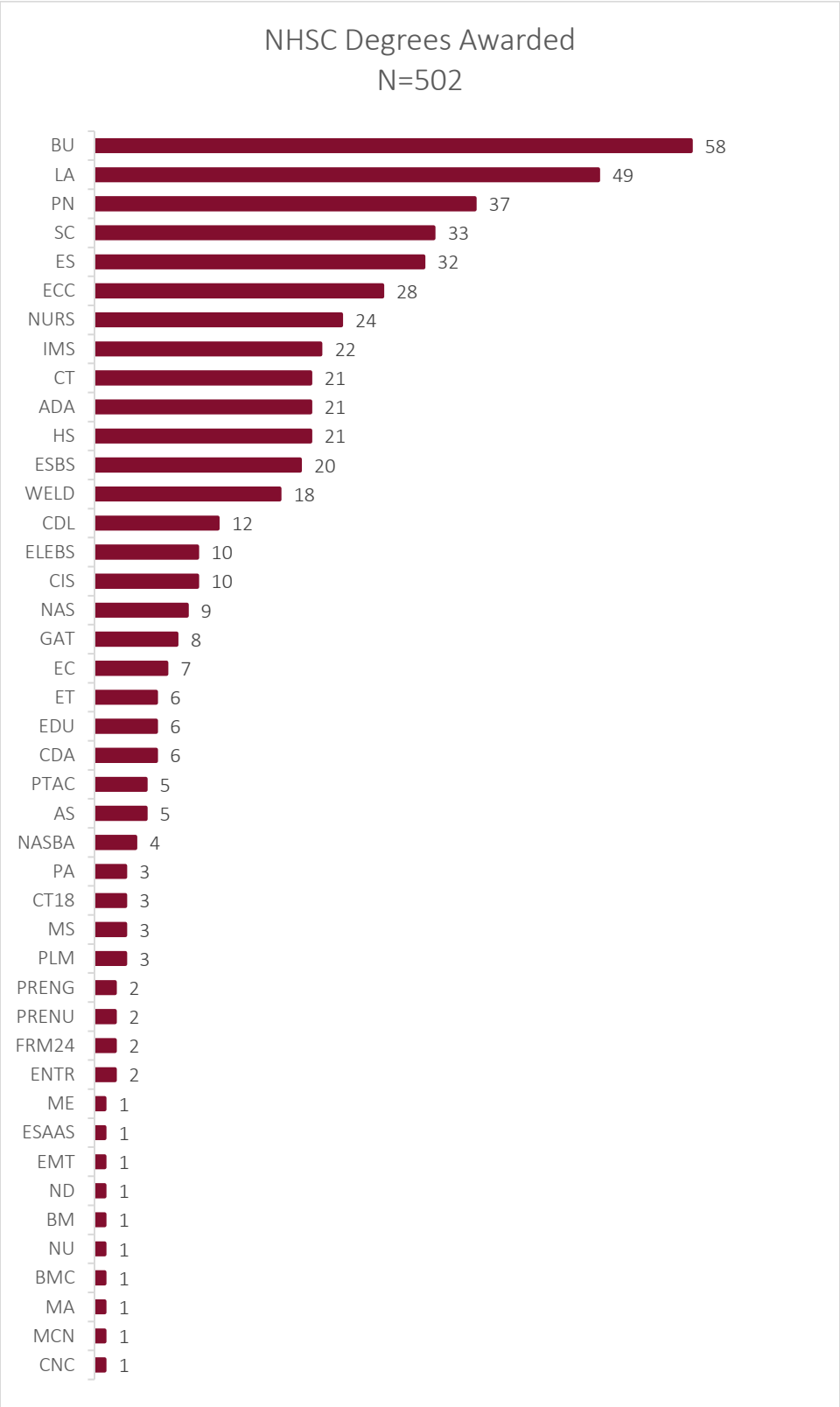


Figure 9. NHSC Degrees Awarded

Student Reaction and Satisfaction

Level 1 results measures student reaction and satisfaction with courses and the school overall. Satisfaction is important to assess because it is the most basic level of evaluation and its results often serve as early indications of program success. If people are not satisfied with a program, course, or institution, there is little chance that they will be receptive to learning or applying the knowledge and skills needed to have a positive impact on the business. This evaluation assessed reaction and satisfaction from students who took classes at NHSC during Fall 2016 and Spring 2017.

A total of 194 students out of 1,148 students completed evaluations during Fall 2016 while 309 students out of 959 students completed them during Spring 2017. The total number of students available to complete evaluations is based on the total number of students receiving grades during the respective semesters; while there was a total of 228 students, they took multiple classes and, therefore, had the opportunity to complete multiple evaluations. The response rate for course evaluations for Fall 2016 was 16.8% while the response rate was 32.2% for Spring 2017. Results are presented in aggregate for all NHSC and according to academic program. The aggregate data includes sections that focus on course features and demographics, cultural integration, technology integration, and resource utilization. Academic program results for Level 1 focus specifically on various aspects of student satisfaction with instructional aspects of courses.

The Benefit of Small Class Size

Graduates of NHSC described how much they appreciate small class sizes. With fewer students in the classroom, each student gets personal attention and communication. Students feel as if the teachers care; it is this caring that is an important part of the student experience journey at NHSC.

Course Features

Figure 10 displays a comparison of the course sessions (i.e. the length of the course) in which students took courses in Fall 2016 and Spring 2017.

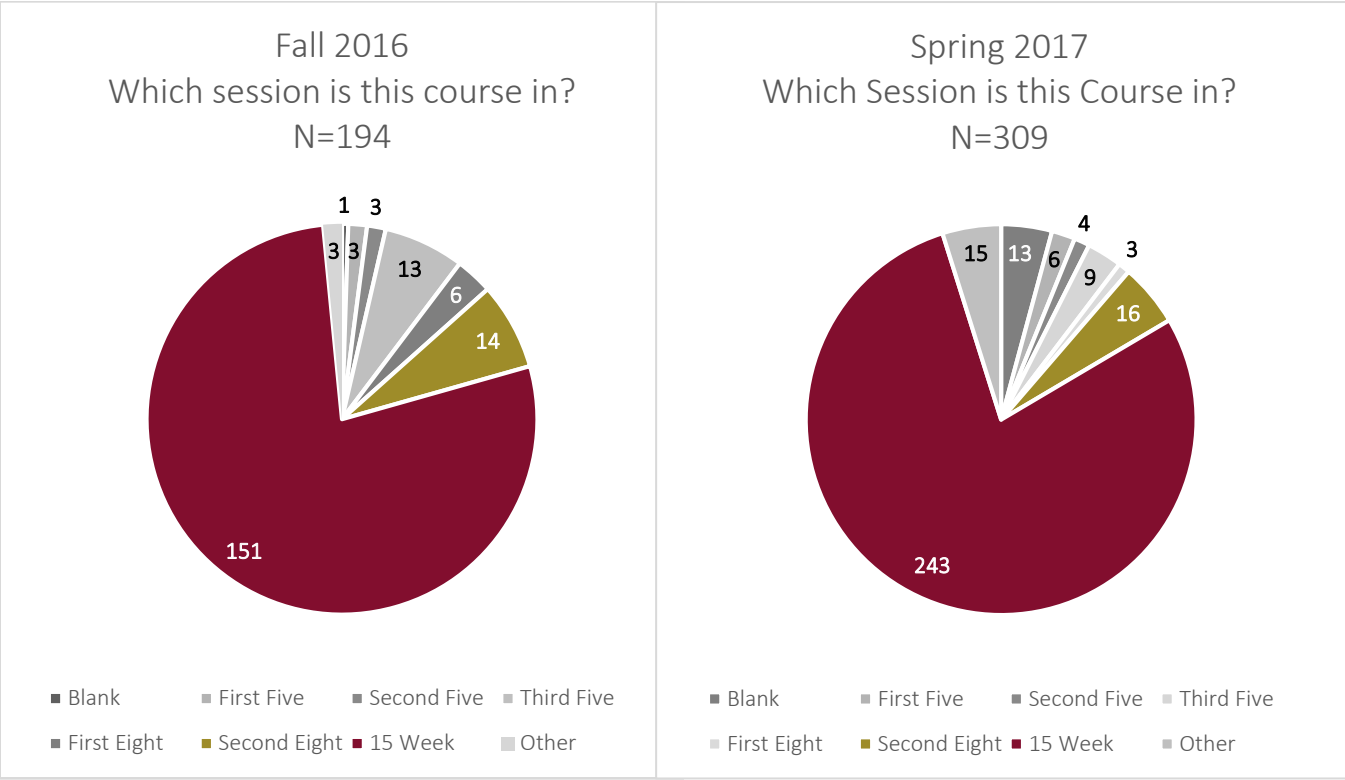


Figure 10. Most Frequent Course Length

The overwhelming majority of the courses taken by students at NHSC were in the 15-week format. This aligns with the institution offering most of its classes in full semester formats. In both semesters, the second most frequent formats were second eight-week classes. This suggests that if students cannot attend full semester-long courses, they prefer half semester courses that start later. Students will likely be more satisfied with courses if they are either 15-weeks or second 8-week courses.

Figure 11 shows that most respondents prefer to take courses offered in the 15-week format. Further analysis is required to determine which specific course offerings would be potential candidates for course redesigns to longer or shorter timeframes.

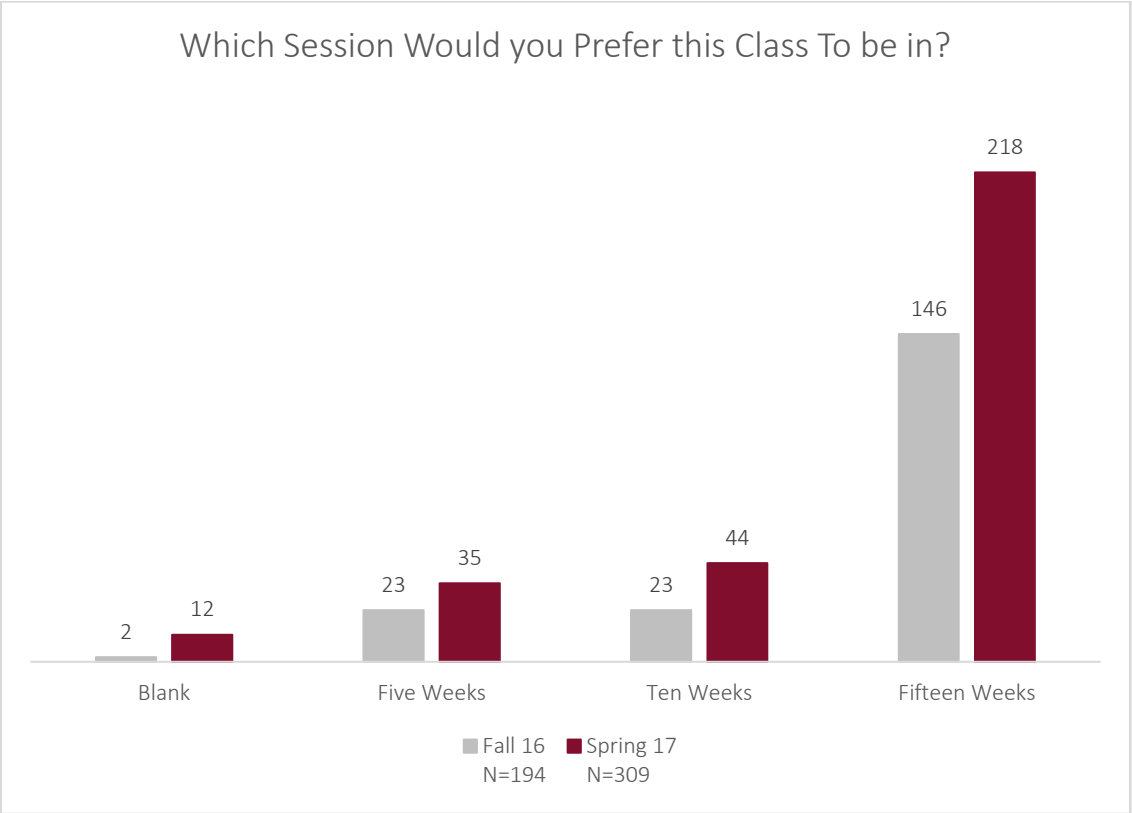


Figure 11. Course Session Preference

Figure 12 displays the campuses where students took their courses during Fall 2016 and Spring 2017. As is illustrated, the main campus in New Town far outpaces the branch campuses in terms of attendance. Although main campus draws the largest numbers, the services provided by branch campuses are important to serving the needs of geographically distributed members of the Mandan, Hidatsa, and Arikara Nations by providing them with local access to quality education.

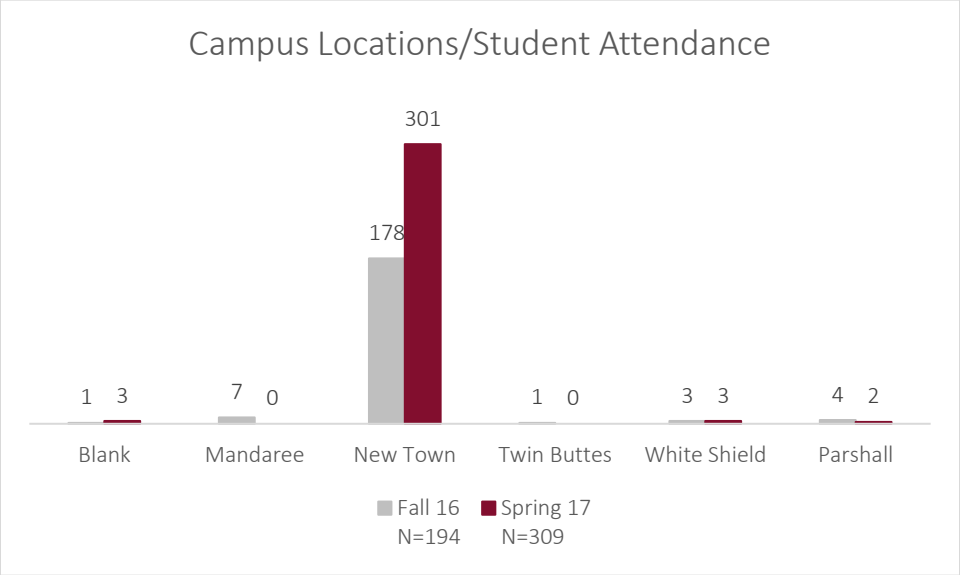


Figure 12. Campus Locations/Student Attendance

Teachers and administrators care.

Student Demographics

Figure 13 displays the academic level of students taking classes at NHSC during the Fall 2016 and Spring 2017 semesters.

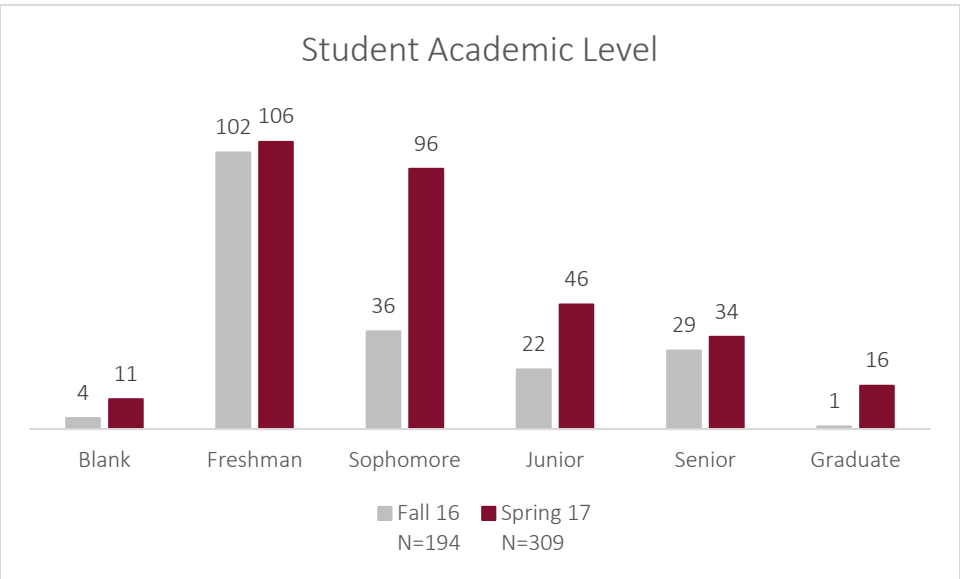


Figure 13. Student Academic Level

During the period evaluated, there were disproportionately large numbers of freshmen and sophomores taking classes at NHSC. There were almost twice the number of freshmen and sophomores as there were juniors and seniors in both semesters. This is related to the fact that NHSC only has three majors at the bachelor's level.

Figure 14 presents the gender of students who completed courses at NHSC in Fall 2016 and Spring 2017.

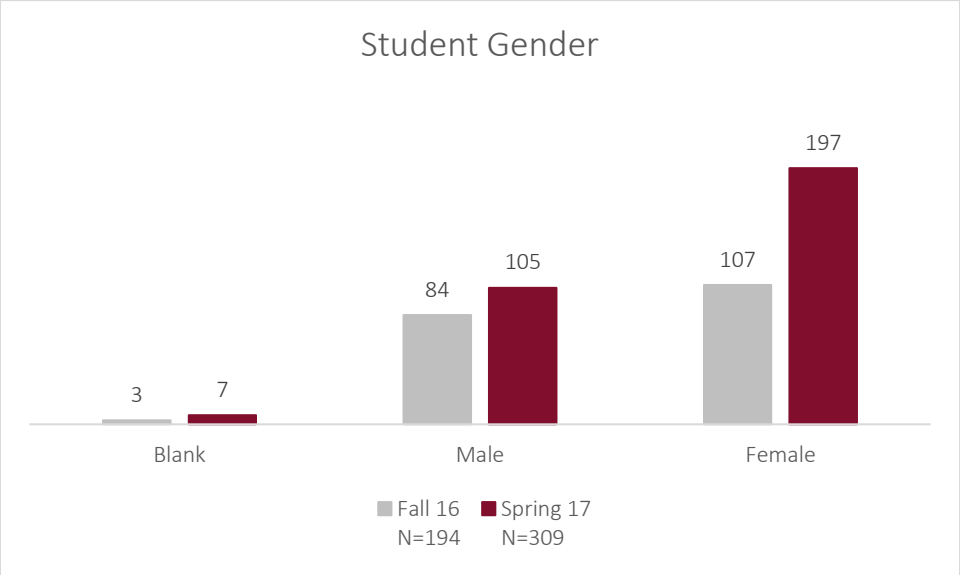


Figure 14. Student Gender

Spring 2017 saw increasing numbers of students completing course evaluations. The large number of females suggests that NHSC practices inclusivity and provides Native women with the opportunity to increase their knowledge and further their education.

Cultural Integration

Figure 15 provides a summary of whether students felt their courses integrated key aspects of their Native cultures using yes/no questions for each aspect.

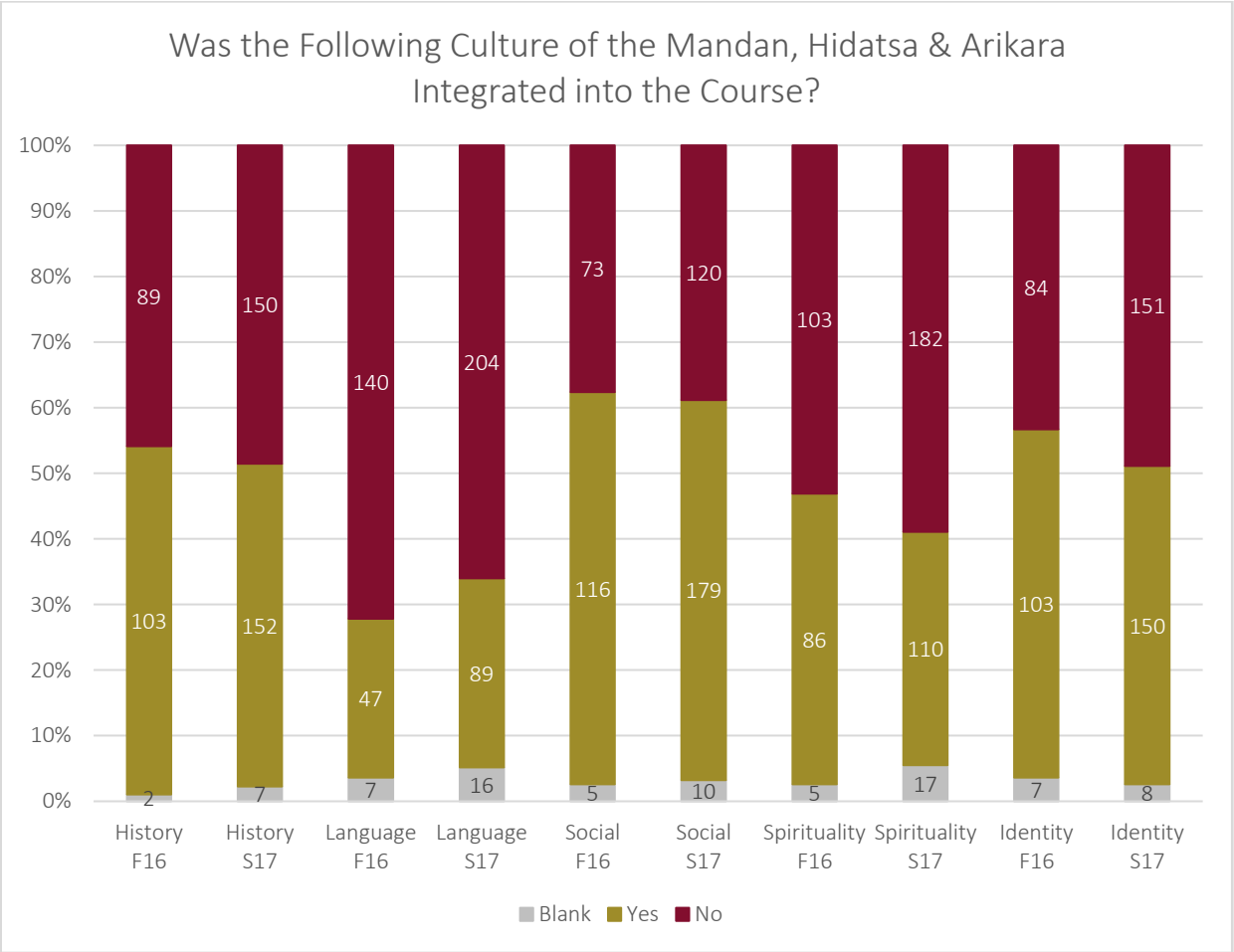


Figure 15. Cultural Integration

Interestingly, the courses from Fall 2016 and Spring 2017 have very similar numbers in each of the cultural aspects students were asked about. This finding is especially important to note. because the sample for Fall 2016 (N=194) was much smaller than the sample for Spring 2017 (N=309). The areas with the largest differences are *spirituality* with 44% in Fall 2016 and 36% in Spring 2017, and *identity* with 53% in Fall 2016 and 48% in Spring 2017. It is commendable that NHSC maintains such consistency in the area of cultural integration given that spirituality and culture are two of its core values. The area with the lowest affirmative responses was *language*. NHSC should investigate ways to further integrate Native Languages into the courses that it teaches.

Technology Integration

Figure 16 presents the yes/no responses students provided when asked whether various types of technology were integrated into their courses at NHSC.

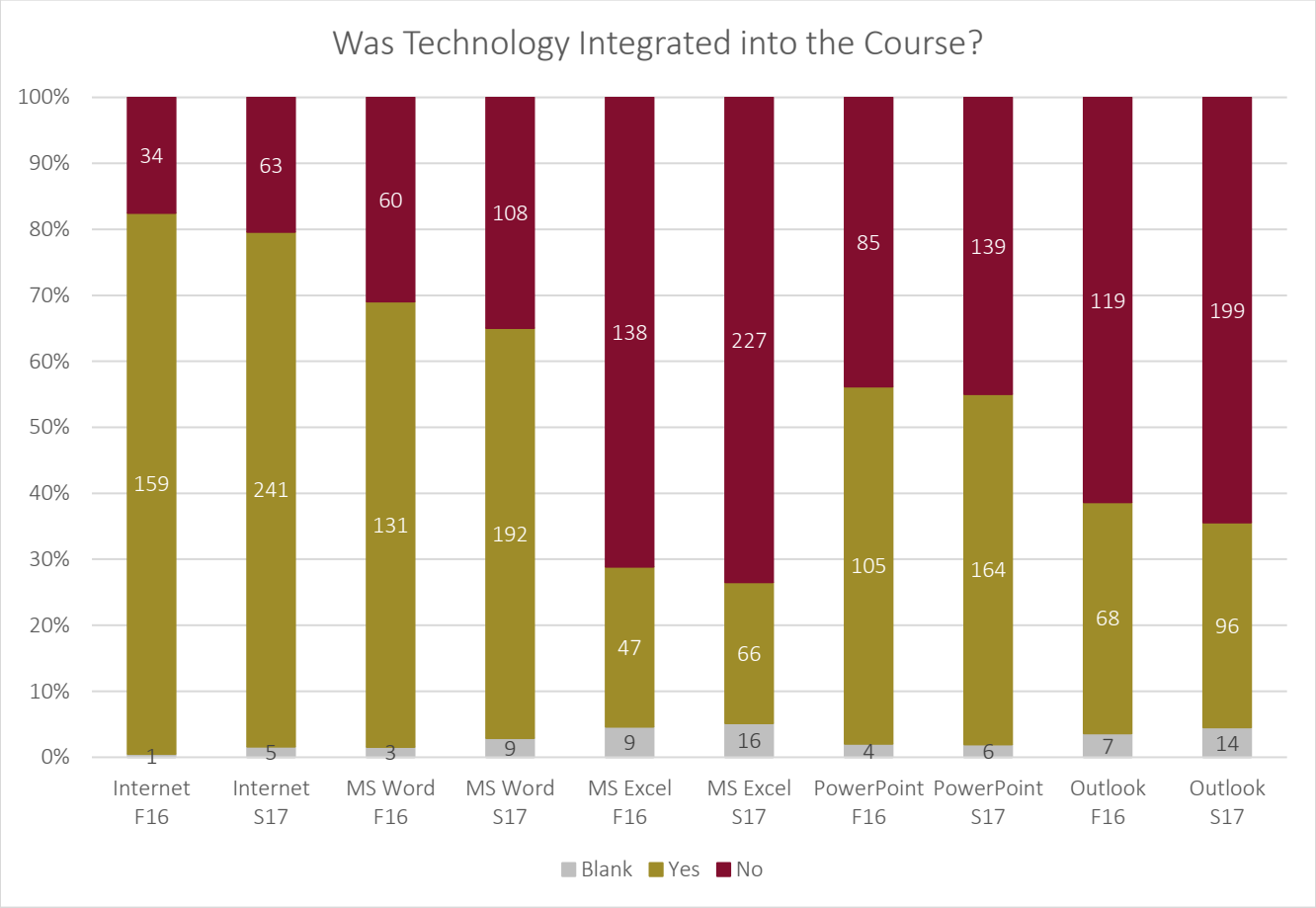


Figure 16. Technology Integration

The two most commonly integrated technologies in NHSC courses are the Internet and MS Word. These two pieces of software are very common in academia and such results are to be expected. The least integrated was MS Excel.

All the types of technology listed in Figure 16 are critical to performing day-to-day work in any business. The greater exposure students have to these types of technology, the better prepared they will be to perform at highly productive levels when they enter the workforce.

Resource Utilization

Figure 17 presents the yes/no responses students provided when asked which resources from the NHSC Library they use to support their coursework at NHSC.

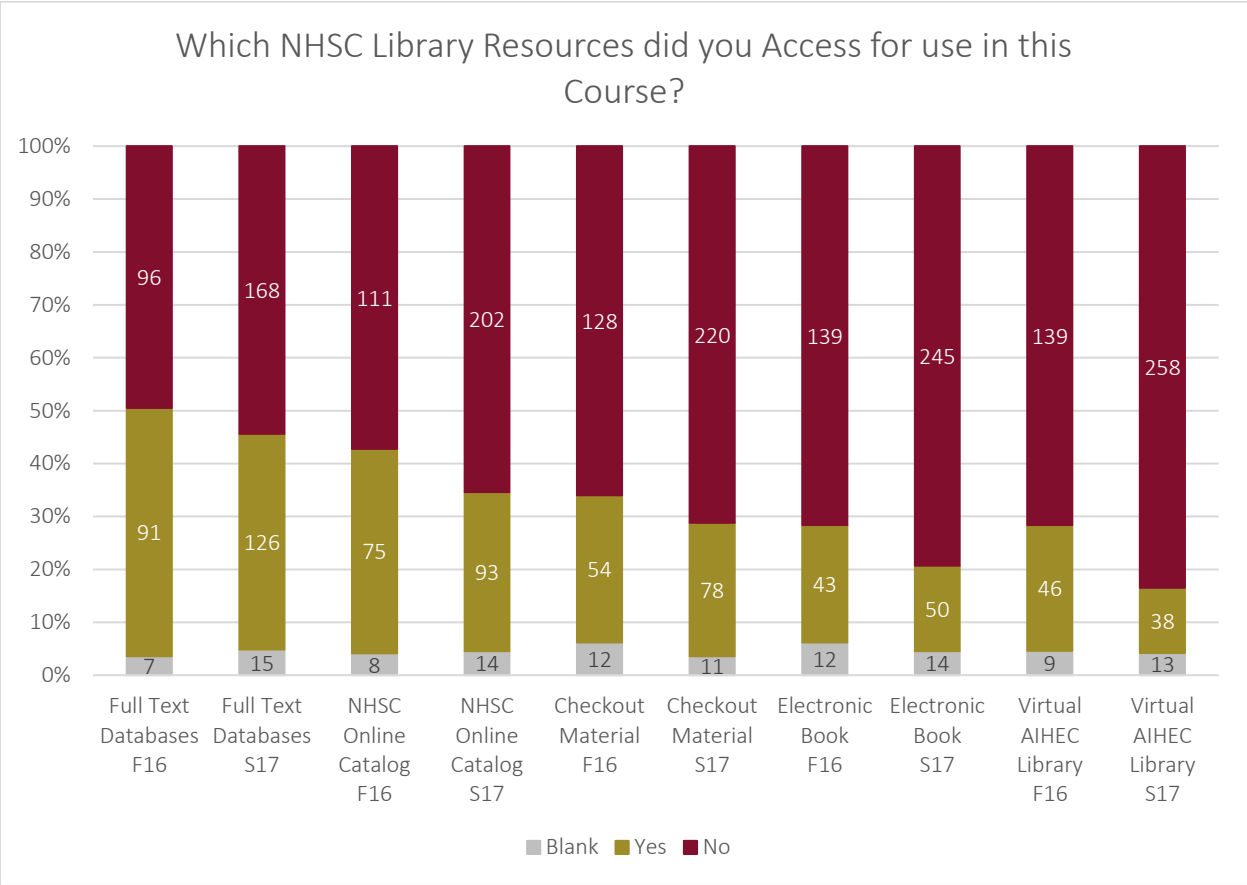


Figure 17. Library Resource Use

The full text database offered by the library were the most often utilized by NHSC students overall and in both Fall 2016 and Spring 2017. In Fall 2016, the least utilized resource was electronic books followed by the Virtual AIHEC Library. In Spring 2017, the least utilized resource was the Virtual AIHEC Library followed by electronic books. One trend that is evident from the data is that the overall percentage of resources used by students dropped from Fall 2016 to Spring 2017 in each category.

Class Satisfaction

NHSC has calculated averages for each of these satisfaction measures for all their course offerings for both Fall 2016 and Spring 2017, as indicated in Table 9.

Table 9. 2016-2017 Institutional Averages for Course Satisfaction

	Fall 2016	Spring 2017
Teaching Strategies Helped me Learn	4.18	4.36
Objectives Were Clearly Explained	4.20	4.36
Sufficient Work Provided to Render a Fair Grade	4.25	4.35
Texts and Readings Contributed to Learning	4.15	4.10
The Course Caused me to Learn a Great Deal	4.23	4.37
Overall Rating	4.28	4.28

These numbers should serve as a baseline to evaluate the success of individual courses. Except for the overall rating, scores fluctuate depending on question item. No target was set to compare these results. Using a score of 4 out of 5 as the basis for comparison indicates all scores are meeting an acceptable threshold.

The results of the satisfaction measures collected for courses delivered in Fall 2016 and Spring 2017 are presented in the two following tables. Table 10 displays the average score for each class satisfaction measure from classes that were taught during both Fall 2016 and Spring 2017. The number of courses offered by the departments in the semesters evaluated as part of this evaluation were inconsistent. Data presented in both tables represent a combination of all classes taught in a given department for the semester indicated. Therefore, the specific classes taught between the two semesters can vary.

Table 10. 2016-2017 Course Satisfaction for Courses Offered Both Semesters

		ACCT	ARSC	ART	BADM	BIO	BOTE	COMM	EC	EDU	ENG	MA	PSY	WELD
Teaching Strategies Helped me Learn	**F16**	3.8	4.5	4.67	4.33	3.92	4.14	4.33	4	4.09	4.31	3.95	4.07	4.56
	S17	4.24	4.63	4	4.15	4.51	4	4.5	4.44	4.46	4.65	3.69	4.57	4.39
Objectives Were Clearly Explained	**F16**	3.8	4.25	4.33	4.33	3.92	4.57	4.24	4	4.09	4.38	4.1	4.07	4.61
	S17	4.24	4.38	4.5	4.38	4.55	3.5	4.5	4.22	4.46	4.47	3.72	4.36	4.33
Sufficient Work Provided to Render a Fair Grade	**F16**	4	4.5	3.33	4.33	4.13	4.57	4.27	4.5	4.45	4.38	4.23	4.03	4
	S17	4.35	4.63	4.5	4.38	4.58	3.75	4.5	4.33	4.38	4.59	3.75	4.36	4.28
Texts and Readings Contributed to Learning	**F16**	4.2	3.75	2	4.33	4.04	4.57	3.81	4	4.27	4.08	4.12	4.17	4.61
	S17	3.94	4.5	3	4.15	4.58	4	4.5	4.56	4.36	4	3.89	3.79	3.5
The Course Caused me to Learn a Great Deal	**F16**	3.6	4.5	4.67	4.33	3.88	4.57	4.19	5	4.18	4.38	4.03	4.23	4.61
	S17	4.18	4.38	4	4.08	4.68	3.75	4.5	4.44	4.46	4.53	3.72	4.57	4.5
Overall Rating	**F16**	3.4	4.5	4.67	3.83	4	4.14	4.57	5	4.72	4.61	4.05	4.13	4.67
	S17	3.82	4.63	4	3.92	4.45	3.5	4.75	4.11	4.38	4.59	3.61	4.43	4.5

Note: N=194 for Fall 2016 and N=309 for Spring 2017

Success was measured by achieving an average of 4 out of 5 on a 5-point Likert scale for each of the class satisfaction measures listed in the table columns. Most NHSC classes taught both during Fall 2016 and Spring 2017 achieved this goal. For example, Early Childhood and Education classes achieved at least an average of 4 out of 5 for all the measures. In Fall 2016, only two departments failed to achieve at least a 4 out of 5 overall rating. Courses including Animal and Range Science, Communication, English, and Welding all achieved an overall rating of 4.5 or higher in both semesters evaluated. English and Welding classes exhibited overall exemplary performance as both achieved a 4.5 or higher on five different measures.

However, Accounting and Math classes failed to meet the of 4 out of 5 goal. Math classes fared the worst, failing to meet the goal seven times. Attention should be paid to these courses to ensure satisfaction does not continue to decline. Accounting courses were rated below 4 a total of six times, including both overall ratings. Other courses that failed to meet the evaluative goal along with the number of areas in which they failed to reach the 4 out of 5 goal include Art (3<4), Business Administration (2<4), Biology (3<4), and Business, Office, Technical Education (4<4). The most concerning trend among these is the Business Administration courses because, in both Fall 2016 and Spring 2017, their overall ratings were below 4. Another concerning trend is that courses associated with working in business-related jobs are being rated low in various areas (Accounting and Business, Office, Technical Education). These findings are concerning because of the high number of business graduates coming out of NHSC. The high number of graduates indicates this program is a success. However, the low satisfaction ratings indicate there is room for improvement.

In order to further investigate these low ratings this study employed a sentiment analysis. A sentiment analysis is a method of analyzing opinions regarding products and services that depends on the quantification of language according to positive and negative words and phrases (Liu, 2012). Positive words such as “wonderful,” “great,” and “amazing” count as 1, while negative words such as “awful,” “terrible,” and “worst” count as -1. These counts are summed to produce a sentiment score. Not all statements necessarily have a sentiment associated with them. For example, statements that state facts do not have a sentiment score. The data used in the sentiment analysis comes from the course evaluations for Business Administration, Accounting, and Business, Office, Technical Education from Fall 2016.

Responses for Business Administration come from BADM 205-01 and were provided by four students. Table 11 provides all the results from the Sentiment Analysis.

Table 11. Fall 2016 BADM Sentiment Analysis Results

What Aspects of the Course Helped you Learn and Should be Continued in the Future?		
Positive	Negative	Overall Sentiment
4	0	4
What Would you Suggest be Changed When the Course is Taught Again?		
Positive	Negative	Overall Sentiment
1	-3	-2
Strengths and Weaknesses of Course		
Positive	Negative	Overall Sentiment
3	0	3
Strengths and Weaknesses of Instructor		
Positive	Negative	Overall Sentiment
5	0	5

Students asked for a stronger focus on business to include business videos and assignments when asked the second question listed in Table 11. However, their overall sentiment was very positive, and this is verified by comments such as, “The instructor is very patient and helps us when we need it and makes sure that we actually understand everything she is teaching us which is a great help!” Students were overwhelmingly positive as far as their comments regarding the strengths and weaknesses of the course.

The sentiment analysis for Accounting comes from three students who completed ACCT 200-01. Table 12 presents the results of the sentiment analysis.

Table 12. Fall 2016 ACCT Sentiment Analysis Results

What Aspects of the Course Helped you Learn and Should be Continued in the Future?		
Positive	Negative	Overall Sentiment
3	0	3
What Would you Suggest be Changed When the Course is Taught Again?		
Positive	Negative	Overall Sentiment
3	-2	1
Strengths and Weaknesses of Course		
Positive	Negative	Overall Sentiment
3	-1	2
Strengths and Weaknesses of Instructor		
Positive	Negative	Overall Sentiment
5	0	5

The overall sentiment scores for ACCT were positive and they were based on comments such as, “Great instructor! Helped me understand and learn, willing to go the extra mile to help me learn and understand everything.” The areas in which students felt the course needed some improvement include moving at a faster pace and working more in Excel.

Responses for Business Office and Technical Education come from two different courses and were provided by four students. Table 13 presents the results of the sentiment analysis according to the four qualitative questions asked on the end of course survey.

Table 13. Fall 2016 BOTE Sentiment Analysis Results

What Aspects of the Course Helped you Learn and Should be Continued in the Future?		
Positive	Negative	Overall Sentiment
2	0	2
What Would you Suggest be Changed When the Course is Taught Again?		
Positive	Negative	Overall Sentiment
1	-1	0
Strengths and Weaknesses of Course		
Positive	Negative	Overall Sentiment
4	0	4
Strengths and Weaknesses of Instructor		
Positive	Negative	Overall Sentiment
5	0	5

The results of the sentiment analysis reveal an overwhelmingly positive sentiment. Note that the sentiment of 0 is considered neutral. This was confirmed as students provided comments such as “No weaknesses only strengths.” and “[The instructor] is by far one of my favorite professors. She is always there when you have a question.” The comments provided by the students for Fall 2016 match the ratings provided in terms of sentiment and content.

Although satisfaction for the Business Administration, Accounting, and Business, Office, Technical Education classes was low, a closer look at qualitative evaluation responses revealed that the courses and their instructors were doing many positive things. This investigation revealed some positives, but the results are not conclusive as the evaluation results for Spring 2017 were not available for analysis. Additionally, the qualitative responses available for Fall 2016 were provided at most by four students, which represents a small percentage of the total number of students in the class. Ultimately, these courses should be further evaluated to ensure students graduating with business related degrees are thoroughly prepared for the challenges of the real world.

Table 14 displays average scores for class satisfaction measures of classes that were only taught either in Fall 2016 or Spring 2017.

Table 14. 2016-2017 Course Satisfaction for Courses Offered in One Semester

	Teaching Strategies Helped me Learn	Objectives Were Clearly Explained	Sufficient Work Provided to Render a Fair Grade	Texts and Readings Contributed to Learning	The Course Caused me to Learn a Great Deal	Overall Rating
ASMT S17	3.83	4.33	4.17	3.83	3.67	3.83
CDL S17	5	5	5	5	5	5
CHEM F16	4.6	4.2	4.6	4.6	4.4	4.4
CSCI S17	4.33	4.33	4.33	4.17	4.33	3.92
ECON S17	4.33	4.44	4.44	4.22	4.33	4.44
ENGR S17	5	5	5	5	5	5
GEO F16	4.83	4.83	4.83	4.83	4.83	4.
HIST S17	3.33	3.33	3.33	3.33	3.33	3.33
HPER S17	4.29	4.57	4.57	4	4.36	4.5
ME S17	5	5	5	5	5	5
NAS S17	4.47	4.33	4.28	4.11	4.47	4.17
SET S17	3.67	3.67	3.33	3.5	3.83	3.83
SOC S17	4.36	4.45	4.36	2.72	4.36	4.09
SWK S17	4.44	4.67	4.33	3.33	4.56	4.67

Note: N=194 for Fall 2016 and N=309 for Spring 2017

Courses offered in either Fall 2016 or Spring 2017 did not perform as well as the courses that were offered in both semesters but there were still many positive areas. Of the 14 departments offering courses for just one semester, only four did not achieve the 4 out of 5 overall rating (ASMT, CSCI, HIST, and SET). A total of five courses achieved overall ratings that eclipsed 4.5. In fact, CDL, ENGR, and ME had an overall rating of 5. However, these results should be interpreted carefully because these ratings were based on two course evaluations for CDL and one evaluation each for ENGR and ME. The most consistent performers among the group were ECON, GEO, HPER, and NAS. It is particularly encouraging to see NAS performing well as this course is key to NHSC achieving its goal of ensuring traditional values and culture are a part of student academics.

Areas of concern among this group include HIST and SET courses which failed to reach a rating of 4 out of 5 on all the satisfaction measures. Although courses did not have many samples, N=3 and N=6 respectively, such consistently low ratings should be cause for further investigation. ASMT courses should also be evaluated because they failed to reach the 4 out of 5 goal for four out of six satisfaction measures including the overall rating.

Overall Perception of Attending Tribal College

Participants agreed that going to school at the college was just what they needed. They like the small classes and the personal interest from their instructors. There is a high level of trust. between faculty members and students. Faculty members have been known to go to a student's home and transport them to class when the student does not have transportation. As one graduate said of faculty, "They care." Faculty members are intentional in their efforts to make course content relevant to current and future jobs.

Student Learning

Level 2 results measure the changes in knowledge, skills, and attitudes. These results are important because they demonstrate that new knowledge, skills, and attitudes have been learned and thus will have the opportunity to be applied on the job. For this research project, learning was evaluated by analyzing the grades earned by NHSC students in the Summer 2016, Fall 2016, and Spring 2017 semesters. All the classes offered during this semester were included in the data analysis.

Results in this section are first presented according to aggregate percentages of grades to establish general levels of student achievement. Next, grades by academic department are presented. The final topic discussed in this section outlines the specific courses in which students earned As.

Overall Grades

Figures 18, 19, and 20 present the overall grade distributions across all courses for Summer 2016, Fall 2016, and Spring 2017. Note that the grade distributions presented also include other categories such as *withdraws* (W), *incompletes* (I), and *Continuing Education Units* (CEUs). The *Blanks* category also included in each figure represents courses that do not have grades earned but rather credit or no credit.

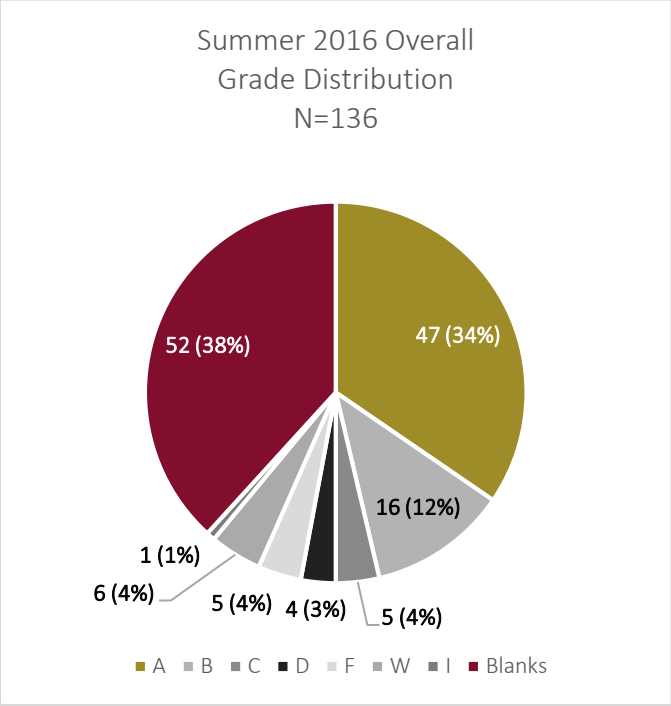


Figure 18. Summer 2016 Grade Distribution

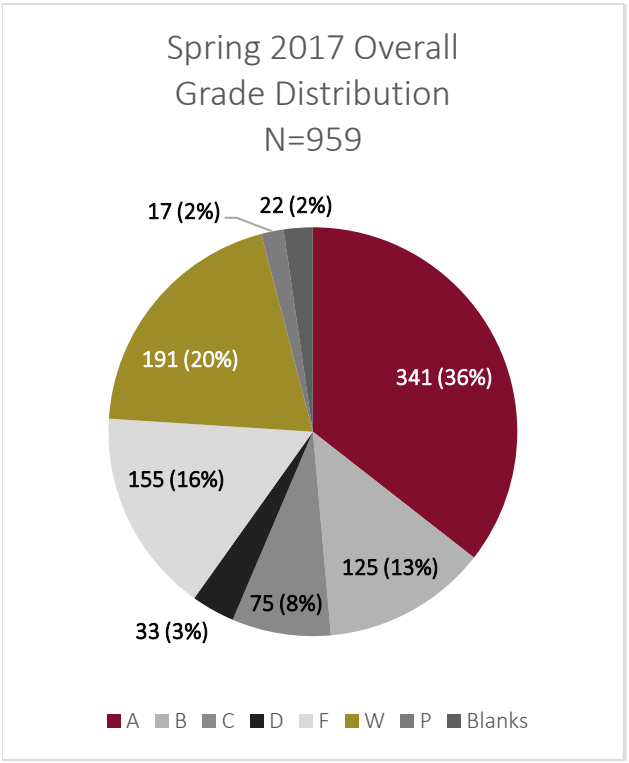


Figure 20. Spring 2017 Grade Distribution

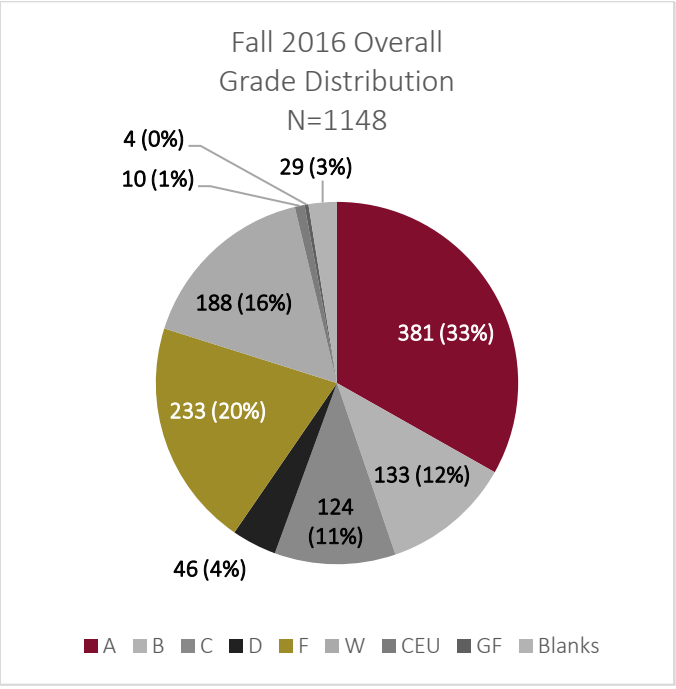


Figure 19. Fall 2016 Grade Distribution

The first noteworthy item is that the percentages of As and Bs NHSC students earned each semester is very consistent. The range for As is between 33% and 36%. The range for Bs is between 12% and 13%. This consistency is important to note especially considering that the

number and type of courses offered in each semester vary considerably. The consistent percentage of As and Bs earned in these semesters reflects consistency in achievement by NHSC students. The percentage of passing grades (A, B, and C) considered for each semester, the results would be as follows:

- Summer 2016 – 50%
- Fall 2016 – 56%
- Spring 2017 – 57%

Therefore, a minimum of 50% of NHSC students earned a passing grade in the courses they took during the evaluation period.

The total percentages of failing grades earned by students at NHSC across all semesters was 21.22%. In order to assess the meaning of the percentages of failing grades at NHSC, it is necessary to compare against the number of failing grades received by students at peer institutions. The most applicable peer group are the other four Tribal Colleges in North Dakota. Figure 21 presents the number of failing grades at all the Tribal Colleges as compared to the rest of the grades.

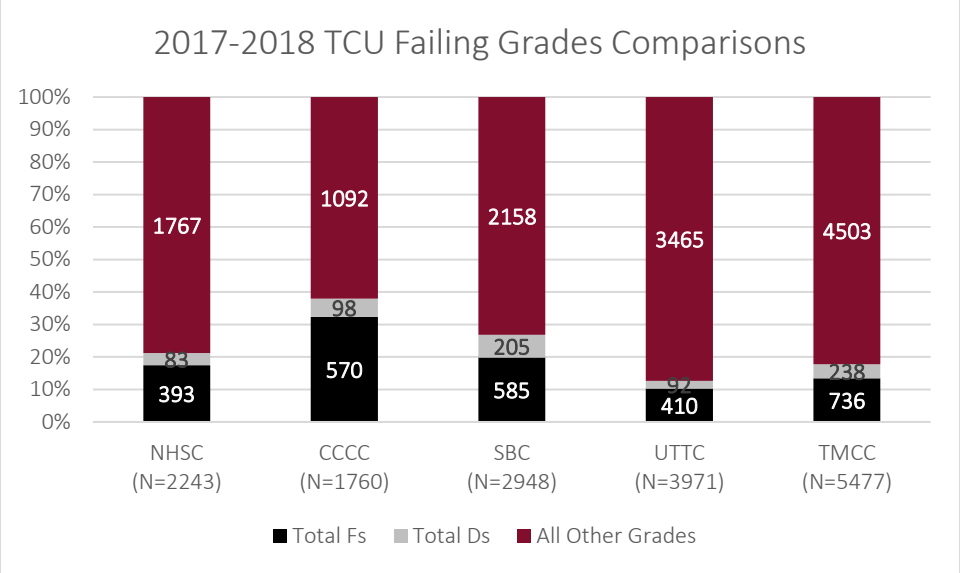


Figure 21. 2017-2018 TCU Failing Grades Comparisons

The average percentage of failing grades across the North Dakota Tribal Colleges is 23.28%. The percentage of failing grades at NHSC is below this value at 21.22%. This percentage is also the median of the set. Students at NHSC are performing better than average because a lower percentage of them are failing their courses.

Now that the general achievement of NHSC students has been established, further detail regarding student achievement can be examined.

Grades by Division

Tables 15, 16, and 17 provide details regarding the grades NHSC students earned according to each academic department offering the courses. The total number of courses per department from which grades were provided is listed below each department abbreviation in the far-left column. A full accounting of the acronyms used in the tables in this section can be found in the Division Acronyms section Appendix A. The absence of grades in a category is denoted using a dash (-). Table 15 presents grades by division for Summer 2016.

Table 15. Summer 2016 Grades by Division

	A	B	C	D	F	CR	W	I	Blanks
AG (N= 3)	11	-	-	-	2	-	1	-	-
AH (N= 3)	5	1	-	-	-	-	2	-	4
EC (N= 1)	-	-	-	-	-	3	-	-	-
ED (N= 3)	3	1	-	-	-	-	-	-	3
IS (N= 1)	-	-	-	-	-	4	-	-	-
MS (N= 10)	13	5	3	2	2	-	2	1	15
NA (N= 6)	6	4	-	1	-	-	1	-	11
PE (N= 1)	4	-	-	-	-	-	-	-	1
SB (N= 2)	4	3	1	-	1	-	-	-	9
SS (N= 3)	1	2	1	1	-	-	-	-	2

The most active department during Summer 2016 was MS offering a total of 10 classes followed by NA with six classes. MS, AG, and NA have the most As among offerings in Summer 2016.

Table 16 presents grades by division for Fall 2016. The most active department during Fall 2016 was MS offering a total of 29 classes followed by NA with 21 classes. Both data points continue the trend of activity that was established in Summer 2016. NA, AH, BU, and MS have the most As among offerings in Fall 2016. However, before drawing a conclusion, it is also necessary to consider the number of failing grades. For example, AH has 64 As and almost half as many Fs with 31. In addition, MS has 5 more Fs than As. The percentages of passing grades for each of the departments with the highest numbers of As is as follows:

- NA – 76%
- AH – 53%
- BU – 66%
- MS – 50%

Table 16. Fall 2016 Grades by Division

	A	B	C	D	F	W	CEU	GF	Blanks
AG (N= 3)	6	2	4	-	3	3	10	-	-
AH (N= 8)	64	17	8	11	31	29	-	1	6
BU (N= 8)	60	11	10	11	17	17	-	1	-
CS (N= 2)	12	1	6	1	5	5	-	-	-
CT (N= 11)	3	9	20	-	14	32	-	-	-
EC (N= 1)	-	2	1	-	-	-	-	-	-
ED (N= 15)	15	16	8	1	12	8	-	-	-
MS (N= 29)	60	36	23	15	65	30	-	2	10
NA (N= 21)	85	26	33	2	11	28	-	-	3
PE (N= 3)	12	1	-	-	4	4	-	-	-
SB (N= 3)	53	6	2	2	41	13	-	-	8
SS (N= 2)	10	4	9	3	30	13	-	-	2
VT (N= 1)	1	2	-	-	-	6	-	-	-

Based on the percentages, student learning was highest in students taking classes in the NA and BU departments. The comparatively higher number of failing grades in both AH and MS drove down the percentages. Courses where the number of students who pass is almost equal to the number of students who fail should be examined as it signifies learning disconnects. Further evidence of this claim comes from MS and AH having the first and third most Fs of all the courses offered in Fall 2016. MS courses with the most Fs were Elementary Algebra and Biology I and Lab. Students in AH classes had the most difficulty with Composition I. The department with the second most Fs is SB which achieved only 49% passing grades. Students struggled the most with Psychology of Student Success.

The number of withdraws from courses can also be an indicator of student struggles. Again, we see MS and AH in this category as the second and third departments with the highest number of withdraws. CT had the most withdraws with 32, and NA is fourth on the list with 28. It is interesting to see NA on this list given the high percentage of passing grades. The number of withdraws from a course can also be due to scheduling issues and, since NA is one of the departments offering the most classes during this evaluation period, having a high number of withdraws is expected. The same trend for withdraws is evident for MS as well. During Fall 2016, student learning was strongest for classes in the NA and BU departments while courses from MS, CT, and AH proved to be most challenging for students.

Table 17 presents grades by division for Spring 2017. Once again, MS and NA were the two departments offering the largest number of classes. This makes these departments the top two most active departments at NHSC during the evaluation period. It is especially encouraging to see so many consistent course offerings in the NA department from Summer 2016 to Spring

2017 because it offers courses such as Introduction to Indian Studies and History of Three Affiliated Tribes. These courses affirm NHSC's commitment to its values of culture and people.

Table 17. Spring 2017 Grades by Division

	A	B	C	D	F	P	W	Blanks
AG (N= 6)	13	-	-	-	-	-	2	2
AH (N= 10)	57	23	11	7	21	-	37	13
BU (N= 10)	39	8	4	4	8	-	20	1
CS (N= 2)	22	1	2	-	2	-	6	3
CT (N= 13)	6	23	4	2	2	-	11	-
ED (N= 13)	11	15	4	2	1	-	6	-
IS (N= 1)	20	-	2	-	5	-	1	-
MS (N= 28)	62	26	29	9	39	3	39	1
NA (N= 16)	34	8	1	2	24	-	15	1
PE (N= 5)	24	-	7	-	4	-	2	-
SB (N= 5)	38	13	7	5	36		34	-
SS (N= 4)	6	5	4	1	13		14	-
SW (N= 1)	2	2	-	-	-	-	-	-
TS (N= 3)	7	1		1			4	
VT (N= 1)	-	-	-	-	-	14	-	1

MS, AH, BU, SB, and NA have the most As for Spring 2017. The percentages of passing grades for all these departments is:

- MS – 57%
- AH – 54%
- BU – 60%
- SB – 44%
- NA – 51%

During Spring 2017, the two departments that contributed the most to student learning were BU and MS. Student success and learning in classes offered by BU remained strong from Fall 2016 to Spring 2017 according to the percentages of passing grades. This finding is encouraging because BU offers classes such as Keyboarding 1, MS Word, Office Procedures, and Business Communication. The success of students in this area is important because BU classes teach skills that directly influence a graduate's ability to succeed in the workforce in multiple disciplines.

The performance of MS improved from Fall 2016. The change is likely attributable to different courses being offered in MS during Spring 2017. However, like Fall 2016, MS again had the

highest number of Fs as compared to the rest of the departments. MS also had the highest number of withdraws during Spring 2017. Classes offered by the MS department could be seen as some of the most challenging at NHSC because so many students are failing these courses.

Two other departments that proved to be challenging for students, to a lesser degree than MS courses, were offered by the NA and AH departments. Both NA and AH departments had 20+ Fs. The number of Fs in NA is troubling because classes in the NA department are important to integrating AIAN values and culture into the academic experience at NHSC. Failing grades in NA predominantly came from the *History of Three Affiliated Tribes* class. Who is failing these classes? Why is that not the focus of this evaluation? Further investigation is warranted to ensure these students retain a strong understanding of course content.

AH also had a high number of failing grades. Additionally, AH also had the second highest number of withdraws in Spring 2017. The courses students struggled with were primarily Composition I and II. Writing and English classes in general have historically been a challenge for Native students. Research shows that 35,000 Native students who attended public schools and 10,245 Native students who attended Bureau of Indian Education schools were classified as English Language Learners (Musu-Gillette et al., 2017) in 2014. The challenges encountered by NHSC students should be examined, and existing support services like tutoring and writing labs should be modified accordingly.

Classes with the Most As

Figures 22, 23, and 24 present the distribution of As by class.

It should be noted that three ARSC (Animal and Range Science) classes and three BIO (Biology) classes dominate Figure 22. ARSC classes belong to the AG department and BIO courses are offered by MS. ARSC classes are key to preserving Native traditions while BIO is an important foundation for science-oriented degrees and certificates.

PSY 100, *Psychology of Student Success*, offered by the SS department, was the class with the most As during Fall 2016. Overall, five PSY classes appear in this figure, but the other four have very few As. The top ten classes with the most As includes five from NAS which are offered from the NA department. Overall, NAS dominates this illustration of student success with 14 classes. Four classes in NAS were part of the truncated data for classes with only one A. No other department is close to delivering as many classes with students earning As. The closest contender is BOTE from BU with six classes. The high levels of achievement in NAS is indicative of NHSC being able to fulfill its goal of providing a culturally centered education to its students. Moreover, it speaks to the high levels of understanding students have of their own Native culture. The large number of BOTE classes underscores the success NHSC students have in learning the basics of what it takes to succeed in the workforce.

NAS 113, *Hidatsa,* was the class with the most As during Spring 2017. This class had the third highest number of As during Fall 2016. The top ten classes from Spring 2017 are well dispersed

among different departments but include two from NAS. Overall, the most frequent department on this list is BIO from the MS department with nine classes. NAS has the second highest with seven classes. Such strong student performance in BIO classes is an indication that NHSC is preparing its students well for advanced studies in health fields. The continued strong performance of NAS adds additional credence to the assertions made previously regarding the understanding students have of their Native culture due to courses at NHSC.

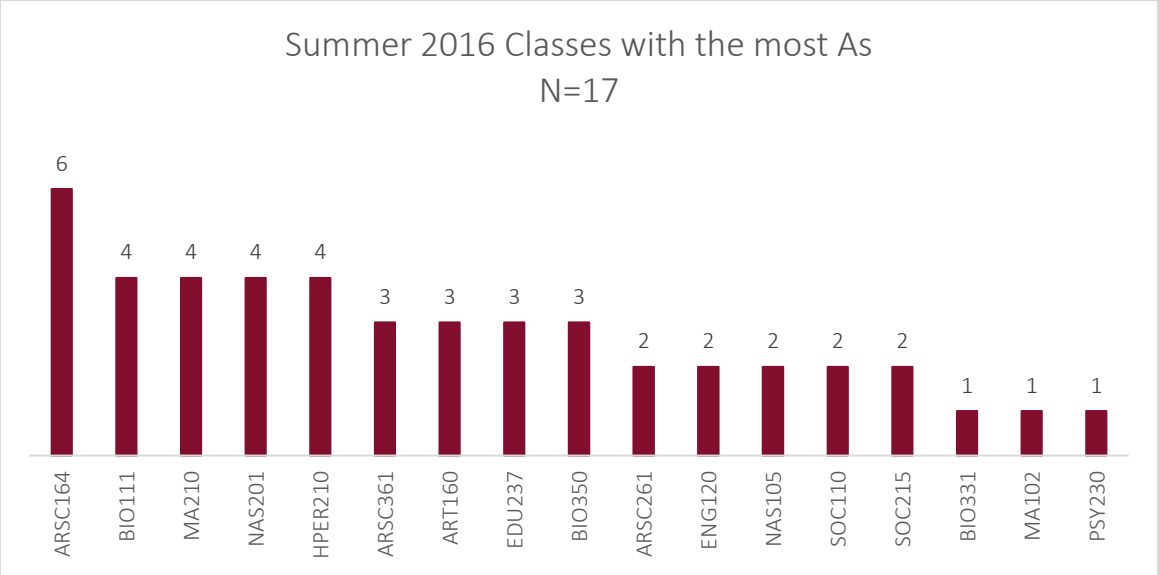
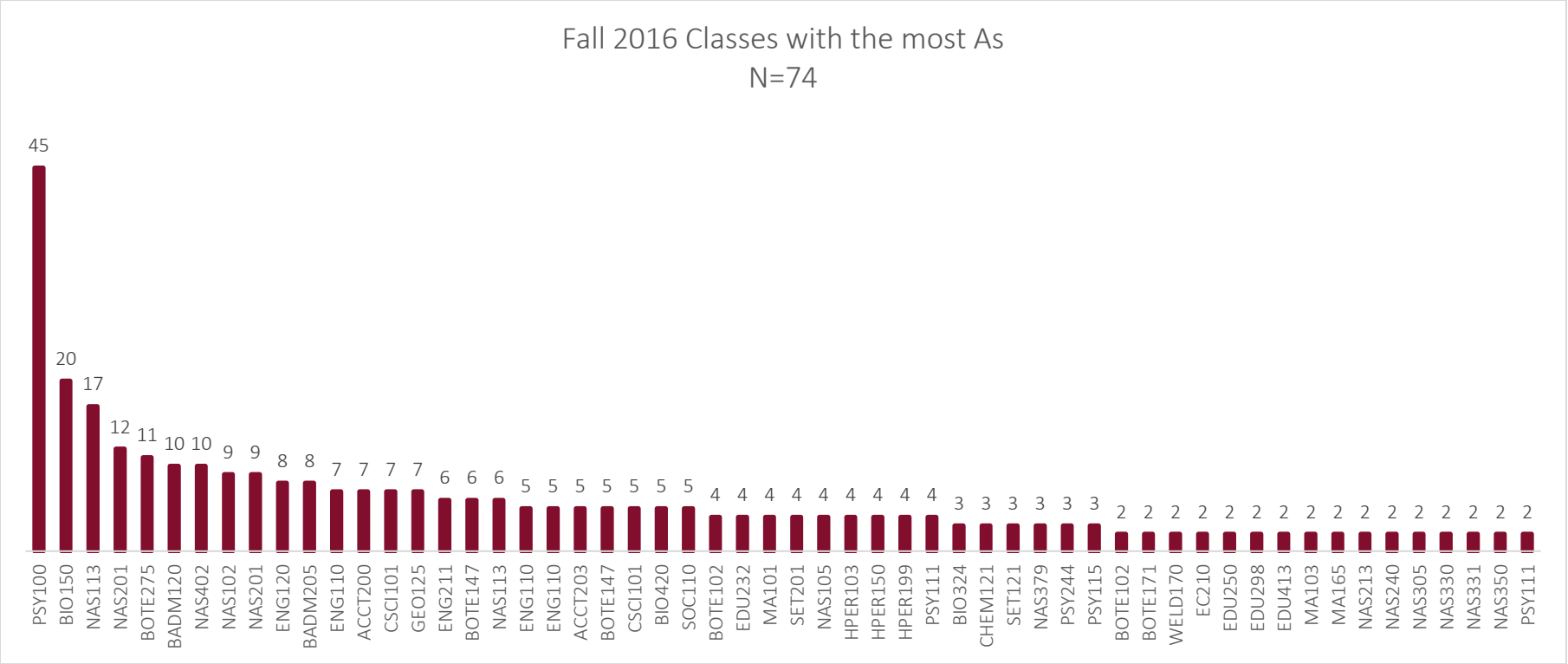
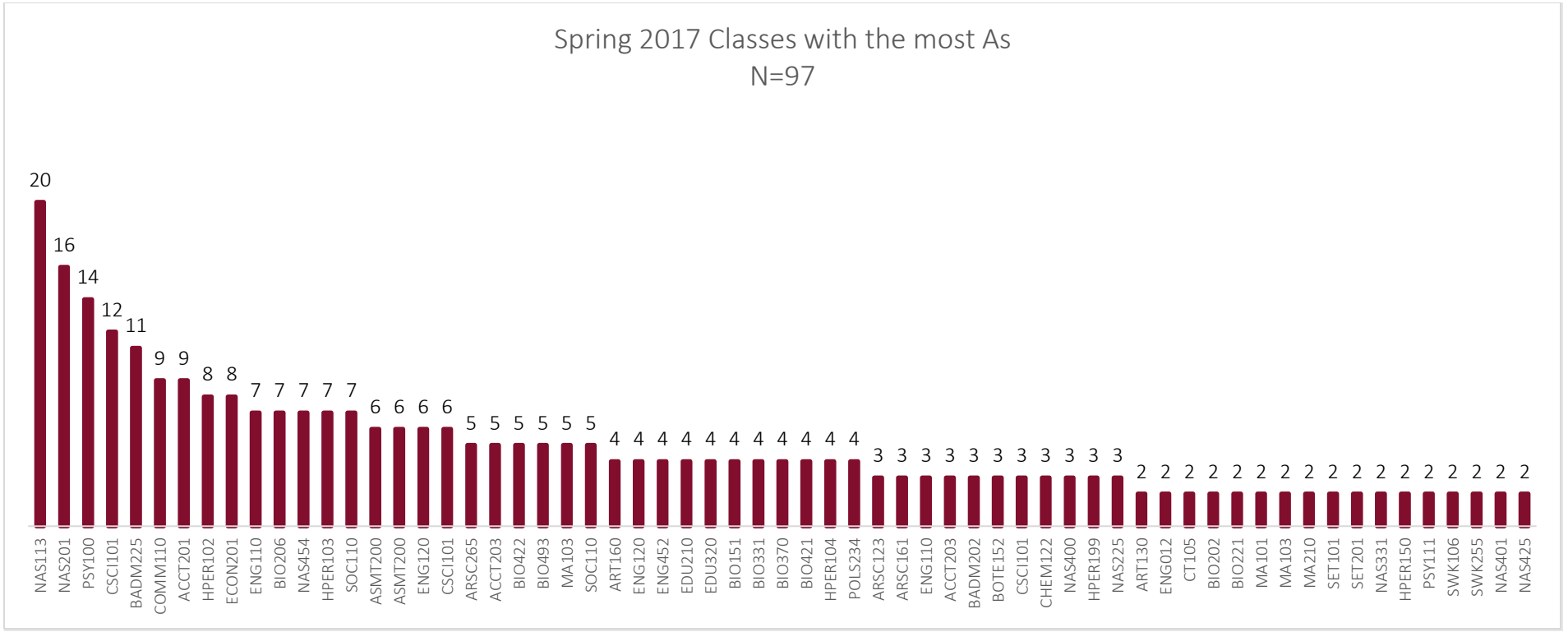


Figure 22. Summer 2016 Classes with The Most As



Note: Classes with only 1 A per class (N=18) were excluded from this graphic.

Figure 23. Fall 2016 Classes with The Most As



Note: Classes with only 1 A per class (N=34) were excluded from this graphic.

Figure 24. Spring 2017 Classes with The Most As

Traditional and Contemporary American Indian Cultural Values

All students take courses in history and language that teach traditional and contemporary American Indian cultural values. While not all teachings in these areas are explicit, "most teachers try to incorporate values into the coursework." As part of the teaching, cultural values are put into practice daily. For example, whether during a celebration or a typical day in the lunchroom, students and faculty respect those who sacrifice and come before them. During any given group activity, veterans always go first, followed by elders, then first responders. Everyone else then follows.

This school should be Mecca of who we are.

Relationships are an important element of the tribal community value system and is taught (and demonstrated) throughout the student experience. One graduate shared his efforts to put this value into place to ensure strong partnerships between family, school, and community. He described how the relationship between business and school in his district is "awesome" and that members of both groups work together for the betterment of the community.

Experiential Learning and Internships

While there are not quantitative measures of success with Level 3, Experiential Learning and Internships, participants of the talking circles described how they were given opportunities to apply their learning while in school. They also described how they continue to apply what they learn in their current jobs. Through experiential learning and internships, students at NHSC learn what it means to be American Indian as well as job skills that prepare them for their field of choice.

As part of the TCU's effort to teach students American Indian values, students must lead a community fundraiser requiring them to "get into" the community. This exercise offers students practice in applying the concepts learned from their courses, faculty, and friends. They also learn from the community leaders brought into the classroom.

Several graduates described the opportunities to engage in internships. Students worked at the Business Office at NHSC. One worked at the Marketing/Recruitment Office on campus. These students had a high regard for their experiences during their internships. Tasks that the students worked on during their internships included updating student data in a database, basic accounting, and creating and disseminating marketing materials. The internships played an important role in exposing students to their field of choice as many did not have prior experience in the given areas. Working at NHSC effectively serves as an incubator for student success in the workplace since so many interns gain useful experience working on campus. A few students also had opportunities to work outside of NHSC. One intern was placed at North

Segment Office. Further internship opportunities should be provided to NHSC students to expose them to first-hand knowledge they need to help ensure their success after school.

Impact on Indian Country

Level 4 results measure Impact on Indian Country and are important because they illustrate how behaviors being applied on the job are influencing key outcomes (Phillips, 2003). This study was concerned with the impact of attending NHSC on Indian Country such that graduating from NHSC should be considered according to the contexts of home, local communities, and the entire world (Janecek-Hartman, 2007). The implications at these levels reflect the Native value of interconnectedness. While impact on Indian Country should include increase in tax base and other outcomes that lead to a thriving community, the starting point is the impact on the student and the student's access to resources through income. It is this measure of impact that became the focus of the research.

Transfer of Learning

Education is the great equalizer, as stated by one talking circle member. The values students learn and the experiences they gain while attending NHSC transfer outside the college community. In fact, graduates report that students of tribal college are more open and have fewer biases toward others than those from mainstream colleges and universities. They are less likely to judge based on what they don't know.

NHSC Impact

Figure 25 shows trend data in AIAN annual income for those who did complete high school, did not complete high school (HS), completed associate degrees (AA), or had some college experience. A report by Musu-Gillette et al. (2017) for the National Center for Education Statistics (NCES) supplied data in the form of the median income in 2014 for full-time AIAN wage and salary workers aged 25 to 34. This figure includes people of all education levels and therefore, is higher than those from 2006. The actual data compared against these baseline datapoints are the annual earnings of NHSC graduates from Spring and Summer 2017.

The average annual income for the 2006 figures is $26,400. In 2014, the average annual income increased to $27,080. However, the average income for a Summer and Spring 2017 NHSC graduate is $36,461. The annual earnings of NHSC graduates is 25.73% higher than the general trend baseline data. This difference is consistent with a finding from the NCES (2008) that AIANs with a BA earned 26% more than AIAN high school graduates in 2006 and 28% more than AIANs who do not finish high school. NHSC graduates can expect to make more money per year than AIANs who have only graduated high school and have not completed a college degree.

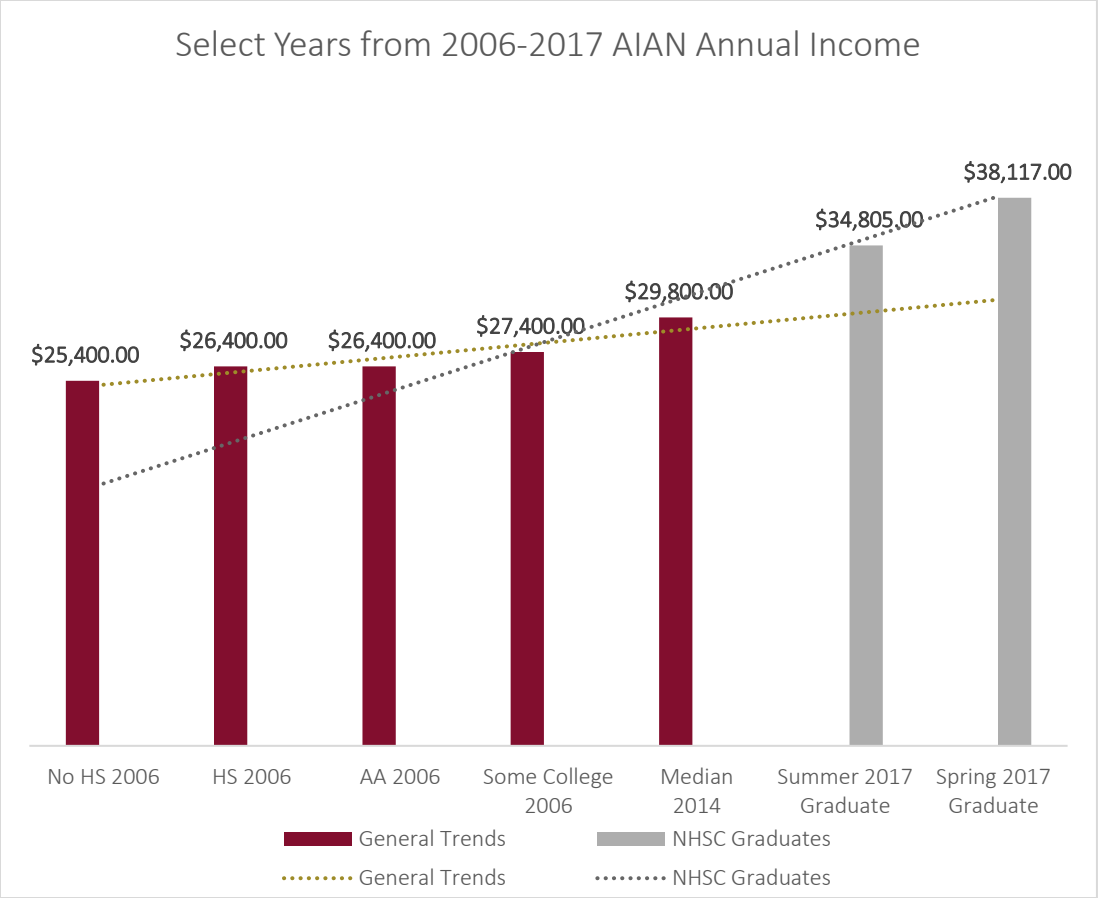


Figure 25. Select Years from 2006-2017 NHSC Trend Line Analysis

Before reporting the specific earnings data for NHSC graduates for Spring 2017 and Summer 2017, it is important to consider the degrees that were earned by these graduates as they are directly correlated with graduates' earning potential.

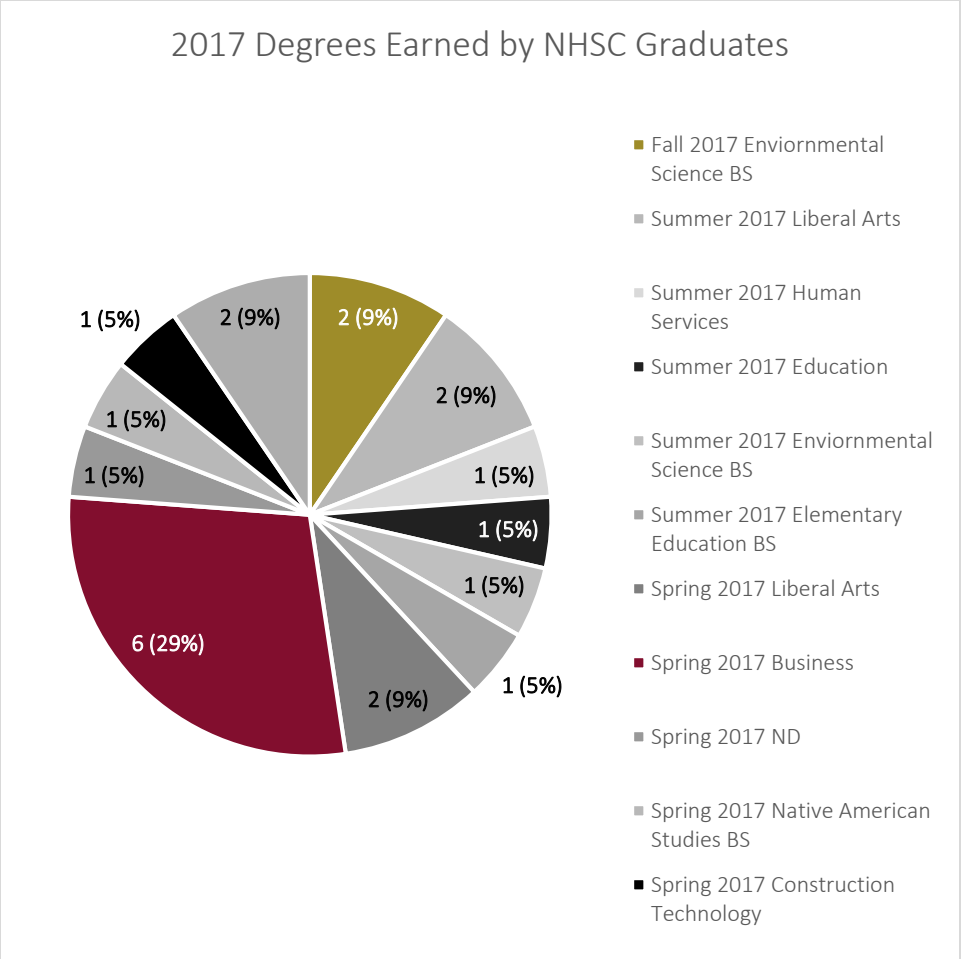


Figure 26. 2017 Degrees Earned by NHSC Graduates

The majority of the 21 graduates during the time period examined were graduates of the Business school with six graduates from Spring 2017. These degrees are all at the associate level. The only four-year degrees in this group are degrees in Environmental Science, Elementary Education, and Native American Studies. Liberal Arts degrees were the second largest category with four graduates spread across two semesters. The degrees earned by the graduates in the state data are important because they provide a view into the employability of the sample. For example, it is natural to conclude that someone with a business degree would have more opportunities in the job market than someone with a degree in liberal arts. Although the data provided from the State of North Dakota does not provide the level of detail needed to determine which students became employed, it is still helpful in assessing the value of the degrees earned at NHSC.

Figure 27 displays the earnings for NHSC graduates who completed their degrees in Spring and Summer 2017 and was extracted from the state data.

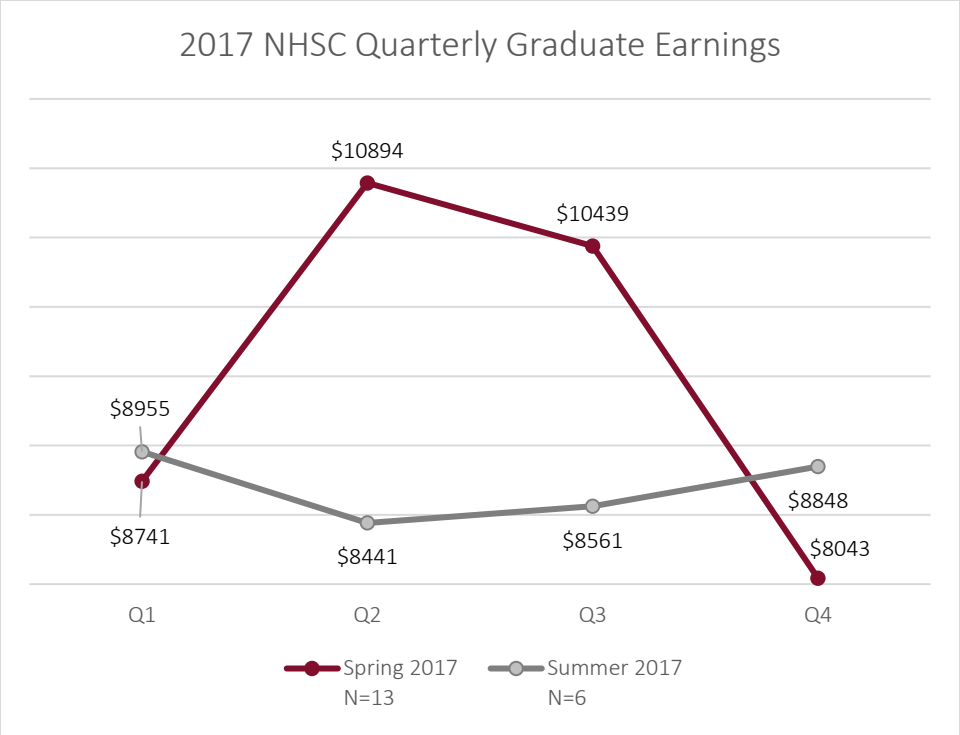


Figure 27. 2017 NHSC Quarterly Graduate Earnings

Notes:

1. There were seven people employed from the Spring 2017 graduation date in Q1-Q3. In Q4 the number grew to nine people. The inclusion of the additional two people being employed was likely the reason for the drop in average income from Q3 to Q4.
2. Five people were employed from the Summer 2017 graduation date throughout all four quarters. These average earnings remained consistent throughout all four quarters.
3. Excluded from this graphic are the two Fall 2017 graduates as neither of them found employment within four quarters after their graduation.

The average earning of graduates from Spring 2017 is $9,529.25 per quarter, while the average for Summer 2017 graduates is $8,701.25 per quarter. Spring 2017 average earnings are higher than Summer 2017 average earnings because graduates of the Spring 2017 cohort made more over four quarters than the Summer 2017 cohort. Divided over three months, the average monthly income for Spring 2017 is $3,176.42, or $19.85 per hour. The monthly income for Summer 2017 graduates is $2,900.42, or $18.13 per hour. Annual earnings for Spring 2017 graduates of NHSC was $38,117 while Summer graduates made $34,805. It was not possible to calculate a monthly income for Fall 2017 graduates because this data was not yet available at the time this report was written.

The two annual income figures that were calculated based on the data provided by the State of North Dakota fell far below the average incomes for mainstream college graduates in North Dakota, as shown in Figure 28.

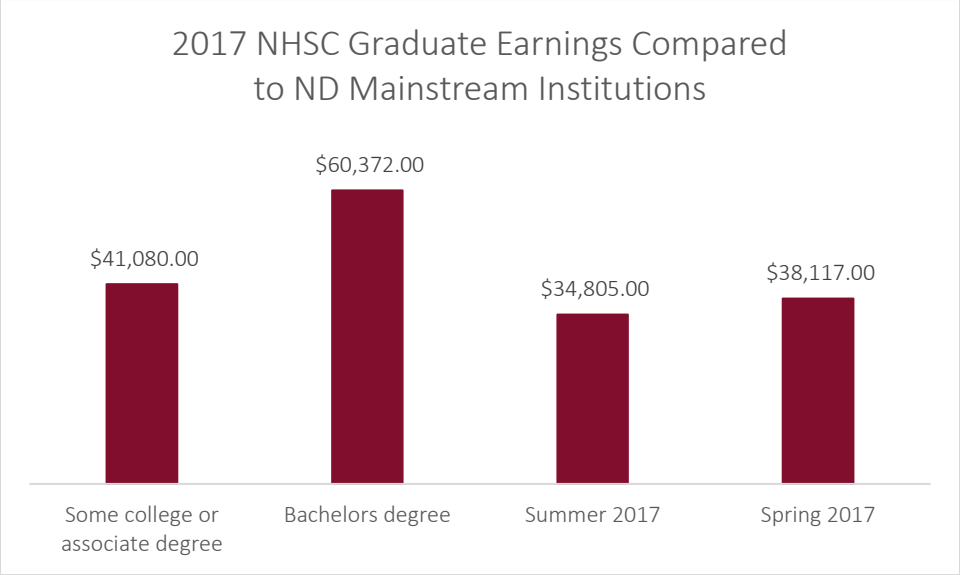


Figure 28. 2017 NHSC Graduate Earnings Compared to ND Mainstream Institutions

Note: Earnings data shown above comes from the State of North Dakota (2017) which sourced its data from a report by the U.S. Bureau of Labor and Statistics. The averages were based on a combination of data for all races of men and women aged 25 and over.

Although the earnings of NHSC graduates fail to meet these benchmarks, most of the NHSC graduates work either at NHSC or on the reservation in New Town, as noted in the description of the talking circles described earlier in this report. Data from Mountrail county, where NHSC is located, can be used in order to make a more appropriate comparison with NHSC graduates. According to the U.S. Bureau of Labor Statistics (2018), the average weekly wage for Mountrail county during the third quarter of 2017 was $1,228. This means that the average monthly income would be $4,912, far exceeding the monthly incomes of $3,176.42 and $2,900.42 stated earlier. Earnings on the reservation are generally lower than what they are in other communities. For example, based on data from the 2012-2016 American Community Survey, the per capita income of AIANs on the reservation is $10,894, while it is $16,978 for the United States in general (Center for Indian Country Development, 2019). The location where graduates work influences the likelihood of their ability to meet general benchmarks.

The fact that all the graduates who found jobs from the Spring and Summer 2017 cohorts on the reservation is a significant impact on Indian Country. Only 14% of Native Americans have college degrees (American Indian College Fund, 2018c). The fact that these NHSC graduates stayed on the reservation is important. Their impact is illustrated by the two graduates of the business school who attended the talking circle and became employed by NHSC as described earlier to gather Level 3 data. These two graduates must come from the group of six that graduated in Spring 2017; this was the only time during the three semesters of graduates considered for this evaluation that students completed degrees in business. During the talking circle, these two students noted how impactful their time at NHSC was to their jobs. These

graduates face the unique challenges of balancing being former students and working within NHSC administration. A benefit to current students is that the graduates can serve as mentors for them. For example, if a student bill cannot be paid, these graduates can help students find solutions to leave school debt free. The fact that these two students stayed at their home institution reflects the ideal outcome for tribal communities of retaining Native talent from the community. It is common for Native students who complete college degrees to leave their communities instead of returning home to support their community. As noted by Vilsack (2014), "retaining talented young people in Tribal communities remains a challenge." Therefore, these two students provide a high level of impact for Indian Country because they continue to contribute their talents to the development of Native students.

The more college educated Native American community members stay on the reservation after completing their degrees, the stronger these communities ultimately become. As such, the earnings of graduates who find work on the reservation can be considered a benefit to Indian Country as their contributions improve their home communities. It is critical for the growth and overall self-sufficiency of Native communities for the college educated to stay on the reservation and contribute to the betterment of Indian Country, especially because community members fully understand the cultural context in ways that are not possible for outsiders.

College Comparison

This section of the evaluation presents combined data that compares all the North Dakota Tribal Colleges according to number of graduates, average quarterly earnings, and employment trends. Data for this section was supplied by the State of North Dakota.

Diploma versus Readiness

NHSC graduates participating in the talking circles credit their attendance at tribal college for their current jobs and careers. While not all students pursue employment, all graduates but one attending the talking circle shared how they valued their college years as they relate to their current jobs. But, as noted, "college is not for everyone."

North Dakota adopted the Choice Ready initiative. This initiative enables individuals to pursue military service, college, or the workforce after high school. NHSC offers a General Education Development (GED) test preparation program to tribe members who want to pursue a career pathway other than college.

Figure 29 presents the number of graduates from each school for 2017 and 2018. The two schools with the top numbers of graduates are TMCC followed by UTTC. The school graduating the fewest number of students was CCCC. NHSC falls in the middle of this group. NHSC only reported 2017 data. NHSC did have 2018 graduates but they are not displayed here because they were not part of the original dataset provided by the State.

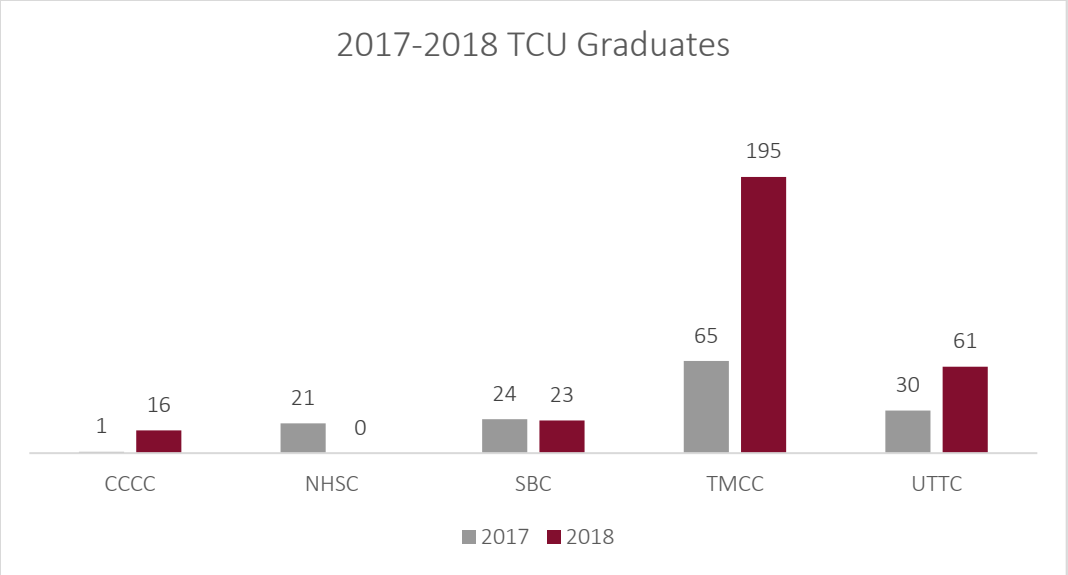


Figure 29. 2017-2018 TCU Graduates

Figure 30 presents graduation rates within 150% of normal time from the five North Dakota Tribal Colleges. Normal time is the typical time it takes to finish a degree. For example, a bachelor's degree is typically completed in four years. Data in Figure 30 are based only on the 2011 student cohort.

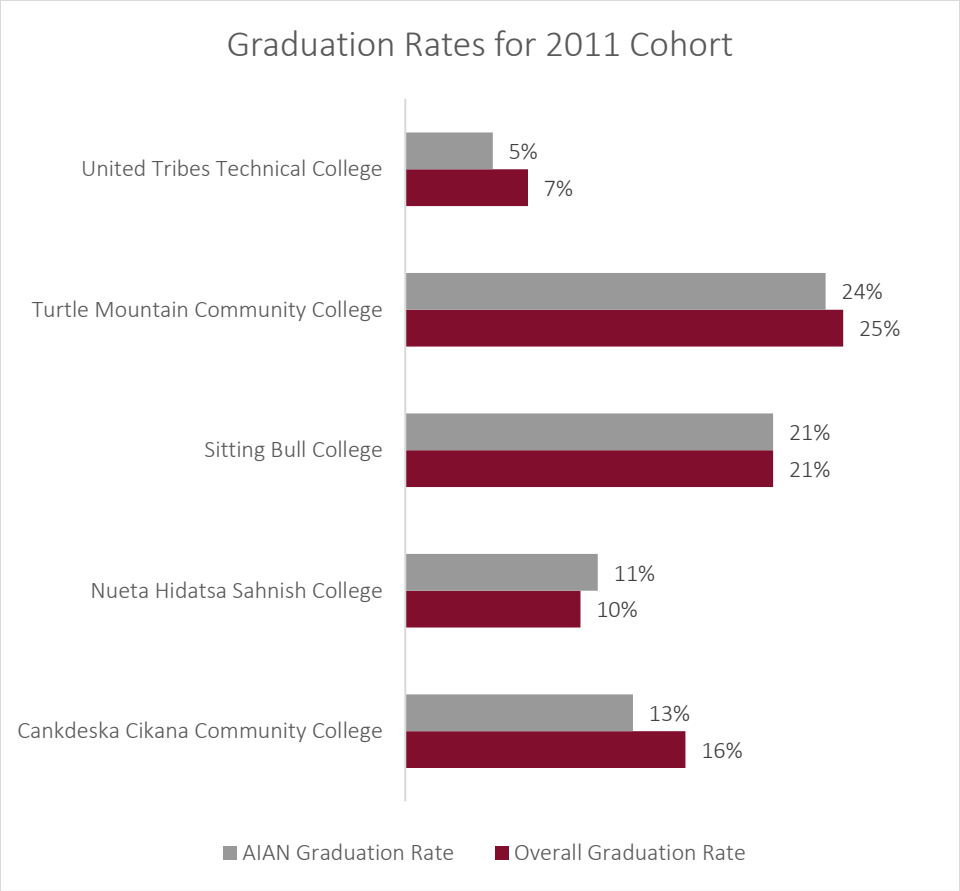


Figure 30. 2011 Cohort Graduation Rates

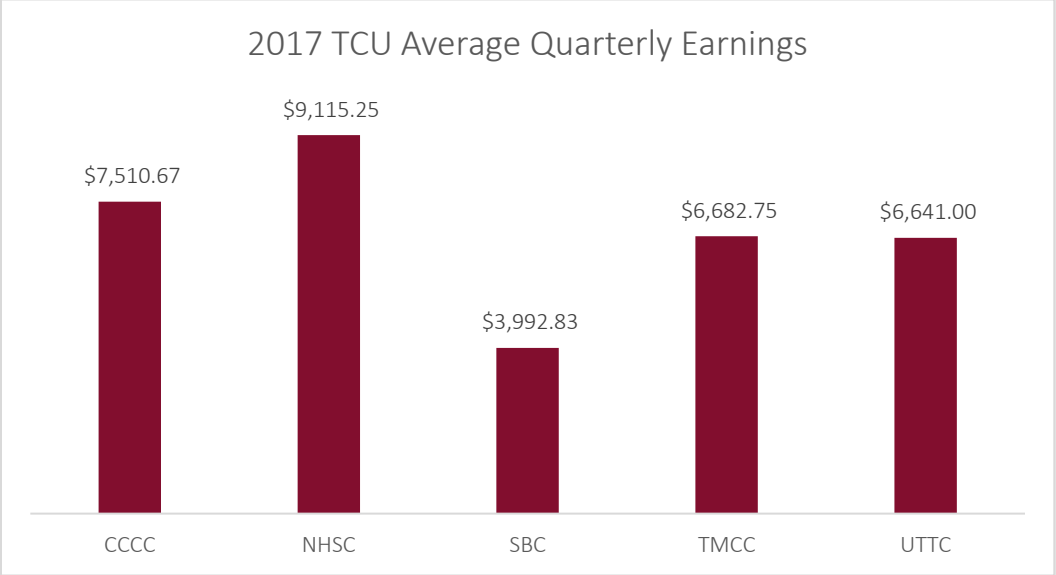
Source: U.S. Department of Education (2019)

The average graduation rate for the 2011 cohort at Tribal Colleges in North Dakota is 15.8% while the average graduation rate for AIANs is 14.8%. Graduation rates were highest at the 150% level at TMCC and SBC. The cohort fared the worst at UTTC.

Comparing the Tribal College numbers to those of two of the largest universities in North Dakota reveals that Tribal Colleges graduate students at a much lower overall rate. The graduation rate of AIANs is somewhat contested with both TMCC and SBC, exceeding the number at the University of North Dakota. The graduation rates of North Dakota Tribal Colleges do not compare favorably to North Dakota State University or the University of North Dakota. However, North Dakota Tribal Colleges, except for UTTC and NHSC, are performing consistently or better than their peers across the nation.

Figure 31 displays the average quarterly incomes for graduates of North Dakota Tribal Colleges. NHSC graduates reported the highest quarterly earnings of all the Tribal Colleges. NHSC's

average is based only on 2017 reporting. SBC reported the lowest numbers. The average earnings for graduates of Tribal Colleges is $6,788.50.



****These numbers may be skewed due to the increased regional hourly rates or salary increases due to the oil industry. Employers such as Tribal Colleges need to pay more to be competitive in order to get employees.

Figure 31. 2017 TCU Average Quarterly Earnings

Figure 32 displays employment trends for Tribal Colleges by quarter. The quarters were counted following a given cohort's graduation in the Spring, Fall, or Summer semester. At the time this data was reported in Spring 2019, the state only had data through the fourth quarter of 2018. This means that the most recently graduated cohorts would not have a full complement of data to report and that there is some incomplete data especially during the fourth quarter.

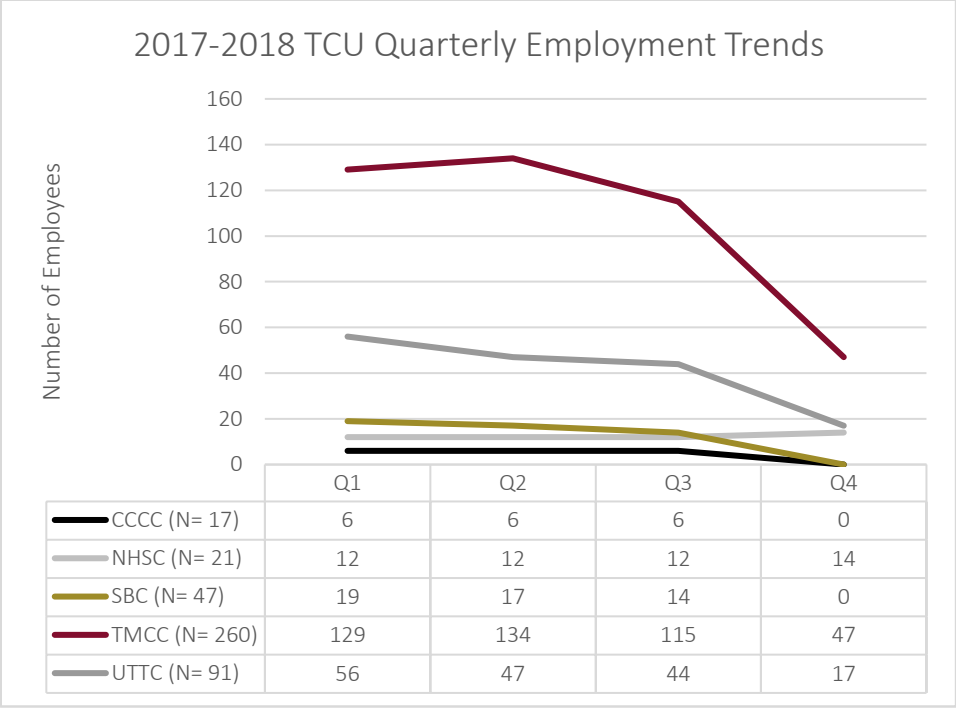


Figure 32. 2017-2018 TCU Quarterly Employment Trends

The highest number of employed graduates belongs to TMCC with 134; this is due to Spring 2018 producing 86 employed graduates. The trends show that only students from NHSC, TMCC, and UTTC were able to maintain employment four quarters after graduation. TMCC graduates retained employment from the Summer 2017, Fall 2017, and Spring 2018 semester. UTTC graduates from the Fall 2017 semester were able to retain their jobs, while NHSC graduates of the Spring and Summer 2017 cohorts remained employed. NHSC and CCCC did not report employment numbers for Fall 2017 graduates. Spring 2018 cohorts from SBC, CCCC, and UTTC only reported their first three quarter numbers. Summer 2018 graduates from TMCC only reported two quarters of employment data. Summer 2018 is the most recent graduate cohort included in this dataset.

The downward trend in quarterly employment should not be concerning. This trend is influenced heavily by the rolling reporting of employment data semester by semester. Cohorts that reported four quarters of employment data were quite stable, like NHSC's Spring 2017 cohort that ranged from seven to nine, NHSC's Summer 2017 cohort that reported five employed students each quarter, and TMCC's Summer 2017 cohort that ranged from 13 to 15. SBC and CCCC were the only two schools reporting only three quarters of data.

Alarming data includes less recent cohorts like SBC and UTTC Summer 2017 that did not report any employed graduates. An additional point of concern is that TMCC's Spring 2018 cohort went from 86 employed graduates to 79 and then 72 over three quarters. UTTC's Spring 2018

cohort displayed a similar trend decreasing from 41, 32, and then 28 employed graduates over three quarters. Furthermore, not a single graduating cohort reported all graduates being part of the workforce. Overall, North Dakota Tribal Colleges only employed 50.92% of their graduates within the first quarter of graduation. Further investigation is warranted to determine why half of graduating students do not find work. Additional focus should also be dedicated to determining why low numbers of Tribal College graduates attain employment.

Return on Investment

Impact is best illustrated by calculating the ROI. These results compare benefits to costs using a Benefits/Cost Ratio (BCR) and ROI (Phillips, 2003). The BCR is the output of a cost-benefit analysis that compares the annualized economic benefits costs (Phillips and Phillips, 2016). The formula for BCR is:

$$\text{BCR} = \frac{\text{Monetary Benefits}}{\text{Costs}}$$

ROI compares net benefits to costs and is expressed as a percent (Phillips & Phillips, 2016). The formula for ROI is:

$$\text{ROI (\%)} = \frac{\text{Net Monetary Benefits}}{\text{Costs}} \times 100$$

Net monetary benefits are defined as benefits minus costs.

Both metrics (BCR and ROI) describe how benefits compare to costs. The BCR assumes gross benefits and is reported as a ratio; ROI assumes net benefits and is reported as a percentage

A third metric that is valuable when describing the return on an investment is payback period. Payback period indicates the point in time when an investment will breakeven. The formula is:

$$\text{Payback Period} = \frac{\text{Costs}}{\text{Monetary Benefits}}$$

Monetary Benefits

The ROI calculation requires performance metrics data to be converted to money. These monetary benefits are added to the numerator of the ROI formula. The monetary values for this study were provided by the State of North Dakota who provided quarterly wage data for NHSC graduates from Spring, Summer, and Fall 2017. No data was available for Fall 2017 graduates because it was not yet reported to the State of North Dakota when the data collection for this evaluation was completed. Earnings varied from quarter to quarter for Spring and Summer 2017 graduates of NHSC. Therefore, all the quarterly data provided was averaged to calculate

an overall yearly earnings average.

Table 18 shows the inputs to the numerator of the ROI formula. Benefits are defined as the average earnings of NHSC graduates based on quarterly earnings data for graduates from Spring and Summer 2017. The annualized change in performance column was calculated based on the total number of quarters (4) in a fiscal year.

Table 18. Data to Money Conversions

Units	Unit Value Avg 3 Qtrs Earnings	Annual Performance (P Δ)	Annualized Value
One Quarter Earnings (Summer/ Spring 2017)	$ 9,115.25	4	$36,461

The annualized value was calculated by multiplying the quarterly average earnings ($9,115.25) by the total number of quarters in a year (4). The resulting figure, $36,461, reflects the annual income for a graduate of the 2017 cohort. However, this amount must be discounted by the annual income of a student who did not graduate college. Only the income differential can be attributed to higher education. Most high school graduates in North Dakota earn minimum wage as shared in the TCU-ROI Convening in Denver, CO on July 9, 2019. According to the U.S. Department of Labor (2019), the minimum wage in North Dakota is $7.25. Annualizing this hourly figure yields a total of $15,080 assuming 52 weeks employed at 40 hours per week. The incremental value of graduating from NHSC as compared to high school graduation is:

$$\$36,461.00 - \$15,080 = \$21,381.00$$

Multiplying this amount by the number of employed graduates (14) yields the incremental value for the employed graduating cohort for one year as $299,334.00.

According to the Bureau of Labor Statistics (BLS) (Sept. 20, 2018), the median number of years that wage and salary workers stay with their current employer is 4.2 years. BLS also reports an average annual wage and salary increase of 3%. Assuming these two variables, plus a discount rate of 3% (time value of money), an NHSC graduate will earn $91,435.13 more than a person with a high school diploma when employed upon graduation in 2017 at 2017 value for money.

For the 14 students who gained employment after graduation, that is a total added value to their income as follows:

$$\$91,435.13 \times 14 = \$1,280,091.82$$

Assuming five years on the job instead of 4.2, an NHSC graduate would earn $110,109.18 more than high school graduates.

$110,109.18 x 14 = $1,541,528.52

Fourteen (14) employed graduates were used instead of 21 overall graduates because only 14 of the 21 graduates were employed four quarters after their graduation. The two graduates from the Fall 2017 cohort, who are among the seven unemployed, did not have any available data. As mentioned by Phillips (1996) in the Guiding Principles of ROI studies, if no improvement data is available, it must be assumed that no benefit was realized. All the figures listed above were used in the calculations for the institutional BCR, ROI, and payback period.

Another important facet to calculating the benefits of attending a Tribal College is including the institutional funding and other support that students receive while attending school. Items like scholarships, tuition waivers, student travel, and utilities fall into the institutional funding and support category. Including these two facets allows the benefits calculation to account for benefits realized after graduation and for benefits realized while students are in school. The Vice President of Student Services and NHSC Comptroller identified these items and helped to estimate the percentages of each benefit to include in the in the final benefits calculation. The total benefit was prorated by the total 2017 NHSC enrollment (228). This figure was then multiplied by the total number of years graduates in the cohort took to complete their degrees at 150% of normal time (78). The final amount of student funding and support was calculated to be $385,053.24 over the time the 21 graduates took to finish their degrees at NHSC.

The final benefits calculations, including both income differential and student funding and other support, are listed according to the number of years a graduate will stay at his or her job as follows:

- 4.2 years = $1,665,145.06
- 5 years = $1,926,581.76
- 10 years = $3,713,635.70
- 15 years = $5,785,320.42
- 20 years = $8,186,970.72

These final benefits are used in the BCR and ROI calculations from the student perspective.

Costs

While the benefits of graduation are linked to student income as a proxy for Indian Country impact, the costs are school operating expenses incurred to prepare the student for employment. Table 19 represents the NHSC's 2017 fiscal year general fund and was used to as the costs to educate the total student enrollment of 228 students.

Table 19. NHSC Expenses

Item	Amount
A/R Clearing Account	$(65.05)
Academic tutors	$97,900.00

Item	Amount
Admin Error	$(8,140.62)
Advertising	$59,685.36
Athletic Department Activities	$(100.00)
Bad Debt Expenses	$320,284.43
Bank Charges	$264.01
Board of Directors Stipend	$3,852.60
Book Store Purchase	$171,583.39
Book Tuition Fees	$10,807.85
Cafeteria Cleaning Supplies	$17.49
Capital Outlay Equipment	$337,233.54
Capital Outlay-Equipment	$3,228.00
Computer Equipment	$1,983.23
Consultant Services	$137,277.31
Depreciation	$1,045,555.77
Dues and Subscription	$76,864.02
Employee Benefits	$47,435.57
Employee Life Insurance Expense	$2,826.83
Facility Cleaning Supplies	$416.08
Facility Maintenance	$2,534.92
Food and Beverage Supplies	$43,988.22
Fringe FICA	$161,981.08
Fringe Medicare	$37,676.00
Graduation	$(3,600.00)
Graduation Activities Expense	$18,682.15
Health Insurance Expense	$300,605.93
Instructional Aids and Supplies	$11,809.54
Insurance	$9,016.59
Janitorial Supplies	$67,916.12
L R Building	$141,792.47
Library Acquisition	$2,501.04
Library Office Supplies	$8,053.47
Material and Supplies	$133,193.96
Meeting Expenses	$10,170.19
Merchant Fees-Credit Card	$1,062.24
Misc. Expenses	$156,262.28
Office Furnitures	$13,684.90
Office Supplies	$21,965.26
Office Supplies-Recruiting	$30,012.43
Other Expense	$(1,542.50)
Participant Support Native American Stud	$2,000.00
Participant support-NAT AMER STUDIE	$15,600.00

Item	Amount
Postage and Shipping	$4,507.37
Professional Services	$11,606.29
Professional Services-BOD	$6,594.00
R M Building	$64,911.33
R M Equipment	$39,014.23
R M Vehicle	$43,635.68
Recruitment Expense	$43,585.00
Retirement Expense	$73,287.25
Salaries Faculty FT	$65,445.14
Salaries Professional Management	$1,445,664.98
Salaries Support Staff	$1,171,546.70
Scholarship Award	$13,676.00
Scholarship Institutional	$15,482.00
Software Supplies	$3,800.40
Stipends	$10,500.00
Student Activities Expense	$3,206.67
TAT Construction Grant Expense	$603,918.19
Training	$894.00
Training/Professional Development	$22,589.53
Transfer In \ Transfer Out	$29,830.75
Travel Expenses	$179,326.78
Tuition Waiver Family	$19,698.86
Tuition Waiver Employee	$6,893.00
Tuition Waiver Elder	$475.00
Utilities Electrical	$13,051.93
Utilities Heating	$360.19
Utilities Telephone Internet Service	$96,036.69
Grand Total	**$7,483,814.06**

The total cost provided in Table 19 was allocated across all students to determine the total 2017 per student cost.

$$\frac{\$7{,}483{,}814.06 \text{ total cost}}{228 \text{ students enrolled}} = \$32{,}823.75 \text{ cost per student}$$

One-year cost to educate the 2017 cohort is $689,298.75 ($32,823.75 x 21 total graduates).

Institutional ROI

The objective for this study was to determine the ROI of investing in the tribal college and due to resource and data availability, one year was selected as the evaluation time period. Outlined below are the calculations for BCR, ROI and payback period based on the benefits and costs

calculated previously in this report for one-year after graduation for the employed members of the graduating cohort.

The BCR of attending NHSC for one-year of benefits and one-year of costs is:

$$\text{BCR} = \frac{\$299{,}334.00}{\$689{,}298.75} = 0.43$$

The BCR of 0.43 indicates that for every dollar invested, 43 cents of the original dollar invested is returned in gross benefits.

The ROI calculation for attending NHSC considering one year of benefits and one year of costs for the employed graduates is:

$$\text{ROI}\ (\%) = \frac{\$299{,}334.00 - \$689{,}298.75}{\$689{,}298.75} \times 100 = -56.57\%$$

The -56.57% result is interpreted that for each dollar invested in NHSC, that dollar is lost along with another 57 cents. Given this negative result, it is important to know how long it will take for the investment in the employed graduates to breakeven. This is illustrated by the payback period formula. The calculation for the payback period for the employed members of the graduating cohort is:

$$\text{PP} = \frac{\$689{,}298.75}{\$299{,}334.00} = 2.3\ \text{Years}$$

The 2.3 years payback period means that the income differential earned by the graduating cohort will breakeven with the investment made in their education after 2.3 years of employment. In 2.3 years, NHSC will recognize an ROI of 0% based incremental student wages and one-year of costs.

The BCR of attending NHSC if a graduate is employed for 4.2 years benefits and one year of costs is:

$$\text{BCR} = \frac{\$1{,}280{,}091.82}{\$689{,}298.75} = 1.86$$

The BCR of 1.86 indicates that for every dollar invested, $1.86 are returned in gross benefits.

The ROI calculation for attending NHSC if a graduate is employed for 4.2 years of benefits and one year of costs is:

$$\text{ROI}\ (\%) = \frac{\$1{,}280{,}091.82 - \$689{,}298.75}{\$689{,}298.75} \times 100 = 85.71\%$$

The 85.71% result is interpreted that for each dollar invested in NHSC, the original dollar invested is returned along with another 86 cents.

Table 20 presents a recap of the BCR and ROI calculations for various job tenures using one year of costs for the graduating cohort.

Table 20. Labor BCR and ROI Calculations with One Year of Costs for Graduating Cohort

	Benefits	Costs	BCR	ROI
1 year	$299,334.00	$689,298.75	0.43:1	-56.57%
4.2 years	$1,280,091.82	$689,298.75	1.86:1	85.71%
5 years	$1,541,528.52	$689,298.75	2.24:1	123.64%

ROI Institute's guiding principles require the most conservative approach when calculating ROI. To ensure this principle is met, it is important that we include all costs of educating the graduates for the entire time they attended NHSC. The tenure for a student to graduate is 150% of normal time as shared by Jennifer Janecek-Hartman, Ph.D., Executive Director, North Dakota Association of Tribal Colleges. For example, degrees were assigned values of either one or two or six years to complete and then multiplied by a factor of 1.5 to account for more realistic completion rates at 150% of typical completion time. Therefore, the four-year degree takes six years to complete, the two-year degree generally takes three years, and the one-year certificate takes 1.5 years. In total, it took the cohort 78 years to complete their degrees. Using the cost per student previously calculated of $32,823.75, the total cost to educate and graduate the cohort is:

$$\$32{,}823.75 \times 78 \text{ years } = \$2{,}560{,}252.50 \text{ total costs}$$

The BCR of attending NHSC if a graduate is employed for 4.2 years benefits and total costs is:

$$\text{BCR } = \frac{\$1{,}280{,}091.82}{\$2{,}560{,}252.50} = 0.5$$

The BCR of 0.5 indicates that for every dollar invested, 50 cents are returned in gross benefits.

The ROI calculation for attending NHSC if a graduate is employed for 4.2 years benefits and total costs is:

$$\text{ROI } (\%) = \frac{\$1{,}280{,}091.82 \ - \ \$2{,}560{,}252.50}{\$2{,}560{,}252.50} \times 100 = -50.00\%$$

The -50.00% result is interpreted that for each dollar invested in NHSC, that dollar is lost along with another 50 cents.

Based on the negative ROI, it is critical to determine the payback period. Assuming one-year benefits and total costs, the payback period is:

$$\text{PP} = \frac{\$2{,}560{,}252.50}{\$299{,}334.00} = 8.55 \text{ Years}$$

The payback period for total costs to educate the cohort is 8.55 years and generates ROI of 0%.

Table 21. Labor BCR and ROI Calculations with Total Costs for Graduating Cohort

	Benefits	Costs	BCR	ROI
1 year	$299,334.00	$2,560,252.50	0.12:1	-88.31%
4.2 years	$1,280,091.82	$2,560,252.50	0.5:1	-50.00%
5 years	$1,541,528.52	$2,560,252.50	0.6:1	-39.79%

Student ROI

While it is important to consider the institutional perspective when determining the BCR and ROI of attending NHSC, it is critical to include the perspective of the students themselves. The benefits numbers that include income differential and student funding and support presented in the last part of the Monetary Benefits section of this report are used to calculate the BCR and ROI in this section. In order to calculate the costs for students who attend NHSC, this study considers the average cost of attending NHSC and wages students do not realize while completing their studies.

Determining the average cost of attending NHSC for the 2017 graduates requires an average yearly cost of attendance and the number of years it should have taken the 2017 cohort to complete their studies. The U.S. Department of Education (2019) provided the average net price of attending NHSC for full-time, first-time degree/certificate-seeking undergraduates receiving grant or scholarship aid. The cost was $8,168 during the 2014-15 academic years, $5,567 during 2015-16, and $11,071 during 2016-17. The average of these figures, $8,268.67, was used to calculate the cost of attending NHSC.

Since 21 students graduated from NHSC in 2017, the number of years typically required to complete their degrees was determined based on the type of degrees awarded. The following calculation represents the total investment made by the 2017 graduates in their education at NHSC:

$$\$8{,}268.67 \text{ x } 78 = \$644{,}956.26$$

Calculating the total cost of lost wages involves multiplying the average yearly earnings of a high school graduate by the total number of years the 2017 NHSC graduates spent in school. The 21 students spent a combined total of 78 years completing their degrees. However, some

NHSC students work while they are in school. In order to approximate the portion of working students at NHSC this study turned to the expert estimation method.

The VP of Campus Services estimated that 65% of students work while in school, and his confidence in the estimate was 90%. This portion of the study is interested in determining the number of working years students lose because they attend school. In this case, the other side of the 65% estimate (35%) is the percentage of interest. Therefore, the percentage of working students who do not work while attending NHSC (35%) can be multiplied by the total number of years it takes students to complete their degrees (78). The result is 27.3 years. Costs must be fully loaded when calculating the cost of any program. This means that the error of the estimate must be added to the final figure to calculate the final cost of lost wages due to attending college. Since the estimate was at 90% confidence, 10% of the estimate represents error. This error (10% of 27.3=2.73), must be added to the 27.3 to determine the total number of years students do not work while in school. The result is 30.03 years.

The average annual earnings for a high school graduate was determined to be $15,080 earlier in this report. Therefore, the total lost earnings are determined by the following formula:

$$30.03 \times \$15,080 = \$452,852.40$$

When the total cost of attendance is added to the total cost of lost earnings, the resulting figure is $1,097,808.66. This figure was used to calculate the student BCR and ROI presented in Table 22. Note that the benefits used in this section were listed in Monetary Benefits.

Table 22. Student BCR and ROI Calculations

	Benefits	Costs	BCR	ROI
1 year	$684,387.24	$1,097,808.66	0.62:1	-37.66%
4.2 years	$1,665,145.06	$1,097,808.66	1.52.:1	51.68%
5 years	$1,926,581.76	$1,097,808.66	1.75:1	75.49%
10 years	$3,713,635.70	$1,097,808.66	3.38:1	238.28%
15 years	$5,785,320.42	$1,097,808.66	5.27:1	426.99%
20 years	$8,186,970.72	$1,097,808.66	7.46:1	645.76%

The BCR and ROI figures are favorable to the students graduating from NHSC. From the projections displayed in Table 22, are consistent with several studies that examined the value of a college degree. For example, Lobo and Burke-Smalley (2018) reported that the average student can expect to recover the costs of attending college for 4 years in 13 years and in 31 years for 6 years in college. Most students finished their degrees within 4 years even at 150% of typical graduation time. In addition, Daly and Bengali (2014) found that it takes less than 20 years for the average college graduate to recover the cost of attending college. Students will breakeven in less than 4.2 years given all of the money students invest in their educations at NHSC. Realizing the monetary value of an education at NHSC happens within the typical time an

employee stays at a given job. There are also various intangible benefits of being an NHSC graduate that show up in the short-term.

Intangible Benefits

Intangible benefits are benefits associated with a program that were not converted to monetary values but still provide value to the overall project (Phillips & Phillips, 2015). These benefits can include those associated with the institution, the students, and society at large.

Intangible benefits of attending NHSC, and Tribal Colleges in general, include positive impacts on health outcomes. AIAN communities have well documented histories of high instances of suicide, depression, and other mental health issues. For example, suicide rates among AIANs are more than 3.5 times higher than rates observed for other ethnicities from 2003-2014 (Leavitt et al., 2018). Of specific importance to this study are the differences between suicide rates for high school graduates and college graduates. Studies by Phillips and Hempstead (2017) and Crosby, Ortega, and Stevens (2013) found that suicide rates are highest among people who only have high school diplomas and lowest among people who have a college degree. Contrary to other ethnic groups who tend to have higher rates of suicide when they are middle aged, AIANs have the highest suicide rate when they are in their teens and early 20s (Leavitt et al., 2018). It follows that enrolling in school and graduating during this high-risk period can serve as a protective factor.

This is also true for drug and alcohol abuse. It is widely known that substance use and abuse in AIAN communities far surpasses that of other populations (Whitesell, et al, 2012). While one talking circle member pointed out that the impact of tribal colleges has not had an effect on the drug problem that exists on the reservation, another admitted “by participating in school, I am less likely to do meth.”

While the focus of this study did not specifically include impacts on health outcomes, the general trends indicate that attending and graduating from tribal college could decrease the likelihood of unnecessary deaths due to suicide and overuse of drugs, and alcohol. Further research is needed to more accurately test this assumption.

Another benefit to students is the fact that some transfer from student to employee of the school. This not only offers income to the student, but fills a vacancy at the school, eliminating the need to recruit, hire, train, and assimilate a new employee who likely does not know the culture of the school. It is a better hire at a lower cost, assuming the job is a vacant position that truly needs to be filled. Additionally, this student-turned-employee can “serve as a navigator for new students.”

But nothing can describe the benefits of attending and graduating from a TCU than the students themselves. Following is a summary of key responses to questions asked during the talking circles.

Voices

On April 2, 2019, Dr. Jen Janecek-Hartman and Dr. Patti Phillips listened to ten graduates as they described their experience attending and graduating from Nueta Hidatsa Sahnish College (NHSC). They learned that NHSC is a community of trust, caring, and relationships. It instills a sense of values overlooked in mainstream colleges and universities. The focus is on persistence and graduation and ensuring that all who attend succeed.

Tell us about your overall perception of attending school at NHSC.
Business is the biggest major. It is needed and wanted. We need more instructors and more four-year degrees; the problem is capacity.

I went to Jamestown, then Kaplan, then here. We get one-on-one attention here. It is more personal. There are smaller numbers and better communication. Instructors and administrators care.

Having been a former student at a larger university, everything feels more personal. I went from a classroom of 300 to one of three students.

Having moved from former student and now part of administration requires a balance. We can serve as navigators for students. We will work with students if a bill cannot be paid. Students want to leave school debt free. Students bring life experiences into the classroom. They need someone to help them navigate the system. Someone who has been in their shoes.

There is a high level of trust between students and teachers. Instructors want students to succeed. I have never seen a community like I have seen it here.

How relevant are courses to your job?
Courses are very relevant to the job. Guest speakers from the community and business attend the classes. It is good to hear from the real world and how courses apply.

But college is not for everyone. There is a difference between diploma and readiness. NHSC offers the GED along with other schools. It is part of the readiness program.

There had been some discussion about investing in sports. But I disagree with sports. Fortunately, no one is talking about it any longer. Sports are unrelated to persistence and graduation.

What did you learn while attending NHSC?
How to build relationships. Business leaders in New Town and the faculty and staff at NHSC have an awesome relationship. About 40% of the students are from New Town. There is a partnership.

Everyone takes courses in history and language. There should probably be two courses. These courses teach traditional values.

Most teachers try to incorporate values into course work. Leadership is brought in from community to talk about the importance of values in their work.

All teachers may not call out values as learning, but they all practice the values. All teachers have to take courses on the traditions and culture of the tribe.

This school should be Mecca of who we are.

How have you applied what you learned while attending school at NHSC?
During school we had to apply what we learned within the community. We had to put on a community fundraiser as a class assignment. We had to get into the community. This experiential learning opportunity required we apply what we learn immediately.

I had an internship and then a job. I use what I learned in school every day.

I studied Native Studies and apply it every day in business. Not only did I attend, but my family goes here as well.

Every day we apply the values of the tribe. Even at celebrations or other events. The one who provides the meal eats last. We allow Veterans to go first, elders second, first responders third, then everyone else follows. No other place treats Veterans better than here.

What impact does graduation from NHSC have on Indian Country?
We get jobs, either in the community or at the school.

I opted not to go to work; but will one day.

By going to school at NHSC or another tribal college, you are more open and have fewer biases toward others. "I look to a day when people will not be judge by the color of their skin, but by the content of their character." That quote [by Martin Luther King] comes to mind.

You are less likely to judge based on what you do not know.

Education is the great equalizer.

Sadly, the impact of the school doesn't change the drugs.

They care about the students and community.

Conclusions

This section presents conclusions that were drawn from the evaluation. Conclusions are presented according to the TCU-ROI conceptual model.

Impact of Tribal Colleges on Indian Country

At Level 0, Count/Number of Participants, most of the students enrolled at NHSC are AIANs. High enrollments of AIANs at NHSC is a historical trend; this indicates that the resources being dedicated to educating people from Fort Berthold, New Town, and the surrounding areas are going to the people who need them most. These resources should have a positive influence on Indian Country because many AIANs are enrolled and are completing their degrees. Most graduates are completing Business and Language Arts degrees.

At Level 1, Reaction and Student Satisfaction, Business and Language Arts have produced strong results at the Satisfaction level. Another area that is producing strong results at Level 1 is Native American Studies. These courses are critical to NHSC's ability to embody its philosophy of integrating the culture, traditions, and language of the Three Affiliated Tribes into its course offerings. The Native American Studies Department is very strong in these areas, and other courses offered at NHSC were also rated favorably by students when asked about cultural integration. This suggests that NHSC is helping to preserve the cultures of the Manda, Hidatsa, and Arikara Nations through its educational offerings.

At Level 2, Learning, Native American Studies classes were consistently strong at NHSC during the evaluation period. These courses appear in the top 10 of courses that students earned the most As. This is important to the Native American Studies BA degree, as well as the rest of the general education at NHSC (two NA classes are part of every student's general education requirements). Students and new faculty are required to take courses on Native American history and culture. Through these courses they learn to appreciate the Native American value system. As a result, graduates who are not Native American indicated that, since graduating the tribal college, they have realized that they are more open and have fewer biases toward others than their friends who attended more mainstream universities. This reflects tribal cultural value of respect for diversity. Overall, NA classes represent a distinct strength of student learning at NHSC and should make a meaningful contribution to preserving the Native American culture of the Mandan, Hidatsa, and Arikara Nations.

When it comes to having an impact on the future success of learners, one of the most important trends is the success students demonstrated in BU classes. Strong performance in these classes suggests students graduating with degrees like Marketing/Entrepreneurship, Information Management Specialist, Business Administration, and Administrative Assistant are particularly well prepared for the workforce. This is supported by the fact that BU graduated the highest number of students at NHSC as noted in the Level 0 section. Students were also

generally satisfied with BU courses. These factors suggest that students working in business related fields should be able to apply their learning in meaningful ways.

At Level 3, Application of Learning, no specific skills from NHSC were credited as having specific influence on workplace success; however, discussions held during the talking circle indicate that graduates generally felt their education prepared them well for their jobs.

This evaluation found that, at Level 4, Business Impact, NHSC graduates earn more than ND high school graduates. However, NHSC graduates do not compare favorably to people with college degrees from schools outside the immediate area. This finding should be interpreted with a measure of caution; the lower incomes are likely associated with the graduates staying on the reservation to work. Incomes on the reservation have historically been lower than incomes in the rest of the country. Therefore, the incomes of AIANs who are college educated should be expected to fall short when comparing to people outside the immediate area. Retaining talent within Native communities is critical to having a positive impact in Indian Country.

Efficacy of TCU-ROI Conceptual Model

The TCU-ROI Conceptual Model is a good approach to demonstrating the impact of TCUs. Built on a proven methodology that is applied across all sectors and all type of programs, this approach has been modified to reflect American Indian values. While this case study was an initial application of the model, future applications should leverage the more robust methods inherent in the process. Factors that are critical to success of future applications include:

- Clearer definition of measures other than graduate rates and income. These measures may include time to graduation, placement rates, student career satisfaction, and job performance after graduation.
- Targets for comparison. While the case study offers results and, in some cases, a basis for comparing those results, performance with any measure is only meaningful when making meaningful comparisons.
- More methodical approaches to isolate the effects of TCUs and the programs they offer. In this case study, a very broad estimate of contribution was assumed. Using a more structured approach to estimates, as used with the ROI Methodology®, will provide a more reliable indicator of TCU contribution. Other approaches such as control/comparison groups, trendline analysis, or the development of mathematical models to describe attribution will generate credible and reliable outcomes.

Recommendations

This section of the report presents recommendations based on the conclusions drawn in the previous section of this evaluation.

Opportunities for NHSC

According to the Level 1 results, NHSC should investigate ways to further integrate Native Languages into the courses that it teaches. Of all the satisfaction measures collected regarding cultural integration, language was the lowest one. This is a particular challenge since Native Languages do not easily translate over to technical western terms. However, this is one area in which NHSC can improve its course offerings especially when focusing on classes associated with Native American Studies.

Experiential learning is critical to gaining knowledge for Native Americans. This evaluation found that students who were able to engage in internships benefited significantly from them. Further internship opportunities should be provided to NHSC students both on and off the reservation in the fields they are studying. Such an expansion will likely require establishing Memoranda of Understanding (MOU) with various partners. Providing more internship opportunities for students will further prepare them with the first-hand knowledge they need to ensure their success after school.

Perhaps the biggest opportunity to improve student learning can be found in classes offered by Math and Science (MS). Of the two core subjects, NHSC students overwhelmingly struggle with math classes. In Fall 2016, math classes accounted for 65% of the failing grades in MS. Elementary Algebra had 25% of the failing grades while Foundations of Mathematics had 15%. Note that 22% of the Fs in MS came from Biology I & Lab. In Spring 2017, math classes were 96% of the failing grades in MS. Elementary Algebra represented 54% of the failing grades for that semester.

Generally speaking, NHSC is already aware of the issues students have with math as it states in the tutoring section of its website. This awareness and the existing tutoring services are likely a great benefit to students, but more solutions need to be developed to decrease the high number of failing grades in these classes. Utilization of tutoring services is not part of this evaluation; however, this could impact the persistence of these student struggles. Further student support services should be offered to assist students with their math courses.

As this is the first time that an ROI study has been conducted with a Tribal College, there are numerous opportunities for NHSC and other Tribal Colleges to pursue that can improve the fidelity of this work. The first opportunity is to work with the American Indian College Fund and other Tribal Colleges to standardize the collection of common datapoints along the 5 levels. The opportunity was identified by conducting these initial ROI studies and finding high levels of inconsistency as far as the details of similar datapoints and how some data are presented. For

example, NHSC focuses specifically on culture in their student evaluations where other Tribal Colleges do not specifically assess this important feature of a tribally oriented education.

Another difference that was identified is that different Tribal Colleges present similar data, such as enrollment demographics, inconsistently; some present many details while others are very general. Inconsistencies in the type of data that are collected and differing details of common datapoints make it difficult to compare performance across institutions. The introduction of common datapoints at each of the five levels will allow the TCU-ROI Model to generate consistent data that can inform decision-making at various levels. The American Indian College Fund can play a key leadership role in establishing these datapoints for Tribal Colleges as a primary stakeholder and financial contributor to Tribal Colleges.

Additionally, each individual institution should have the opportunity to define measures that are specific to their local context. As common datapoints are identified and collection methods are implemented, it is critical to respect the people and communities from which data are being collected. This means assuring data collection methods are sensitive to culture by involving tribal institutional review boards in the approval of protocols. It would also be beneficial to involve tribal councils in the approval of such data collection protocols.

Lastly, respect for data sovereignty can be exemplified by the ways data are shared with local stakeholders. Data should not only be owned by a given Tribal College or by the American Indian College Fund; it should also be shared with tribes. This assures the people can own their data and use it to further community interests.

Another opportunity specifically for Tribal Colleges is to improve their knowledge of graduate performance in the workforce. The reason that Tribal Colleges should be involved in the monitoring of graduate performance is because the State of North Dakota can only track graduates who stay within North Dakota. The graduates who leave North Dakota are effectively lost from the state's perspective and this negatively influences the real-world impact being reported for Tribal Colleges.

Tribal Colleges can improve the tracking of graduates by establishing relationships with alumni via alumni offices. Alumni offices can keep track of alumni contact information, employment status, job function, and pay ranges. This data will improve the fidelity of the ROI Methodology. It will also ensure that Tribal Colleges are telling their complete story of success without leaving out the impact of students who leave home to make a difference for other AIAN communities and the world at large.

Opportunities for Future Research

Three specific questions that can be used to guide future research were left unanswered by the current study:

1. What programs offered by Tribal Colleges result in the best employment outcomes?
2. Why are large portions of students from graduating cohorts failing to gain employment after finishing school?
3. What do employers think of the on-the-job performance of Tribal College graduates?

Answering the first question involves a level of detail in the data that was unavailable to the researchers conducting this study. The State of North Dakota provided data for employment and quarterly earnings in aggregate form. While these data are useful in calculating the overall differential in wages between graduating cohorts and high school graduates, it is not possible to make a connection between specific graduates and employment.

A useful outcome of a study on the ROI of attending a Tribal College is determining employment opportunities as they relate to completed degree programs. For example, one would think that students graduating with a degree in Liberal Arts would have difficulties finding work, whereas someone with a degree in Business Administration would easily find employment. Information such as this would be quite helpful to Tribal Colleges because they offer many associates degrees and certificates. However, these types of determinations were not possible in this first ROI study with Tribal Colleges. A correlation between degree completed and employability should be part of future studies.

Answering the second question involves a robust understanding of local context that did not result from this study. Potential explanations for the low employment percentages of graduates from Tribal Colleges include family commitments and saturation. There are many family commitments that influence a student's ability to work. Caring for elders, children, or sick relatives is demanding and can be a full-time job. When such situations occur, it is practically impossible to also maintain a full-time job. There is very little Tribal Colleges can do in this situation. Family should always come first and maintaining strong family bonds is of the upmost importance.

Saturation is an issue Tribal Colleges can work with effectively. Saturation refers to the local area being overwhelmed with people of a specific specialty, and many people with similar qualifications compete for only a few jobs. Tribal Colleges can help address this issue by keeping tabs on opportunities both within their communities and also within North Dakota and the surrounding areas. It may not always be feasible for students to leave their home communities for work, but students should have the opportunity to consider various employment opportunities upon graduation. Building relationships with local and state industries is key to providing graduates with the information they need to explore appropriate employment opportunities. Further strategies to facilitate the employment of graduates can also be gleaned by answering the first question regarding the employment outcomes of graduates with various degrees.

Answering the final question involves establishing continuing dialogue with employers of Tribal College graduates. Tribal Colleges work to prepare their students to enter the workforce. As

such, the opinions of employers regarding the on-the-job performance of graduates is of the upmost importance when it comes to evaluating the extent to which Tribal Colleges are preparing their graduates to succeed in the workforce. Including the perspective of those most familiar with graduate on-the-job performance can benefit future studies by providing critical feedback on which job-based skills are strengths and weaknesses of Tribal College graduates.

This information can easily be used to improve curriculum by tracing skills back to courses within a program of study for a given degree, and ultimately making changes as needed to improve the probability of graduate success in the workforce. Talking circles or surveys should be considered to collect this valuable data. Tribal Colleges can also engage graduate employers by working with them to develop more internships and opportunities to engage in experiential learning for students. Involving the voices of employers in the evaluation of graduate's success will ultimately validate raw employment data and represents a rich opportunity for research and program improvement.

Dissemination of Results

Research without communication adds no value. That is why Guiding Principle 12 of the ROI Methodology exists. Results of an evaluation must be communicated. This research is worth dissemination. It:

- Tells a story about the success students have by attending a TCU.
- Offers opportunities for the TCUs involved in the research to improve processes, measurements, and measures.
- Provides a framework and model for other TCUs to apply as they try to demonstrate the impact of their efforts.

Initial dissemination efforts will include presentations and publications.

Presentations

The first presentation will be at the TCU-ROI Convening in Denver, Colorado on July 9, 2019. The presentation will be made by Dr. Jennifer Janecek-Hartman, Executive Director of the North Dakota Association of Tribal Colleges; Dr. Damien Sanchez, Senior Consultant with ROI Institute, Inc.; and Dr. Patti Phillips, CEO and Co-Founder, ROI Institute, Inc.

A proposal has been submitted for Dr. Janecek-Hartman and Dr. Sanchez to present at the September 4, 2019, United Tribes Technical College 50th Annual International Pow Wow in Bismarck, North Dakota.

Consideration should also be given to present at the annual conferences of the Association for Talent Development, the International Society for Performance Improvement, and the Academy of Human Resources Development.

Publications

An initial publication to consider is *Tribal College: Journal of American Indian Higher Education*. This journal is appropriate for this type of work. *Native Business* may also be an option as the alignment between business and the TCU is strong, according to one talking circle member. A third journal, *The American Indian Quarterly*, is a peer-reviewed, interdisciplinary journal.

In addition to publishing the research findings, portions of the findings can be disseminated as articles. For example, users of the ROI Methodology® would be interested in learning about talking circles. Publishers who focus on diversity and inclusion would be interested in the influence that attending TCU has on tolerance.

This research is rich with content. Each type of data and each technique employed represents a focal point for an article, presentation, or even a marketing effort. Prior to developing a dissemination strategy, it will be important to get a clear focus on the payoff opportunity and

the specific measures that should improve by investing in developing presentations and publications. Once the objectives are clear, dissemination will align with the needs of the TCUs and can be designed to have an impact on Indian Country.

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Appendices

Appendix A. Definitions, Terms, and Acronyms

Degree Name Acronyms

ADA – Administrative Assistant
AS – Addiction Studies
BM – Business Administration
BMC – Building Maintenance Certificate
BU – Business Admin/Management
CDA – Child Development Associate Credential
CDL – Commercial Driver's License Training Program
CIS – Computer Information Systems
CNC – Cisco Network Communication Administration
CT – Construction Technology
CT18 – Construction Technology 18 Month
EC – Early Childhood Education
ECC – Early Childhood Development
EDU – Elementary Education
ELEBS – Elementary Education BS
EMT – Emergency Medical Technician
ENTR – Entrepreneurship
ES – Environmental Science
ESAAS – Environmental Science AAS
ESBS – Environmental Science BS
ET – Energy Technology
GAT – Graphic Arts Technology
HS – Human Services
IMS – Information Management Specialist
LA – Liberal Arts
MA – Mathematics
MCN – Microsoft Certified Network Administrator
ME – Pre–Engineering
MS – Medical Secretary
NAS – Native American Studies
NASBA – Native American Studies BA
ND – Non-Degree
NU – Practical Nursing
NURS – Nursing
PA – Public-Tribal Administration
PLM – Plumbing
PN – Practical Nursing
PRENG – Pre-Engineering
PRENU – Pre-Nursing
PTAC – Processing Technology
SC – Science
WELD – Welding

Division Acronyms

ACCT – Accounting
AG – Agriculture
AH – Arts and Humanities
ARSC – Animal & Range Science
ART – Art
ASMT – Assessment
BIO – Biology
BADM – Business Administration
BOTE – Business, Office, Technical Education
CHEM – Chemistry
CDL – Commercial Driver's License Training Program
COMM – Communication
CIS – Computer Information Systems
CSCI – Computer Science
CT – Construction Technology
CJ – Criminal Justice
ECON – Economics
EC – Education: Early Childhood Education
ED – Education
EDU – Education: Elementary Education/Middle School Endorsement
ENG – English
GEOG – Geography
GEOL – Geology
GAT – Graphic Arts Technology

HPER – Health, Physical Education, and Recreation
HIST – History
HORT – Horticulture
HUM – Humanities
IS – Information Systems
MA – Mathematics
NA – Native American studies
NAS – Native American Studies
NURS – Nursing
PHY – Physics
POLS – Political Science
CE, ENGR, EE, ME – Pre–Engineering
PSY – Psychology
SOC – Sociology
SS – Social Sciences
SWK – Social Work
SOIL – Soil Science
SET – Sustainable Energy Technology
VT – Vocational Technology
WELD – Welding

Appendix B. Nueta Hidatsa Sahnish College Course Evaluation Form

Nueta Hidatsa Sahnish College - Student Course Evaluation

MARKING INSTRUCTIONS
Correct Mark ○ ● ○
Incorrect Marks ⊘ ⊗ ◒

Course Title _____ Term _____

Instructor _____ Course/Section _____

R16-2061

1. Which session is this course in? ○ First Five ○ Second Five ○ Third Five ○ First Eight ○ Second Eight ○ 15 Week ○ Other

2. Which session would you prefer this class to be in? ○ Five Weeks ○ Ten weeks ○ Fifteen weeks

3. Class Standing: ○ Freshman ○ Sophomore ○ Junior ○ Senior ○ Graduate

4. Your Site Location is: ○ Mandaree ○ New Town ○ Twin Buttes ○ White Shield ○ Parshall

5. Your Gender is: ○ Male ○ Female

Student Opinion of the Course: Each of the items below deals with characteristics of the course that are important to Student Learning. Indicate the rating of the course by filling in the bubbles or the appropriate point on the scale. Omit items that do not apply to this course.

6. Was the following culture of the Mandan, Hidatsa & Arikara integrated into the course?

a. History	○ Yes	○ No
b. Language	○ Yes	○ No
c. Social	○ Yes	○ No
d. Spirituality	○ Yes	○ No
e. Identity	○ Yes	○ No

7. Was technology integrated into the course?

a. Internet	○ Yes	○ No
b. MS Word	○ Yes	○ No
c. MS Excel	○ Yes	○ No
d. PowerPoint	○ Yes	○ No
e. Outlook	○ Yes	○ No

8. Which NHSC library resources did you access for use in this course?

a. Full Text Databases	○ Yes	○ No
b. NHSC Online Catalog	○ Yes	○ No
c. Checkout Material	○ Yes	○ No
d. Electronic Book	○ Yes	○ No
e. Virtual AIHEC Library	○ Yes	○ No

College Survey Services, Inc. 800 - 755 - 9065

Continued on reverse side of this form ➡

Statements	Strongly Disagree (1)	Disagree (2)	Somewhat Agree or Neutral (3)	Agree (4)	Strongly Agree (5)
9. The instructor incorporated teaching strategies that helped me learn.	○	○	○	○	○
10. Outcomes (objectives) of the course were clearly explained.	○	○	○	○	○
11. Sufficient assignments, projects and tests were given to render a fair grade.	○	○	○	○	○
12. Textbook(s) and other reading materials contributed to my learning in this course.	○	○	○	○	○
13. As a result of being in this course, I learned a great deal.	○	○	○	○	○
14. Considering all of the above, how would you rate this course?	○ Poor	○ Below Average	○ Average	○ Above Average	○ Excellent

15. What aspects of the course helped you learn and should be continued in the future?

16. What would you suggest be changed when the course is taught again?

17. Please use this space to identify what you perceive as the real strengths and weaknesses of:

a. The course:

b. The instructor:

18. Do you have any comments or recommendations regarding block scheduling?

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NHSC/10-15_AI

Appendix C. Talking Circle Protocol

Themes, Key Questions, Collection and Sources for Data Collection for the TCU-ROI Model (Adapted from Phillips, 2005).

Demonstrating Value:
Tribal Colleges & Universities ROI Study

Talking Circle Notes

Date: _____

College: _____

Number in Attendance: _____

Facilitators: _____

Objective

The purpose of the Talking Circles is to hear graduates describe their Tribal College experience and the impact it has had on traditional and contemporary American Indian cultural values and Indian Country at large. *The tables below serve as a guide (Janecek-Hartman, 2007)*

Themes, Key Questions, Collection and Sources for Data Collection for the TCU-ROI Model (Adapted from Phillips, 2005)

Category	Key Questions	Data Collection	Data Sources
Counts	How many participants enter or utilize the program? How many participants are served or complete the program? Success rates?	Sign in sheets, registration, etc.	Program Leaders
Student Satisfaction	What relevance does the program have to job or mission? What is the importance of the program to job or mission? What new information was provided? Do participants intend to use the new information? Do participants recommend program to others? What are recommendations for program improvement? What opportunities for collegial discussions exist?	Rating scale on a survey	Participants
Learning	Have participants acquired new skill or knowledge? Do they know how to apply what they have learned? What is the confidence level in their ability to apply what they have learned?	Test Simulation Peer assessment Self-assessment	Results from assessments Surveys
Experiential Learning and Internships	How effective are participants at applying what they have learned? How frequently are participants applying what they have learned? If they are applying what they have learned, what is supporting them? If not, why not and what are the barriers?	Supervisor observations Self-reporting	Questionnaires Action plans
Traditional and Contemporary American Indian Cultural Values	How long does the program contribute to lifelong learning? How does the program promote the participant to give back to the community? How does the program promote the participants to take calculated risks? How does the program contribute to the participants' spiritual growth? How does the program contribute to the participant's understanding of what it means to be American Indian? How does the program promote a sense of volunteerism?	Volunteer hour logs Online discussions Reflection paper Oral debate Editorials	Participant or volunteer organization Student rubric

Category	Key Questions	Data Collection	Data Sources
Traditional and Contemporary American Indian Cultural Values	How does the program promote a value of humility? How does the program promote respect for connectedness to the land? How does the program contribute to the development of an attitude of respect for diversity? How does the program contribute to the understanding of Tribal Sovereignty? How does the program help participants build collegial relationships? How does the program engage participants in leadership activities? How does the program promote the development of traditional tribal and contemporary leadership attributes? How does the program support the concept of participant wellness?		
Impact on Indian County	To what extent did the program contribute to the individual's success? To what extent did the program contribute to the organization's success? To what extent did the program contribute to the community's success? To what extent did the application improve the measures the program was intending to improve? How did the program affect output (i.e. quality, time, cost, customer satisfaction, employee satisfaction) and other measures? How do you know it was the program that improved these measures? How does the program enhance the quality of life for participants?	Employer survey Action plan Employer observations	Employer action plan Participant or expert estimations
ROI	Do the monetary benefits of the program outweigh the costs of the programs?	Questionnaire Action plan Performance record	Organization records Participants Program staff
Intangibles	Benefits that the institution has chosen not to attach a dollar value.	Questionnaire Action plan Performance record	Organization records Participants Program Staff

Topic/Questions: Tell us about your experience going to school at _____. (Perception and Learnings)

Key Points	**Notes**
Summary	

Topic/Questions: How have you applied what you learned during your college experience? (Application)

Key Point	**Notes**
Summary	

Topic/Questions: What have you accomplished since graduating? (Application and Impact)

Key Points	Notes
Summary	

Topic/Questions: What impact has the application of knowledge, skill, and information gained by attending tribal college had on your, your organization, and your community? (Impact)

Key Points	Notes
Summary	

Topic/Questions: How does going to Tribal College reflect and influence American Indian values and culture? Indian country at large?

Key Points	**Notes**
Summary	