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Reframing Return on Investments for Tribal Colleges and Universities: Aligning Analyses with Tribal Priorities and Educational Missions

Stephanie Carroll Rainie Native Nations Institute

Ginger C. Stull University of Pennsylvania

Chauncey Hotel & Conference Center, 1 Chauncey Road, Princeton, NJ 08541



Pennese

Center for MSIs

Executive Summary

Tribal Colleges and Universities (TCUs) serve dual missions: educating students and addressing American Indian tribal priorities. Due to this unique status, mainstream Return on Investments (ROI) metrics fail to fully align with TCU missions. This report discusses the history of ROI for educational institutions, the ROI literature for TCUs, complications of applying ROI to TCUs, data restrictions that prohibit TCU outcomes analyses, and reframes the ROI conversation for TCUs. It concludes with suggestions for alternative outcomes evaluation methods, indicates possible ways to address data challenges, and provides recommendations for future actions. Key findings are summarized below.

Characteristics of TCUs that make assessing their ROI unique

- The U.S. has a government-to-government relationship with federally recognized tribes based on the U.S. Constitution, executive orders, laws, and treaties between the federal government and various tribes. As a result, the U.S. has a legal obligation to provide funding for and education to citizens of federally recognized American Indian tribes (Seaton & Bennett, 2008).
- TCUs are the most under-resourced institutions of higher education in the U.S. They have lower per-student revenues than most mainstream institutions and most comparable rural community colleges (O'Laughlin, 2003).
- Thirty-four of the 37 TCUs obtained accreditation from mainstream entities that assess student learning via mainstream outcomes (Higher Learning Commission, 2013). Therefore, assessment methods, data, and measurements often do not resonate with tribal priorities, culture, or Indigenous ways of knowing (American Indian Higher Education Consortium, 2010). TCU leaders continue to educate accrediting bodies on tribally and culturally appropriate learning outcomes (Higher Learning Commission, 2013).

Complications of assessing ROI for TCUs

- Educational benefits such as critical thinking skills, improved self-esteem, leadership, community engagement, and life satisfaction are not measured by current data collection practices (Soland, Hamilton, & Stecher, 2013). TCUs prioritize many difficult-to-quantify gains, like community engagement, language revitalization, leadership, and cultural appreciation (Institute for Higher Education Policy, 2007).
- External variables and inequalities influence ROI calculations. For example, gender, race, and parental earnings are all strongly correlated to differences in income (Baum, Ma, & Payea, 2013). Therefore, institutions that primarily serve minorities, women, and low-income students, as TCUs do, will demonstrate a lower individual ROI than institutions that serve predominantly white, male, affluent students—*regardless of institutional performance*—as a result of longstanding socioeconomic inequities.
- Focusing on purely economic ROI may not be in the best interest of society and individuals. Students may choose to forego a lucrative career in favor of a lower-paying but more rewarding, service-oriented career. TCUs aim to cultivate students with a deep commitment to their communities and community service and are also located in predominantly low-income areas.

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The Data Challenge for Assessing Outcomes for TCUs

Tribes and TCUs need data and evaluation for two purposes: (1) internally to evaluate programs, set policy, decide where funds and efforts go, identify areas of need and (2) externally to receive outside funding, influence federal and other policies in their favor, tell their own story to others, meet funder needs while staying true to tribal interests. Unfortunately, there are significant barriers to utilizing data in such ways.

- Assessing TCU outcomes, including ROI, requires data: on students and others served, enrollment, student success, degree attainment, graduates, etc., and local population data, such as socioeconomic and health. Current data, however, are often of poor quality and do not resonate with tribal and TCU priorities.
- Most TCUs do not have the capacity or the time to collect a broad variety of data. Instead, they expend effort on data to fulfill grant and accrediting body requirements, in essence collecting and submitting data that meets other entities' needs and interests.
- Tribes find themselves in a similar situation with population data. Others have defined and collected for their own purposes the demographic, socioeconomic, and health information available to tribes. These data are not valid or reliable; generally do not align with tribal self-conceptions, needs, and priorities; and do not allow for comparisons over time, across geographies, or among tribes (Bruhn, 2014; Cross et al., 2004; DeWeaver, 2010; DeWeaver, 2013; Freemantle et al., 2015, Westat, 2007).

Moving Forward with Assessing TCU Outcomes

The government-to-government relationship between tribes and the U.S. and the dual mission of TCUs necessitate a shift in the ROI discussion for TCUs.

- Tribal evaluation frameworks such as the American Indian Measures of Success (AIMS), AIMS Key Indicator System (AKIS) and the Indigenous Evaluation Framework (IEF) provide a solid foundation for the creation of tribally driven, nation-based and nationdefined ROI measurements that reflect TCU missions.
- Instead of a focus on the ROI for federal funds invested in TCUs as measured by mainstream ROI assessments, the conversation should center on aligning TCU outcome methods and measurements with TCU missions.
- TCU missions to educate students *and* address tribal priorities require both adjustments to measures of individual and social outcomes as well as innovations in assessing outcomes associated with tribal priorities.
- Some Indigenous communities and TCUs may have very different ideas of what constitutes positive educational outcomes, including measures of tribal culture, language use, sovereignty, etc. Should interests be limited to closing gaps in educational and socioeconomic indicators, or should more attention be paid to Indigenous aspirations and conceptions of TCU missions and to outcomes that resonate with those?

Tribally driven, community-based and nation-defined outcomes methods and measurements that reflect TCU missions are a critical element of moving toward assessing TCUs' success, their positive impact on communities, and their value in the larger scope of educating tribal and U.S. citizens.

Conclusion

The current ROI discussion for educational institutions may not be a valid method of evaluating educational outcomes and socioeconomic impacts. It is even less legitimate for TCUs. Instead, TCU outcomes evaluation methods and measurements should match up with the values and missions of TCUs and tribes. TCUs and tribes will need to carefully consider:

- What mainstream student outcomes, socioeconomic indicators, and other data points reflect their missions?
- What else do tribes need and want to know about its TCUs' outcomes, impacts, and operations?

TCUs and tribal conceptions of TCU outcomes and impacts may be markedly different from federal or other organizations' ideas.

However, even if TCUs transcend the ROI discussion to evaluate Indigenous-defined student and other outcomes, poor data for TCUs and tribal communities in the U.S today hinders the assessment of TCUs' dual mission of educating students and addressing tribal priorities. Tribes and TCUs should lead the movement to improve data, both locally and nationally. The federal government and other funders must support this data agenda by increasing funding of TCUs, establishing tribal and TCU data systems, and promoting collaborative work to improve federal and other data. These and other investments in TCUs are critical to changing the outcomes that matter most to tribes, TCUs, and ultimately outside funders.

Finally, community-based, nation-driven solutions to TCU curriculums and evaluation serve to increase sovereignty, revitalize culture, and, ultimately, create programs and offerings that meet the dual missions of TCUs.

Reframing Return on Investments for Tribal Colleges and Universities: Aligning Analyses with Tribal Priorities and Educational Missions

Since the 1950s, education is increasingly evaluated in economic terms. Students and societies wonder if the time, money and effort invested in educational enterprises will produce a return significant enough to merit their investment. Determining return on investment (ROI) for education has traditionally been calculated with easy to measure outcomes, such as salaries. Focusing solely on the economic gains that education produces dismisses other important outcomes that contribute to social and individual well being. ROI conversations rise in complexity when applied to minority serving institutions (MSIs), especially tribal colleges and universities (TCUs). TCUs are expected to provide meaningful social returns to students and tribes, but are often evaluated by external agencies through economic measures that do not resonate with tribal priorities.

TCUs, usually tribally controlled, two- to four-year higher education institutions located on reservations, serve Native and non-Native students in predominantly rural areas. The relatively short history of TCUs began with the founding of Diné College by the Navajo Nation in 1968. Today there are 37 TCUs in 14 states with over 30,000 enrolled students. Thirty-four of these TCUS are accredited by mainstream accrediting bodies (American Indian College Fund [AICF], 2014). TCUs, often included with MSIs, differ distinctly from other institutions that serve minority ethnic groups because tribes are sovereign polities with government-togovernment relationships with the U.S. and Native peoples have collective rights in addition to their individual rights (IHEP, 2007; UN General Assembly, 2007). TCUs serve a dual mission: the mainstream mission of educating students as well as addressing tribal priorities (IHEP, 2007). Due to this unique status compared to other publicly funded higher education institutions, mainstream ROI metrics fail to fully align with TCU missions.

This paper discusses the history of ROI for educational institutions, the ROI literature for TCUs, complications of applying ROI to TCUs, severe data restrictions that prohibit outcomes analyses of TCUs, and how to reframe the ROI conversation for TCUs. It concludes with suggestions for alternative outcomes evaluation methods, indicates possible ways to address data challenges, and provides recommendations for future actions.

Tribal Colleges and Universities

TCUs emerged in the 1960s as part of the "Self-Determination" era (Carney, 1999; Oppelt, 1990). The Navajo Nation established the first tribal higher education institution, Navajo Community College (now Diné College) in 1968 (Carney, 1999; Diné College, 2015; Oppelt, 1990). This began a proliferation of tribally controlled institutions, each representative of the culture of the founding tribe and aimed at meeting the needs of the community (Oppelt, 1990).

TCUs differ from other institutions of higher education because they operate to fulfill a dual mission. Comparable to other educational institutions, one TCU mission is to educate students to prepare them to enter the workforce or pursue other educational opportunities. Unique to TCUs, however, is their mission to address tribal priorities, such as sustaining and conveying tribal culture; growing productive tribal citizens though courses and student support services tailored to tribal community and economic development goals; and meeting other particular tribal needs (IHEP, 2007). To enact their missions, TCUs offer a wide variety of degrees and skills, often tailored specifically to tribal and community needs.

The History of Indigenous Education in the U.S.

The history of Indigenous education in the U.S., federal Indian policy, and socioeconomic conditions in Native communities intimately relate to and provide context for TCUs. European settlers and colonizers first utilized education as a method to assimilate Indigenous peoples in the U.S., a method that was later repeated by federal Indian policies (Boyer, 1997). Schools employed Western curriculums and ignored Indigenous ways of knowing, often banning Native languages and practices. Boarding schools further eroded tribal and social connections by removing children from tribal communities (Boyer, 1997). During the termination era, the federal government forcibly moved Natives to cities, eliminating many reservations, placing children in mainstream education, as well as moving many formerly federally administered reservation schools under state control. These actions served to assimilate Natives but also resulted in severed ties with tribes and traditions as well as negative impacts on socioeconomic status (Boyer, 1997; IHEP, 2007). In the 1960s, selfdetermination emerged offering tribes the opportunity to control programs formerly administered by the federal government, including education (Boyer 1997). Tribal leaders used this as another opportunity to create education by and for Native peoples (IHEP, 2007; Oppelt, 1990).

Fulfilling A Dual Mission

Generally, TCUs have been recognized as contributing to the growth and preservation of tribal cultures while at the same time educating tribal citizens and community members (IHEP, 2007). The skills TCUs help develop bolster tribal sovereignty and self-determination through leadership and economic development, increasing traditional and mainstream knowledge, and engaging the nation-rebuilding goals of Native nations today (Grob, 2007; IHEP, 2007).

To address TCU dual missions that include meeting mainstream educational goals as well as tribal priorities, TCUs offer four master's degree programs, 46 bachelor's degree programs, 193 associate's degree programs and 119 certificate programs in a variety of fields (AICF, 2014b). Courses and degree programs range from accounting to small business entrepreneurship to computer information technology to Native languages, culture, and history (American Indian Higher Education Consortium [AIHEC], 2012a). In 2011, 28 TCUs offered American Indian Studies degree programs and enrollment in these programs doubled between 2003 and 2010 (AIHEC, 2012b). Through these programs and courses, students can learn vocational skills needed to improve tribal infrastructure, health professions needed to improve community well-being, and cultural courses to maintain tribal traditions. These skills and knowledge promote rebuilding Native nations and strengthening tribal sovereignty (IHEP, 2007). TCUs have also collaborated with regional mainstream institutions through distance education and articulation agreements, opening up student access to additional courses and advanced degrees (Brayboy et. al., 2012).

In addition to the 30,000 degree-seeking students they serve, it is estimated that TCUs reach an additional 47,000 individuals each year through community-based education and support programs (AIHEC, 2012b). Programs such as Upward Bound, language and reading instruction, computer literacy courses, health and wellness classes, leadership development

programs, and entrepreneurship courses, to name a few, all contribute to addressing individual tribal priorities and needs (AIHEC, 2012b). Participation in these programs grew by 84 percent between 2003 and 2010 (AIHEC, 2012b).

Thirty-four of the 37 TCUs obtain mainstream accreditation from regional accrediting organizations like the Higher Learning Commission (HLC, 2013). These accreditation entities assess student learning via mainstream outcomes, such as graduation rates and post-graduation earnings. Therefore, assessment methods, data, and measurements often do not resonate with tribal priorities, culture, or Indigenous ways of knowing. TCU leaders continue to educate accrediting bodies on tribally and culturally appropriate learning outcomes (HLC, 2013). As a result, accrediting agencies such as the Higher Learning Commission have made efforts to assess student outcomes from a more culturally aware position (AIHEC, 2010; HLC, 2013; Karlberg, 2007). Although these efforts have been made, many in the TCU community are calling for a tribally controlled accrediting body able to assess student outcomes from Indigenous perspectives. Until this happens, mainstream methods of accreditation will fail to provide appropriate data and analyses to adequately assess student and other outcomes aligned with tribal, funder, and federal priorities.

The next section introduces mainstream concepts of ROI and discusses literature on applying this concept to TCUs.

A National Focus on Return On Investment

Return on investment began as a business metric to measure the return of money invested in an economic enterprise and primarily assesses if an investment is lucrative enough to pursue. In the late 1950s, the concept of ROI from a human capital perspective was transposed onto education (Psacharopoulos & Patrinos, 2004). The expansion of higher education in the U.S. during the Post-War Golden Era brought a dramatic increase of public funds devoted to universities. And, as public investment grew, public expectations deepened (Millett, 1981). Society expected universities to meet multiple public needs, such as filling the expanding demand for educated talent in the American labor market, encouraging economic growth within the states, and advancing social mobility (Millett, 1981). In general there were public expectations that higher education institutions would produce a return on the public's investment. These growing public expectations of ROI justified the growing role of the federal and state governments in setting higher education policy and influencing the behavior of institutions through funding formulas, grants, and state and federal legislation (Millett, 1981).

Although all public institutions continue to receive some public funding, the burden of the cost of higher education has shifted from the public to the individual. Since the 1980s, perstudent state and federal investment has gone down while private investment, in the form of tuition and fees, has gone up (Finney, 2014). Tuition has risen 632% in the last thirty years (Finney, 2014), and with this increase in cost, students expect more return on their investment in the form of increased earnings and a lower likelihood of unemployment. From these two phenomena, the ROI of education is often conceptualized as either a social return or a private return.

Definitions of Return on Investment

Mainstream definitions of ROI often discuss both private returns and social returns in economic measures (Baum, Ma, & Payea, 2013; IHEP, 2005; IHEP, 2007; Hout, 2012). The private ROI of education often comprises increases in salary and earnings and decreases in

periods of unemployment (Baum, Ma, & Payea, 2013; Hout, 2012). Social ROIs of education include increases in household income, decreased reliance on public assistance, improved health outcomes, and decreases in crime (Baum, Ma, & Payea, 2013; IHEP, 2005; Hout, 2012). Broader definitions of ROI for higher education focus on human development, including private and social returns such as emotional and physical well-being, civic and community engagement, and workplace satisfaction (Gallup, 2014; IHEP, 2005; IHEP, 2007).

Return on Investments for Tribal Colleges and Universities

From 2000-2007, three entities issued reports on ROI for TCUs (AIHEC, 2000; IHEP, 2007; Janecek Hartman, 2007). In general, these entities examined ROI for TCUs using mainstream definitions. However, these reports also concluded that to appropriately gauge ROI for TCUs, novel methods and measurements that align with tribal and TCU priorities must be employed.

In 2000, the American Indian Higher Education Consortium (AIHEC) issued a report measuring the contributions of TCUs to economic growth on reservations (AIHEC, 2000). The report, "Tribal College Contributions to Local Economic Development," declared a new, tribally centered definition of economic development that focuses on human development as much as material development. The goal of economic development on tribal lands extends beyond wealth accumulation to community development and social renewal. The report demonstrated the direct contributions that TCUs provide to economic growth through (1) workforce and skills development; (2) showing the direct connection between academic programs and the needs of local employers and industries; (3) small business and entrepreneurship development, by offering small business support centers; (4) agriculture and land development. Most strikingly, the study noted the severe funding inequities that TCUs face compared to other land-grant institutions, stating that "the 30 land-grant Tribal Colleges receive approximately the same funding through land-grant-related appropriations that one state land-grant university does" (p. 25).

In 2007, the Institute for Higher Education Policy (IHEP) collaborated with AIHEC and the American Indian College Fund (AICF) to release a report, "The Path of Many Journeys: The Benefits of Higher Education for Native People and Communities," (IHEP, 2007). Looking beyond the typical private and public economic and social returns, the authors examined returns that reflected the historical, economic, and cultural realities of American Indian reservation communities. The resulting matrix, in Table 1 below, offered a more nuanced understanding of the social and economic benefits of higher education for tribal communities specific to private, public, and reservation domains. The private and public benefits replicated those seen in mainstream ROI analyses. The reservation benefits spoke to internal returns and concerns specific to Native nations and the opportunities and challenges they face as governing entities. While community colleges and land-grant institutions may commit to serving similar community interests, such as workforce development and employment, tribes as sovereign nations endeavor to pursue greater community development goals, including sustaining and bolstering sovereignty and culture.

	Private	Public	Particular to Reservations
Economic	Higher Salaries and	 Increased Tax 	Workforce and Skills
	Benefits	Revenues	Development
	 Employment 	• Greater	Greater Opportunities
	 Higher Savings 	Productivity	for Leadership and Small
	Levels	 Increased 	Businesses
	 Improved Working 	Consumption	• Economic Growth and
	Conditions	 Increased 	Development
	•	Workforce	• Employment for
	Personal/Professional	Flexibility	Graduates on
	Mobility	 Decreased 	Reservations
		Reliance on	Agriculture and Land
		Government	Development
		Financial Support	
Social	 Improved 	 Reduced Crime 	 Mitigation of Social
	Health/Life	Rates	Problems
	Expectancy	 Increased 	Centers for Preservation
	 Improved Quality 	Charitable	of Culture, Language and
	of Life for Offspring	Giving/Community	Traditions
	Better Consumer	Service	Provision of Further
	Decision Making	 Increased Quality 	Educational Opportunities
	 Increased Personal 	of Civic Life	Technology Transfer
	Status	 Social Cohesion 	Community Programs
	 More Hobbies and 	and Appreciation of	
	Leisure Activities	Diversity	
		 Improved Ability 	
		to Adapt and Use	
		Technology	

Table 1: Benefits resulting from higher education in general and from TCUs on reservations

Source: Adapted from IHEP 2007.

In addition to the above two reports, leaders of the United Tribes Technical College (UTTC) have developed a culturally appropriate ROI model for TCUs (Janecek Hartman, 2007). UTTC used a participatory research process to elicit how UTTC stakeholders defined culturally relevant ROI and developed a conceptual model intended to both be viable for other TCUs to utilize and be inclusive of measures credible to mainstream entities, such as the federal government, grantors, and accrediting bodies. UTTC project participants felt the resulting culturally relevant CREATION model contributed to the TCU's goal of tribal self-determination by infusing Indigenous and TCU elements into the ROI framework. The model measured ROI at the program level, but some elements could transfer to determine ROI at the institution level. For example, one measure of ROI was the dissemination of traditional and contemporary American Indian cultural values. Key questions to determine this return are: 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 understanding of tribal sovereignty? This line of questioning begins to unveil the more nuanced social returns that tribal leaders expect to receive

from TCUs. Participants noted that lack of data limited TCUs' ability to assess ROI and identified possible data sources and opportunities to collect more data on ROI, such as end-of-term learning evaluations that assess traditional and contemporary American Indian knowledge, post-internship and post-graduation employment surveys, and financial data demonstrating institutional commitment to and impact on Indian Country (Janecek Hartman, 2007).

While these three reports set the stage for expanding measurements and methods for assessing the ROI for TCUs, little has been published since, in part because very little data exist and what data do exist are of poor quality, cannot be compared across sites, and do not align with tribal and TCU conceptions of TCU outcomes.

Innovations in Assessing TCU Student and Program Outcomes

There have been extensive tribally driven efforts to create culturally relevant assessments for TCU learning and program outcomes (AIHEC, 2009). In 2004, AIHEC developed the American Indian Measures of Success (AIMS) and AIMS Key Indicator System (AKIS) in an attempt to "better evaluate the transformative nature of TCUs – and measure their impact and effectiveness in a way most relevant to their communities, their Nations and their funders" (AIHEC, 2012b, p. 1). These data collection methods consist of quantitative and qualitative measures. The quantitative data points include IPEDS measures as well as measures specific to TCUs such as community participation numbers and developmental education numbers. The qualitative section reports on stories of success and challenges, best practices, and extracurricular, community and cultural activities. AIMS and AKIS measure personal knowledge gains and program efficacy, which is slightly different from ROI's attempt to measure private and social gains. Yet the AIHEC frameworks have helped build data collection capacity among tribes, and their commitment to tribal traditions and culture should be replicated in ROI assessment.

AIHEC also developed the Indigenous Evaluation Framework (IEF) to guide TCUs through evaluating their programs and students' learning (AIHEC, 2009). IEF acknowledges that tribes have ways of assessing merit and worth based on their own traditional values and cultural expressions, and that flexible and responsive evaluation methods will best serve tribal goals for self-determination and sovereignty (AIHEC, 2009). Supporting IEF efforts will strengthen TCU learning outcomes, which in turn may produce a greater ROI.

The AIMS, AKIS, and IEF initiatives provide a solid foundation for the creation of tribally driven, nation-based and nation-defined outcomes methods and measurements that reflect TCU missions. These initiatives are a critical element of moving toward assessing TCUs success, their positive impact on communities, and their value in the larger scope of educating tribal/U.S. citizens.

Critiques of Return on Investment

Countries use ROI metrics to determine if investments in education impact their macroeconomic goals such as increasing GDP and employment rates (Psacharopoulos & Patrinos, 2004). More recently, ROI metrics have been applied to individuals to determine if a college education will lead to earnings increases that outweigh the initial cost of college (Baum, Ma, & Payea, 2013). While this information can be useful to policy makers and prospective college students, ROI analysis falls short in assessing the true value of education in many ways, as it has difficulty quantifying educational benefits, is unable to account for other external factors

affecting educational outcomes, and comprises a solely economic outcomes focus that is insufficient to assessing the full breadth of educational impacts.

Many benefits of education are difficult to quantify. Benefits like critical thinking skills, improved self-esteem, leadership, community engagement, and life satisfaction are not measured under current data collection practices (Soland, Hamilton, & Stecher, 2013). Research on ROI tends to focus on easily quantifiable data like unemployment rates and income. TCUs prioritize many difficult-to-quantify gains, like community engagement, language revitalization, leadership, and cultural appreciation. Focusing too narrowly on the ROI of an institution may incentivize institutions to devote less energy to the difficult-to-quantify but equally important gains.

In addition, many external variables and inequalities influence ROI calculations. For example, gender, race, and parental earnings are all strongly correlated to differences in income (Baum, Ma, & Payea, 2013; Hout, 2012). Therefore, institutions that primarily serve minorities, women, and low-income students, as TCUs do, tend to demonstrate a lower individual ROI than institutions that serve predominately white, male, affluent students—*regardless of institutional performance*—as a result of longstanding socioeconomic inequities. Until these social factors are mitigated, institutions should not be held responsible for the future earnings and other related outcomes of their graduates, especially institutions that serve non-traditional students.

Finally, focusing on purely economic ROI may not be in the best interest of society and individuals. Students may receive a valuable educational experience but forego a lucrative career in favor of a lower-paying but more rewarding, service-oriented career. For example, a medical student with a deep commitment to working in underserved, low-income communities will make less than a medical student who chooses to start a practice in an affluent area. This argument is especially relevant to TCUs. TCUs aim to cultivate students with a deep commitment to their communities and community service and are also located in predominately low-income areas (IHEP, 2007). A TCU that fulfills its mission of cultivating students with a commitment to their communities would likely demonstrate a lower ROI than a TCU that does not instill this value and produces graduates that leave their communities for more lucrative positions. For this reason, focusing on individual economic ROI may be detrimental to the mission of TCUs and to the economic development of reservations.

The limitations of focusing on purely economic indicators of ROI demonstrate how critical it is for TCUs to adhere to a broad definition of ROI that embraces difficult-to-quantify social gains and their unique institutional missions. The next section will address additional data challenges to determining ROI for TCUs and draw conclusions for moving forward on developing ROI metrics that are meaningful to TCUs.

The Data Challenges for Assessing Outcomes for Tribal Colleges and Universities

Tribes and TCUs need data and evaluation for two purposes: (1) internal, to evaluate programs, set policy, decide where funds and efforts go, identify areas of need, etc. and (2) external, to receive outside funding, influence federal and other policies in their favor, tell their own story to others, meet funding needs while staying true to tribal interests, etc.. Unfortunately, there are significant barriers to utilizing data in such ways.

Assessing TCU outcomes, including ROI, requires data on students and others served, e.g., enrollment, student success, degree attainment, graduates, and local population data, e.g., socioeconomic and health. Often, these data are of poor quality and do not resonate with tribal and TCU priorities.

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Most TCUs do not have the capacity or the time to collect a broad variety of data. Instead, they expend effort on data to fulfill grant and accrediting body requirements, in essence collecting and submitting data that meets other entities' needs and interests, including timeframes and types of data collected. Chronic underfunding limits the capacity of TCUs to collect a broad variety of data. Although the U.S. has a legal obligation to provide education to citizens of federally recognized American Indian tribes, in FY 2013, Congress appropriated only \$5,665 per Native American student, per year, with no funding for non-Native students who account for about 20% of TCU enrollment (His Horse is Thunder, 2013). When adjusted for inflation, TCU funding has decreased over 25 percent since 1981 (IHEP, 2007). TCUs do not receive state higher education appropriations, and most tribes do not levy taxes because their populations have such high poverty rates (Fann, 2002; HLC, 2013). TCUs operate in low-income areas and serve communities deeply entrenched in poverty; therefore, they keep tuition low to keep higher education accessible to the community (AIHEC, 2000; HLC, 2013; IHEP, 2007). For all these reasons, TCUs have lower per-student revenues than most mainstream institutions and most comparable rural community colleges (O'Laughlin, 2003). Securing an adequate and stable base-operating budget may be the most pressing challenge TCUs face and this challenge limits their capacity to collect data.

Although many accreditation bodies have begun to include more culturally appropriate data points (AIHEC, 2010; HLC, 2013), the data still do not resonate with TCU and tribal outcomes. In fact, the time cost of collecting and reporting this data may further restrict the types of curriculums and programs offered by TCUs because it requires the allocation of resources toward data generation instead of the creation and implementation of courses that meet tribal needs and priorities.

Tribes find themselves in a similar situation with population data. Others have defined and collected, for their own purposes, the socioeconomic and health information available to tribes (Bruhn, 2014; Cross, et. al., 2004; DeWeaver, 2010; DeWeaver, 2013; Freemantle, 2014; Westat, 2007). However, these available data are not valid or reliable; generally do not align with tribal self-conceptions, needs, and priorities; and do not allow for comparisons over time or across locations or tribes (Bruhn, 2014; Cross, et. al., 2004; DeWeaver, 2010; DeWeaver, 2013; Freemantle, 2014; Westat, 2007).

Existing data and TCU data reporting requirements do not match TCUs' dual missions and tribal conceptions. This limitation demonstrates a need for tribes and TCUs to develop a strategic plan to improve TCU outcomes methodology and measurement and the data necessary to demonstrate to federal and other funders the positive impact of TCUs in tribal communities. Such an initiative should be tribally driven with support and funding from federal, mainstream accreditation, and other entities. An intentional, tribally determined data collection plan for TCUs and tribes would improve TCU and tribal capacity, it would allow TCUs to better respond to tribal and community needs, and ultimately enhance tribal sovereignty and self-determination (Cross et. al., 2004; Schultz & Rainie, 2014).

Moving Forward with Assessing Tribal Colleges and Universities' Outcomes

The government-to-government relationship between tribes and the U.S. and the dual mission of TCUs necessitate a shift in the ROI discussion for TCUs. Instead of focusing on ROI for federal funds invested in TCUs as measured by mainstream ROI assessments, the conversation should center on aligning TCU outcome methods and measurements with TCU missions.

TCU missions to educate students *and* address tribal priorities require both adjustments to measures of individual and social outcomes as well as innovations in assessing outcomes associated with tribal priorities. While addressing student outcome and socioeconomic inequalities through TCU activities is important (IHEP, 2007), merely closing the gaps by reducing disparities between populations is not enough. This approach correctly notes that distinct populations—Native and mainstream students, minority and white students, etc.—have different outcomes, even when living in the same country, but it often operates without appropriate cultural awareness; its goal is to bring the educational or other health and social outcomes of the average member of some subpopulation into line with that of the dominant population. The conversation thus tends to begin and end with mainstream measurable outcomes, ignoring other motivations or needs of the subpopulation.

Additionally, different indigenous communities and TCUs may have different ideas of what constitutes positive educational outcomes, including measures of tribal culture, language use, sovereignty. In addition, many Native communities have experienced markedly different social, political, and economic structural inequalities. This raises questions about what tribes and TCUs, as well as outside funders and other supporting entities, should be looking at when measuring TCU ROI. Should interests be limited to closing gaps in educational and socioeconomic indicators, or should more attention be paid to indigenous conceptions of TCU missions and the outcomes that resonate with those?

Conclusion

The current methods of computing ROI for educational institutions may not be an entirely valid method of evaluating educational outcomes and socioeconomic impacts. It is even less legitimate for TCUs. Instead, TCU outcomes evaluation methods and measurements should match up with the values and missions of TCUs and tribes. TCUs and tribes will need to carefully consider: What mainstream student outcomes, socioeconomic indicators, and other data points reflect their missions? What else do tribes need and want to know about its TCUs' outcomes, impacts, operations? TCU and tribal conceptions of TCU outcomes and impacts may be markedly different from federal or other organizations' ideas. However, even if TCUs transcend the ROI discussion to evaluate indigenous-defined student and other outcomes, poor data for TCUs and tribal communities in the U.S today hinders the assessment of TCUs' dual mission of educating students and addressing tribal priorities. Tribes and TCUs need to work to improve data, both locally and nationally. The federal government and other funders must support this data agenda by increasing funding of TCUs, allocating monies towards establishing data infrastructure, systems, and capacities, and promoting collaborative work to improve federal and other data. Investments in TCUs are critical to changing the outcomes that matter most to tribes, TCUs, and ultimately outside funders. Finally, nation-based, tribally driven solutions to TCU curriculums and evaluation serve to increase sovereignty, revitalize culture, and, ultimately, create programs and offerings that meet the dual missions of TCUs.

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