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# Factors Influencing American Indian and Alaska Native Postsecondary Persistence: AI/AN Millennium Falcon Persistence Model

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**Abstract** The purpose of this review of literature is to identify variables (Hart 1998), relevant to AI/AN postsecondary persistence, and to examine the relationship between findings and postsecondary persistence theories at 2 and 4-year institutions. An exhaustive review with selective citation was used to locate relevant documents. Due to the limited amount of articles found for this review, I included both qualitative and quantitative articles. The factors were organized into four emerging themes including; family support, institutional support, tribal community support and academic performance. Due to the lack of research conducted using measures important to AI/AN persistence, the understanding of factors influencing AI/AN student postsecondary persistence is still somewhat limited.

**Keywords** American Indian · Alaska Native · Persistence · Retention

## Introduction

American Indian and Alaska Native (AI/AN) students have been persisting through postsecondary education at lower rates than any other ethnic group. Of the AI/AN students who enrolled in postsecondary education, 43% compared to 33% of White students did not persist in 2009 (National Center for Education Statistics [NCES] 2012). Of AI/AN students who persisted, 12% compared to 37% of Whites earned, at least, a bachelor's degree in 2010 (NCES 2012). The extreme differences in the rate of AI/ANs enrolling in and graduating from college cannot be attributed to one single problem, but is rather an accumulation of experiences that AI/AN students have at college and home. The consistent low rates of college graduates indicate the need to further investigate factors influencing student persistence.

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The purpose of this review of literature is to identify variables (Hart 1998), relevant to AI/AN postsecondary persistence, and to examine the relationship between findings and postsecondary persistence theories at 2 and 4-year institutions to create a model for AI/AN persistence. An exhaustive review with selective citation was used to locate relevant empirical literature (Cooper 1988). Due to the purpose and focus of this paper, emphasis is on the empirical and theoretical results related to AI/AN postsecondary persistence as opposed historical concentrations on AI/AN postsecondary persistence that can be found elsewhere (Adelman et al. 2013; Carney 1999; Fox et al. 2005; Patterson and Butler-Barnes 2016; Reyhner and Eder 2015; Shotton et al. 2013). The main question this paper seeks to answer is, what are factors that influence AI/AN students' postsecondary persistence.

In this writing I use the terms American Indian and Alaska Natives. However, I do include the term Native Americans when authors use the term. Other terms in the writing I use are persistence and retention. When referring to persistence, the term references the individual's ability to persist, as individuals do not retain. When I use the term retention, it is referring to the institutions ability to retain students, as institutions do not persist. Finally, in this writing I use the terms postsecondary and higher education interchangeably to refer to 2 and 4-year college institutions. In the following section are previous and current theories that scholars developed to explain factors influencing AI/AN student persistence.

## Theory

Several scholars developed and tested theoretical examinations for academic persistence with college students. In this section I included prominent theories that researchers used to examine AI/AN postsecondary persistence. Two of the most notable general persistence theories were Tinto's (1975) longitudinal model of college dropout and Bean's (1980) causal model of student attrition. I reviewed Tinto's model because researchers tested and challenged the model with AI/AN samples in postsecondary persistence. I discussed Bean's model because the model used factors, such as student beliefs, which previous literature showed to predict AI/AN persistence (Guillory 2009; Guillory and Wolverton 2008). Subsequently, I reviewed theories challenging these two dominant theories from minority perspectives, and reviewed theories related to AI/AN postsecondary persistence. Following the description of persistence theories is an examination of their strengths and limitations. The next section illustrates the similarities and differences in theories related to AI/AN postsecondary persistence.

## General Postsecondary Persistence Theories

### *Tinto's Model of College Dropout*

Tinto proposes that college departure is a longitudinal process of relationships between a student, academic, and college social systems. Tinto (1975) used Durkheim's theory of suicide (1961) that proposes people commit suicide when they are inadequately integrated into society. Additionally, Tinto used Spady's (1970) emphasis on relationships between student academic integration and future career, and went further to theorize that college is a social system where students need to be integrated. Tinto's theory suggests persistence is

dependent on the fit between academic ability, motivation and an institution's academic and social characteristics.

### *Bean's Model of Student Attrition*

Bean's (1980) model theorized behavioral intentions predict persistence behavior. Furthermore, student beliefs, attitudes, experiences and student background characteristics influenced behavioral intentions (Bean 1982, 1983, 1985). The model argued behavioral intentions originate from attitudes formed by beliefs, which subsequently influenced behavioral intentions. Some of the variables measured by the theory are student background variables such as: previous academic performance, socioeconomic status, residence, distance to home from college, and hometown size. Additionally, there were measures of institutional characteristics such as: social networks, courses, and overall institutional quality by the amount of informal contacts with faculty members, academic major, and student perception of being at a quality institution.

### **Minority College Student Persistence Theories**

Tinto and Beans' theories are somewhat relevant to AI/AN populations, but scholars critiqued these postsecondary persistence theories because they do not capture the entire experiences of AI/AN students. For example, Tierney (1992) challenged Tinto's theory that used social integration. Integration suggested all individuals must follow the correct steps to assimilate into society. Tierney (1992) contended academic and social integration were not vital to college persistence for some minority groups and follows an assimilationist mentality detrimental to AI/AN communities (Brayboy 2005). Tierney suggested that minority student persistence is most likely predicted by student home culture as opposed to college integration. The call to use alternative models to research postsecondary persistence encouraged scholars to develop alternative postsecondary persistence theories. The subsequent theories indicate the factors integral to postsecondary persistence for minority students.

Hurtado (1992) began to look at campus racial climates for further examination on the influence on persistence. Hurtado stated that racial tension on college campuses is influenced by a collection of historical and contemporary external influences, institutional structure and group relations, and institutional ideologies. The study and theory helped lay the foundation for future theory by Nora and Cabrera (1996), who used a converged model of Tinto (1975) and Bean (1980) to theorize how perceptions of prejudice and discrimination among minority and nonminority influence postsecondary persistence. Perceptions of discrimination had an indirect effect on student decision to persist, and reaffirmed the need to examine additional factors influencing college persistence. Cabrera et al. (1999) theorized perceptions of discrimination are unique to minorities, and exposure to discrimination climate primarily influences persistence decisions among minorities. Discrimination continues throughout institutes of higher education when the cultural backgrounds of minority students are unaccepted and forced to assimilate into the college culture.

Guiffrida (2006) built on these previous theories that diagnosed the need to retain home culture and establish cultural connections to influence persistence. Proposing to make changes to Tinto's model (1975), Guiffrida (2006) suggested that student motivation, impacted by cultural norms, impacts college persistence. In addition, home and institutional social systems shape and fulfill student needs that are important to college

persistence. Museus et al. (2008) further theorized that the relationship between precollege cultures and campus cultures influences minority postsecondary persistence. An important aspect of culture is identity and Hurtado et al. (2015) contended that racial identity salience influences postsecondary persistence. Hurtado et al. (2015) indicated that racial identity is important to students because of more awareness of racial differences that may shape campus climate experiences between college students. From these broader persistence theories AI/AN scholars began to theorize factors predicting persistence among AI/AN college students.

## **AI/AN Postsecondary Persistence Theories**

### *Family Education Model*

HeavyRunner and DeCelles (2002) extended the study of persistence to AI/AN students through the development of the family education model. Using personal experiences as educators and prior research, they developed the following assumptions underpinning the model: 1) Tribal College AI/AN students and their families need the college to act as an advocate for social services and health services; 2) Tribal colleges need to help develop strong support systems for their students; and, 3) Tribal colleges need to engage student family members in the college community. The model emphasizes the importance of family to improve persistence but additionally focuses on the importance of community, and culture to postsecondary education.

### *AI/AN College Student Retention Strategies*

Guillory (2009) developed the AI/AN college student retention strategies model to assist colleges and universities support of AI/AN student persistence. Based on findings from a qualitative study, the model argues AI/AN postsecondary persistence can be predicted by Guillory (2009):

(1) maintaining family and tribal community connections (2) addressing single-parent challenges; and (3) providing academic remediation through developmental education methods focusing on culturally sensitive career counseling, peer mentoring, and academic counseling. (p. 17).

Similar to the family education model, Guillory's (2009) model emphasizes family as a factor influencing persistence but argues strong family connection to the entire tribe additionally predicts persistence (Carlyle et al. 2011; Guillory and Wolverson 2008; Windchief and Joseph 2015). Finally, Guillory suggest students' desire to give back to their communities predicts postsecondary persistence.

### *AI/AN Nation Building*

Brayboy et al. (2012) developed a theory of AI/AN postsecondary persistence related nation building. Postsecondary education success is one aspect that Brayboy et al. (2012) argues is a "necessary element of successful nation building." The researchers theorized that persistence rates increase for AI/AN students when the pursuit of education is with a determination to serve a larger community as opposed to oneself, similar to Guiffreda (2006) theory related to student motivation. The notion of giving back, where AI/AN students desire to give back or serve their community is often an expectation for AI/AN



students and often a goal after graduation (Brayboy et al. 2014). In short, the theory proposed the relationship between student commitment to their community, and level to which institutional support AI/AN commitment to community, predicts persistence.

### *AI/AN Home Going*

Waterman (2012) extended notions of the family education model and using Indigenous epistemologies theorized that home-going behavior, or returning home for college support, of AI/AN students increases persistence among AI/AN students. Waterman further emphasized that home going as a strategy is integral to AI/AN cultural responsibilities to their community. The theory contradicted the notion that college students must integrate into the college social system, and reaffirms predicting persistence from cultural factors. Additionally, home going is a person anchor from which AI/AN can draw strength and motivation to persist.

### *Indigenous Claiming of Education*

Windchief and Joseph (2015) proposed that claiming higher education as Indigenous space predicts AI/AN postsecondary persistence. Specifically, the authors argue that claiming higher education through policy and curriculum, American Indian student services, and contemporary digital activism predicts persistence among Indigenous students. The theory suggested that the extent to which policies incorporate and value AI/AN history and culture, institutes build an AI/AN community through American Indian support services with cultural events such as powwows, and use of technology that allows AI/AN students to share their experiences predicts persistence for Indigenous students.

## **Strengths and Limitations**

Most prevalent about Tinto's model limitations is the focus on institutional experience without controlling for the influence of family on AI/AN persistence (Guillory and Wolverton 2008). Furthermore, he uses an assimilationist framework proven to be detrimental in AI/AN communities (Tierney 1992; Waterman and Lindley 2013). Nonetheless, some scholars found relationships among the institutional fit between student academic background, institutional commitment, and student goals (Pavel and Padilla 1993). An additional major limitation in Tinto's model is the lack of factors measuring college student support programs that influence AI/AN college persistence (Guillory 2009).

Bean's (1980) student attrition model accounted for distance from home to the college that may be helpful in predicting AI/AN student persistence (Waterman 2012). A short-coming of the model is the omission of AI/AN student experiences that influence AI/AN persistence (Saggio and Rendón 2004). Another omission is student interaction with faculty members. Faculty support is integral to AI/AN persistence (Falk and Aitken 1984; Waterman 2007). Also some research suggests AI/AN students may be more likely to attain a degree with AI/AN faculty mentors of ethnic backgrounds (Waterman 2007). Due to the omission of factors from these theories, researchers addressed the limitations to these two dominant theories.

Hurtado (1992) began to look at the campus climate and understanding the effects of discrimination and college success. The theory begins to look at how culture influences persistence among college students. Guiffrida (2006) started to look at student motivation,

which can be seen as an extension of Bean's model that looks at student beliefs. However, Guiffrida (2006) examined how culture influenced beliefs more intricately than Bean (1980). Brayboy et al. (2012) found student motivation (measured by AI/AN desire to give back) to be essential to AI/AN persistence. Hurtado et al. (2015) focused on racial identity saliency as one aspect of culture and beliefs theorized to predict persistence. Although these theories extended the notions of Tinto (1975) and Bean (1980) to fit minority students, scholars sought to continually develop these theories to fit within the AI/AN college community.

Backgrounds are generally discussed in the persistence theories, but not overly emphasized as they are in AI/AN persistence theories (HeavyRunner and DeCelles 2002). One major strength of AI/AN persistence theories was the emphasis on family as a major factor in AI/AN postsecondary persistence. Family provides cultural support (Guillory and Wolverton 2008; Waterman 2012), motivation (Brayboy et al. 2012), and students often need connection to their family for support (Waterman 2012). Windchief and Joseph (2015) theorized that if a college campus was able to create an AI/AN community on campus, AI/AN students will more likely persist. Extending the AI/AN community is extending the family to college campuses, as AI/AN student support services often help integrate AI/AN students into the college community while helping maintain student cultural identity. The use of student support services (Windchief and Joseph 2015) and AI/AN faculty mentorship (Waterman 2007) redefine college integration according to Tinto's (1975) original model, because now colleges are integrating into the needs of students. However, there is a need to further develop and analyze these theories.

The limitations of AI/AN persistence theories are the lack of connectedness between theories and objective examination. Often scholars examined one theory without examining relationships to other AI/AN postsecondary persistence theories. Not to mention that the majority of these theories do not conceptualize how to measure difficult constructs such as culture, and AI/AN desire to give back that are important to persistence. Nor do these theories attempt to examine how these varying factors interact together when examining AI/AN postsecondary persistence.

The theories described throughout the section of the paper illustrate the growing understanding of postsecondary persistence among college students. The theories range from beliefs that students must integrate into the college society, to rejecting assimilation type theories, and recognizing the importance of culture. The more recent theories related to AI/AN postsecondary persistence reveal the inadequacy of previous theories, and the need to continue research in order to understand AI/AN postsecondary persistence. In the next section is a review of literature that confirms and refutes the theories examined. The section begins with the methods used to find articles, followed by a description of findings from those articles. The paper ends with a discussion and conclusion.

## Method

I conducted searches for peer-reviewed journal articles, research reports, book chapters, books, and dissertations using the online Education Resource Information Center (ERIC), Arizona State University's Library One Search, backward/forward searching articles on Google Scholar, and finally locating references from articles retrieved from the online library searches. The descriptors were "Native Americans or American Indians," "Persistence or Retention" and "Higher Education or Postsecondary Education." The searches



revealed over three hundred documents. I limited the articles by including only studies with the following criteria;

1. The research had empirical evidence produced from primary research.
2. The research went through the peer-review process.
3. The research was published within the past 25 years.
4. The research sample contained analysis of AI/AN students.
5. The research was from 2 or 4-year institutions of higher education, including tribal colleges and universities.
6. The research was explicitly related to AI/AN persistence or retention in postsecondary or higher education.

To separate the documents relevant to this review, I read the abstract, title, and methods. Following the criteria, I was unable to locate empirical peer-reviewed research reports, book chapters, and books. However, there were eighty-two dissertations found related to AI/AN postsecondary persistence. Ultimately the research reports, book chapters, books, and dissertations were not included in this review of literature because either there was no evidence of them being peer-reviewed or the documents were considered to be theoretical. Limiting the research produced 19 quantitative and 25 qualitative peer-reviewed empirical journal articles published between 1993 and 2016.

Due to the limited amount of articles found for this review, I included both qualitative and quantitative articles. I put the articles into an annotated bibliography focusing on the sample, results, statistically significant measures for the quantitative research, and the themes that authors reported from the qualitative literature. The organization of this paper follows a conceptual format, whereas the scheme of the paper is constructed around themes identified from the findings (Randolph 2009). The factors were organized into four emerging themes including; family support, institutional support, tribal community support and academics. The themes contain subheadings that address particular factors under the theme (i.e. Family Support: motivation). The majority of the theme subheadings start chronologically, intermingling the qualitative and quantitative literature. The next section will discuss the themes related to AI/AN postsecondary retention and persistence.

## **Literature Review**

To begin this discussion, I analyze AI/AN postsecondary persistence themes on family support, institutional support, tribal community support, and academic influence on college persistence. These studies are chronologically organized under each theme subheading. Following themes are a short description of some of the conflicting results that contradict the positive influence of family on college persistence. The next section will be a discussion on the array of studies showing family support as a factor in AI/AN postsecondary persistence.

### **Family Support**

Of all the factors that influence AI/AN student postsecondary persistence, family support is the most frequently reported factor. Two-thirds of the studies reviewed, found that family social support influenced persistence, of which six were quantitative and 20 were

qualitative. In the following subheadings is the discussion of how family influenced student persistence through encouragement and student motivation.

### *Encouragement*

Family support came in different forms, and family encouragement is one form students reported helped with persistence. Benjamin et al. (1993) investigated successful characteristics of a 166 AI/AN students at a mid-west university and going home to family was a positive experience for AI/AN students in the study, where interviews indicated that family held them accountable with grades. Going home was an opportunity for family to encourage their students, and AI/AN students expressed that they rely on family for social support (Bass and Harrington 2014; Gloria and Kurpius 2001; Pavel and Padilla 1993; Guillory 2009; Schmidtke 2016). Family encouragement to their students came in forms of advice (Bass and Harrington 2014), pushing students to the point of fear of letting family down (Guillory 2009; Guillory and Wolverson 2008; Katz 2005), and in one instance offering to sell cows to ease a student's feelings of financial distress (Jackson et al. 2003). Additional studies reporting encouragement from family can be seen in studies like Marroquín and McCoach (2014) who used a sample of 501 AI/AN students across the United States and found student perception of family support (measured by family support of academic decisions) lead to increases in grade point average. Other studies had similar findings, such as family telling their students how proud they were of being in college, that indicated family encouragement positively influenced their persistence (Montgomery et al. 2000; Reyes 2000; Saggio and Rendón 2004; Waterman 2007, 2012). Which further demonstrates that family encouragement influences persistence. Family encouragement then influences student personal motivation to persist.

### *Motivation*

Personal motivation was also an influential variable in postsecondary persistence. For example, some AI/AN students wanted to finish college to be a role model for their community (Guillory 2009; Montgomery et al. 2000), create a better life for their children, or make their parent(s) proud (Bass and Harrington 2014). Drywater-Whitekiller (2010) interviewed 19 AI/AN students' to examine their stories to persist through higher education and found that graduation, with family support, was an accomplishment for all family members. Makomenaw (2014) examined success factors for eight enrolled AI tribal college students that transferred to predominately White institutions providing 4-year degrees. The researcher found that family was a motivation, to make their parents proud, and for family acceptance. Flynn et al. (2012), aimed to understand the same AI/AN higher education experiences using a sample of 21 AI/AN students, the article indicates that despite persistence challenges, some participants were willing to finish because of the family support. The evidence that family viewed their students' graduation as an accomplishment of family and the subsequent motivation infers that AI/AN students persist because of the family support that they receive.

### *Conflicting Results*

There were contradicting findings to family being a positive predictor of postsecondary persistence. The study by Tate and Schwartz (1993) examined 184 AI/AN students in

bachelors of social work programs to document barriers in American Indian persistence while in professional programs such as social work. The researcher found that students had difficulties in acculturation, measured by items such as, "Family obligations interfered with my academics." This contradiction to some of the research indicating family positively influences persistence is further supported by Dodd et al. (1995) who examined American Indian student retention in a postsecondary school setting with 24 American Indian students, where results indicate family problems influenced the decision to drop out. Jackson and Smith (2001) interviewed the postsecondary transition experienced of 22 Navajo American Indians students, and found family conflict was also an issue for persistence. For example having to attend funerals back home negatively influenced persistence, which Waterman (2012) found to have a negative influence on academic performance. Also, the family conflict or obligations could be the reason why the longer AI/AN students stay in college past their fourth year, the less likely they are to persist (Ishitani 2006; Patterson et al. 2014). Finally, the results showed that family could be a burden to persistence because of family financial struggles. Lee et al. (2010) used an online questionnaire to examine factors affecting 330 AI/AN students' persistence and found family obligations caused some AI/AN students to use their financial aid to help support families, instead of their education.

## **Institutional Support**

The evidence in this section indicates the role institutions have in AI/AN student persistence. The review found that institutional support as a factor in AI/AN student persistence was evident in three areas; AI/AN Support Services, Faculty, and Finances. Despite the focus on persistence as opposed to retention, the university influences AI/AN persistence substantially.

### *AI/AN Support Services*

Support services were found as a major influence on persistence through the academic/social mentoring provided, and efforts to acculturate students to university life (Belgarde and Loré 2003; Guillory and Wolverton 2008; Jackson and Smith 2001; Schmidtke 2016; Shotton et al. 2007). Adapting to university life through institutional support services is important as AI/AN students often have difficulties adjusting to university life. Dodd et al. (1995) indicated that the AI/AN students in their study had experienced prejudice, lack of acceptance that influenced the decision to drop out, and student support services contributed to academic success. In effort to ease AI/AN students into university life, mentoring helped AI/AN students overcome social barriers when adapting to university life (Guillory and Wolverton 2008; Jackson and Smith 2001). Using seven junior and senior AI/AN students attending a mainstream university, Shotton et al. (2007) found peer mentors helped their counterparts overcome potential barriers by, "connecting them to the community, providing support, and providing guidance," (p. 97). If AI/AN students do not feel a sense of belonging, they have a higher likelihood of departing college (Brayboy et al. 2015). Cultural differences, such as feeling pressured to conform to University culture, are problematic for some AI/AN students (Tate and Schwartz 1993; Jackson et al. 2003). AI/AN student support services are one way that institutions provide a sense of belonging to students. Marroquín and McCoach (2014) found that student perception of institutional support (measured by cultural activities and services) was a positive predictor of grade point average that is imperative to persistence.

### *Faculty*

Faculty at institutions of higher education are important to AI/AN student persistence because faculty provide the academic instruction and the mentoring that influence persistence (Bass and Harrington 2014; Brown and Robinson 1997; Dodd et al. 1995; Jackson and Smith 2001; Katz 2005; Schmidtke 2009, 2016). Tate and Schwartz (1993) examined barriers in American Indian persistence using 84 participants from multiple institutions with accredited baccalaureate and masters of social work programs, and found that students had difficulties with faculty support measured by items such as, “faculty understood my educational needs.” The finding demonstrates that faculty can influence increases or decreases in AI/AN student persistence and was further supported by Flynn et al. (2012). Beck et al. (2014) examined attitudes and the influence on grades and graduation with sixty-seven AI/AN students from the larger sample of 2200 students from a South Dakota university. The researchers found that as attitude toward faculty increased, there was a positive statistically significant influence on GPA. Similarly Marroquín and McCoach (2014) examination of student perception of faculty/staff support (measured by perception of cultural respect) showed a positive prediction of grade point average; as did Bass and Harrington (2014) who found that AI/AN institutional faculty and mentors (measured by positive interactions) were most important in aiding AI/AN student pursuit of a bachelors’ degree. These studies indicate that Faculty considerably influences decisions to continue in higher education.

### *Finances*

Since many AI/AN students come from low socio-economic statuses and live or have lived below the poverty line (United States Census Bureau 2015), finances can become substantially large barriers to persistence (Dodd et al. 1995; Flynn et al. 2012; Guillory and Wolverton 2008; Huffman 2003; Reyes 2000). Lee et al. (2010) used an online questionnaire to examine factors affecting 330 AI/AN undergraduates’ persistence and found students reported not having money for books, and finances to continue their education influenced persistence. Findings suggested an increase in grants and scholarships from the university would influence persistence (Chen and DesJardins 2010; Chen and St. John 2011; Mendez et al. 2011). Increasing in funding was found to improve AI/AN student persistence by Chen and St. John (2011). Chen and St. John (2011) analyzed how state-level financial policies influence persistence by racial/ethnic background using the Beginning Postsecondary Student Survey, and found that as AI/AN student non-need based financial aid increased so did the odds of retention. There is some contradictory evidence from Gross et al. (2015) who found that merit-based aid did not have a statistically significant influence on AI/AN student persistence. However, this is likely due to the small sample limitation in their data that reduced statistical power.

### *Conflicting Results*

Despite evidence for increased finances to improve AI/AN student persistence, some researchers found that there needs to be more awareness of opportunities and financial management training. Huffman (2003) examined the college experiences of two groups of American Indian students raised on and off the reservation and both identified financial struggles (measured by their difficulty with financial aid). Tierney et al. (2007) further

investigated if finances influence AI/AN student persistence and the need to increase financial aid to increase college-going rate. The researchers indicate that a substantial amount of financial aid for AI/AN students from the federal, state, and tribes (although not guaranteed) is available, and emphasis should be placed on how to apply for these types of aid. Moreover, data from Lee et al. (2010) revealed AI/AN students lacked skills to manage financial aid that influenced departure from the university. The knowledge of finding financial aid and managing finances would more than likely increase the amount of AI/AN students persisting in college.

### **Tribal Community Support**

The third major theme that came from the literature was tribal community support on AI/AN student persistence. Through the literature is a distinction that AI/AN students have different factors influencing persistence compared to other students in postsecondary education. However, one of the most prevalent differences may be the interdependence of AI/ANs as opposed to the individualism emphasized by Americans in general (Huffman 2001). The support of tribal community, and the community as a motivation to succeed was mostly apparent by the desire of AI/AN students to “give back,” to their communities. The review found that tribal community support as a factor in AI/AN student persistence was evident in three areas; giving back to community, community connection, and culture.

#### *Giving Back*

AI/AN students' desires to, “give back” was a personal motivation to persist through college for their respective communities. Guillory and Wolverson (2008) and Guillory (2009) investigations of persistence factors and barriers to degree completion for AI/AN college students revealed “giving back,” (measured by student's desire to help community) as a primary factor influencing their persistence. Drywater-Whitekiller (2010) provided further evidence by documenting AI/AN student's desire to “give back,” when students gave statements related to helping the tribe through their respective fields of education such as health care, rehabilitation, environmental pollution, museum to ensure the correct tribal history is told, and so forth. One reason students often want to “give back” to their community is because they feel like their community needs help and will benefit through their education (Makomenaw 2014; Waterman and Lindley 2013). Brayboy et al. (2015) further supported these claims in their investigation of findings from a survey on experiences and success of AI/ANs in higher education. They found that AI/AN students who are more self-centered fair better in universities, but AI/AN students who focus on their communities as their motivation for college completion, are more often successful than those individuals who focus on themselves.

#### *Connection*

The desire to give back was due to the connection that AI/AN students felt to their community. This connection did not always reflect the values of the university (Huffman 2001) and often students' went home to gain support from the community (Bass and Harrington 2014; Waterman and Lindley 2013). Although tribal community often supported their students, and they were a dominant factor in persistence, the community also had negative influences. Waterman (2012) examined the going home experiences of 26

Haudenosaunee college graduates and found sometimes the traveling negatively influenced their academic performance. Due to the connection students' felt to their community they often felt the need to be home and take care of obligations, attend ceremonies, or funerals which some students expressed the need for academic programs close to home (Cross et al. 2013; Motl et al. 2016). Despite the negative influence that going home had on persistence, there is evidence that going home also had positive influence because of the need for AI/AN to connect with their respective tribal cultures.

### *Culture*

A common challenge that AI/ANs face coming to higher education is culture shock and the need to maintain identity. Due to the environments that some AI/AN students attend college from, they tend to struggle with feelings or pressure to conform to University culture (Gloria and Kurpius 2001; Tate and Schwartz 1993). Special activities and AI/AN student organizations can help students maintain their identities as they begin their educational careers in a new location (Dodd et al. 1995; Drywater-Whitekiller 2010; Waterman 2007). The activities and student organizations are imperative because they reinforce culture and help maintain cultural identity tied to ones community, which factors into college persistence (Huffman 2001; Jackson and Smith 2001; Ness 2002; Reyes 2000; Waterman and Lindley 2013). Having close relationships to the community demonstrates how distance and access to ones tribal community is important to the college success of an AI/AN student (Cross et al. 2013).

### **Academic Performance**

The last factor influencing AI/AN student postsecondary persistence is academic preparation and performance. Brown and Robinson (1997) studied psychosocial factors related to the academic persistence of 288 American Indian undergraduate students. Academic preparation, and skills predicted students who persisted in school and those who did not. Unfortunately the location and experiences AI/AN students have in elementary and secondary extensively influence persistence for AI/AN students.

### *Academic Preparation*

Evidence from Reyes (2000) indicated Alaska Native students at the University of Alaska Fairbanks were hindered by academic remediation, or not being academically prepared for college level learning, and discussion in the classroom (i.e. not asking questions or contributing to the conversation due to embarrassment). Not being academically prepared or apprehension over the inadequate academic college preparation was the greatest concern for some AI/AN students, such as having to take responsibility over their own education by going to class on time or need to take remedial courses (Flynn et al. 2012; Jackson and Smith 2001). However, academic performance could be dependent on where you receive your education before enrolling into college. Huffman (2003) found AI/AN students from the reservation reported significantly greater academic difficulties while in college compared to the AI/AN students who lived off the reservation.



### *Academic Skills*

Good academic skills, such as studying and asking for faculty help on topics covered in courses helped with persistence, which provide academic remediation needed by some AI/AN students (Guillory 2009; Patterson et al. 2014; Waterman 2007). Academic skills are important as Lee et al. (2010) found statistically significant correlations between academic factors and persistence, such as high school GPA, SAT scores, ACT, and amount of financial aid. Beck et al. (2014) found difficult class work (measured by student perception of difficulty) had a negative effect on retention. Sometimes the perception of difficulty caused frustration or kept AI/AN students from discussions in course topics. Brayboy et al. (2015) found that AI/AN student experiences in college sometimes caused frustration in course assignments and uneasiness in course discussions. Patterson and Butler-Barnes (2016) examined how academic social context influences grade point average and found the lower your range on the academic social context scale, there was a decrease in GPA. Further supporting that AI/AN students who require additional academic assistance, need to receive academic remediation to improve persistence.

### **Discussion**

There are several factors that influence AI/AN postsecondary persistence that support different aspects of the persistence theories reviewed. The review of literature found that family support, institutional support, tribal community, and academic performance were the predominant factors influencing college persistence for AI/AN students at 2 and 4-year colleges. Family support also appears to be both a positive (Bass and Harrington 2014; Gloria and Kurpius 2001; Pavel and Padilla 1993; Guillory 2009) and negative factor (Tate and Schwartz 1993; Dodd et al. 1995; Jackson and Smith 2001; Waterman 2012) in college persistence. As some students expressed the encouragement from family to continue through postsecondary challenges, but other students expressed academic interference due to family obligations. Institutional support was found to be a major factor as well. As student's report that institutions with AI/AN student support services helped them acculturate to the university (Marroquín and McCoach 2014). On the contrary, students who attended universities without AI/AN student support services reported much more difficulty adjusting to college life. Community impacted the majority of AI/AN students in the studies. Noteworthy was the desire of AI/AN students to "give back," to their communities (Drywater-Whitekiller 2010; Guillory 2009; Guillory and Wolverton 2008). Which served as a motivation for AI/AN students to persist through college. Interestingly these students found strength from their community and did not report any contradicting evidence that the connection to community negatively impacted persistence. In some cases (Waterman 2012) students reported that going home for funerals or ceremonies interfered with academics, but these students were still able to complete college. It is inevitable that most students will face some challenges going through college, and despite some interference on academics, community did not seem to be a barrier for AI/AN students (Bass and Harrington 2014; Waterman 2012, Waterman and Lindley 2013). Academic readiness and performance was the last major factor influencing AI/AN persistence in college. There were multiple studies where students indicated they felt unprepared for the academic rigor of university courses. Some evidence (Huffman 2003) suggested that this could be predicted by the location in which students received their K-12 schooling. Other research

showed that reservation schools consistently underperformed when compared to schools in other areas. Which reemphasizes the importance of academic remediation courses at the university level, and support services.

The methods used throughout the 44 articles reviewed tended to produce different results. For example, in the quantitative research, none of the results produced evidence of AI/AN students desire to “give back” to their community or the extent to which family or community supports persistence with the exception of Gloria and Kurpius (2001) who attempted to measure family and community support. Students’ desires to, “give back,” as a component of tribal community factors and family support were major findings to college persistence in all of the qualitative literature, and is most likely a limitation in the quantitative data. Each of these factors could have been difficult to measure with the samples these researchers used. Therefore, the quantitative literature hardly reports any evidence that desire to give back, general tribal community support, and family support have an influence on persistence, whereas the qualitative literature does. These differences in findings may be due to the sampling techniques as well.

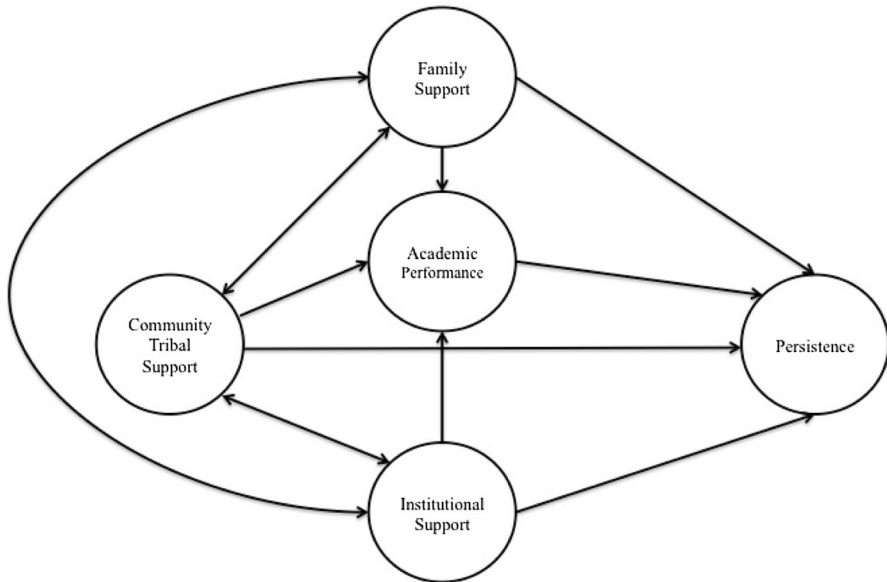
The results of the studies tend to support the general, minority, and AI/AN postsecondary persistence theories. What is missing most from the theories is how to measure difficult constructs such as culture and desire of AI/AN to give back to their community that are a component of tribal community support. Furthermore, there is yet to be an examination looking at how these different persistence theories may interact or be combined to create a model of AI/AN postsecondary persistence. Figure 1 is a conceptual model that examines the future of AI/AN postsecondary persistence by combining these theories and empirical literature.

The model allows researchers to examine varying aspects of AI/AN persistence according to the reviewed literature and theory. As discussed, a strong factor in predicting AI/AN persistence theories is family. The conflicting results show family can be a negative and positive factor in persistence, however the conceptual model proposes that AI/AN students will persist based on studies (Makomenaw 2014; Waterman and Lindley 2013) and theory (Brayboy et al. 2012; Guillory 2009) that indicate community factors (i.e. desire to give back, and cultural support) predict persistence moderated by family support. Meaning that family alone does not predict persistence, and can rather be predicted by a larger tribal community support. Institutional support is also related to community support based on theory (Windchief and Joseph 2015) that proposes institutions can create an extension of tribal community support through American Indian support services. Creating a home away from home (Tachine et al. 2016) at institutions of higher education extends the reach of community support and redefines how researchers will look at institutional integration.

## Limitations

### Validity and Reliability

The majority of the studies in this review were qualitative, as opposed to quantitative to generalize to a larger population. Additionally, no studies found during the review of literature used experimental or quasi-experimental designs to establish stronger internal validity. Most of quantitative methods used were correlational with convenience samples making it difficult to indicate cause and effect relationships between persistence factors



**Fig. 1** AI/AN Millennium Falcon Persistence Model: a conceptual model of the effects of community tribal support on postsecondary persistence

and AI/AN experiences. The qualitative and quantitative survey data comes from relatively small sample sizes due to the low AI/AN student populations and create difficulties establishing reliability. One exception is Marroquín and McCoach (2014) who used the largest AI/AN convenience sample and was able to establish acceptable validity evidence based on internal structure and reliability (American Educational Research Association 2014). However, the majority of studies focused on AI/AN students from a particular institution or particular region, thus limiting external validity (Shadish et al. 2002). There are exceptions, but these studies are from national databases that often have limitations to external validity because of misclassification on AI/AN identity (Chen and DesJardins 2010; Chen and St. John 2011; Ishitani 2006; Marroquín and McCoach 2014; Patterson et al. 2014, 2016; Pavel and Padilla 1993; Tierney et al. 2007).

### Sampling

In most cases the samples in the qualitative literature were very methodical in their approach to finding participants. For example, a qualitative study from Flynn et al. used participants from reservations or were raised on a reservation for a significant amount of their childhood and/or adolescence. Shotton et al. (2007), Guillory and Wolverton (2008), and Huffman (2003) used a similar approach by only including participants who grew up in AI/AN reservation communities or “border towns.” Other qualitative research selected participants who were enrolled in federally recognized tribes (Waterman 2007, 2012). The quantitative literature was less methodical in their approach to sampling. The majority of the samples in the quantitative literature were based on students’ self-identification and convenience samples. There were no referrals to finding participants to ask questions that may be able to determine if the participants were of AI/AN ethnicity (i.e. What tribe are you affiliated with?). This is problematic as policies or evidence from these studies have

threats to external validity. The one exception to the quantitative literature is Marroquín and McCoach (2014) who collected their sample by asking participants to identify tribal affiliations, and if they were from a rural, urban or reservation area.

Future research seeking to increase external validity should collect samples according to Indigenous knowledge and stories. The sampling technique uses tribal creation stories and cultural practices to provide a sampling frame. The sampling technique provides a larger population of AI/AN college students especially important to quantitative analysis and gaining appropriate statistical power for empirical investigations. Finally, the sampling technique allows researchers to measure difficult constructs, such as culture, that vary across the 567 tribal Nations (Indian Affairs 2017) because you are collecting data from tribes that share common cultural practices.

### *Measures*

In some cases the measures from the quantitative research were somewhat vague, such as “I rely on my family for emotional support.” This does not necessarily define what is “emotional support,” but may also simply be a limitation of quantitative methods. However, follow up questions such as, “I rely on family when I am confused or frustrated with academic material,” may be a more informative measure of family support. Furthermore, measures on identity are consistently lacking and/or require further refining.

Due to the lack of research done using the degree to which AI/AN students identify as AI/AN as a factor in persistence, the understanding of factors influencing AI/AN student postsecondary persistence is still somewhat limited. Identity, as a component of culture, falls under the tribal community support factor. Studies conducted thus far have done well in exploring factors influencing AI/AN persistence, but have yet to test how these factors influence AI/AN students based on their degree of AI/AN identity. Some of the qualitative studies made an effort to select participants from reservations, or who had strong connections to the reservations. Some other researchers made an effort to use tribal affiliation to determine AI/AN status. However, there has yet to be a combination of AI/AN location, blood quantum, and measure of tribal connection in quantitative studies with strong external validity. Huffman (2003) identified some of these factors as influencing AI/AN persistence when using reservation connection as a determinant in persistence. The degree to which students identify as AI/AN influences persistence is further supported by the contradicting findings on how family influences persistence. It could be that if you are lower percentage of blood quantum that you are less likely to live on the reservation and find family or community obligations interfering with academic performance. Also, humor is an important aspect of AI/AN identity (Deloria 1969) that researchers have yet to incorporate to measure identity. AI/AN humor is worth considering because it is a part of AI/AN identity used as a means of communicating in arduous discussions, healing, coping with tragedies, and regulating behavior (Bletzer et al. 2011; Dean 2003; Garrett and Garrett 1994; Garrett et al. 2005; Gruber 2008; Johansen 2003; Lancaster 1966; Landes 1937; Lopez 2015). AI/AN humor can manifest in different facades but frequently is present as parody, teasing, exaggeration, and puns (Alexie 2005; Basso 1979; Garrett and Garrett 1994; Lincoln 1993; Lopez 2015; Trechter 2001; Wallace 1953). Researchers should consider including additional measures of identity using AI/AN humor (i.e. rating the following joke, “One time the tribe cancelled our Easter egg hunt, because all the powdered eggs blew away.”) to see how humor indirectly influences persistence. Finally, future research should seek to identify how these factors are associated with persistence accounting for the degree that students identify being of AI/AN ethnicity.

## Conclusion

Given the factors influencing AI/AN postsecondary persistence, some practical suggestions the literature gives to increase persistence are to have American Indian support services, academic support, positive student to faculty interactions, increase mentoring opportunities, and have academic policies that support cultural obligations (such as ceremonies or funerals) that require student attendance. Also, having events that family can attend is vital to increasing persistence, as many AI/AN students indicated family helped with their academic success (HeavyRunner and DeCelles 2002). However, several of these recommendations have been made based on the evidence from the studies in the review, yet AI/AN still struggle from devastating persistence rates. Which leads me to believe that there are other factors, specifically the degree to which college students identify with being AI/AN and desire to give back, attributing to postsecondary persistence rates that require more extensive examination. Future researchers and scholars should carefully look at their sampling and measurement techniques using the proposed model to gain a holistic understanding of AI/AN postsecondary persistence.

## References

- Adelman, H. S., Taylor, L., & Nelson, P. (2013). Native American students going to and staying in postsecondary education: An intervention perspective. *American Indian Culture and Research Journal*, 37(3), 29–56.
- Alexie, S. (2005). *The Lone Ranger and Tonto fist fight in heaven*. New York: Grove Press.
- American Educational Research Association, American Psychological Association, & National Council on Measurement in Education. (2014). *Standards for educational and psychological testing*. Washington, D.C: American Educational Research Association.
- Bass, J., & Harrington, C. (2014). Understanding the academic persistence of American Indian transfer students. *Indigenous Policy Journal*, 25(1), 1–41.
- Basso, K. H. (1979). *Portraits of "the Whiteman": Linguistic play and cultural symbols among the Western Apache*. Cambridge: Cambridge University Press.
- Bean, J. P. (1980). Dropouts and turnover: The synthesis and test of a causal model of student attrition. *Research in Higher Education*, 12(2), 155–187. <https://doi.org/10.1007/BF00976194>.
- Bean, J. P. (1982). Student attrition, intentions, and confidence: Interaction effects in a path model. *Research in Higher Education*, 17(4), 291–320.
- Bean, J. P. (1983). The application of a model of turnover in work organizations to the student attrition process. *Review of Higher Education*, 6(2), 129–148.
- Bean, J. P. (1985). Interaction effects based on class level in an explanatory model of college student dropout syndrome. *American Educational Research Journal*, 22(1), 35–64. <https://doi.org/10.2307/1162986>.
- Beck, K. A., Joshi, P., Nsiah, C., & Ryerson, A. (2014). The impact of sociability on college academic performance and retention of Native Americans. *Journal of American Indian Education*, 53(1), 23–41.
- Belgarde, M. J., & Loré, R. K. (2003). The retention/intervention study of Native American undergraduates at the university of new mexico. *Journal of College Student Retention*, 5(2), 175–203. <https://doi.org/10.2190/ML98-8WQF-EFWP-7MCY>.
- Benjamin, D., Chambers, S., & Reiterman, G. (1993). A focus on American Indian college persistence. *Journal of American Indian Education*, 32(2), 24–40.
- Bletzer, K. V., Yuan, N. P., Koss, M. P., Polacca, M., Eaves, E. R., & Goldman, D. (2011). Taking humor seriously: Talking about drinking in Native American focus groups. *Medical Anthropology: Cross-Cultural Studies in Health and Illness*, 30(3), 295–318.
- Brayboy, B. M. J. (2005). Toward a tribal critical race theory in education. *The Urban Review*, 37(5), 425–446.
- Brayboy, B., Fann, A., Castagno, A., & Solyom, J. (2012). *Postsecondary education for American Indian and Alaska Natives: Higher education for nation building and self-determination*. San Francisco: Wiley Subscription Services.

- Brayboy, B. M. J., Solyom, J. A., & Castagno, A. E. (2014). Looking into the hearts of Native peoples: Nation building as an institutional orientation for graduate education. *American Journal of Education*, *120*(4), 575–596.
- Brayboy, B. M. J., Solyom, J. A., & Castagno, A. E. (2015). Indigenous peoples in higher education. *Journal of American Indian Education*, *54*(1), 154–186.
- Brown, L., & Robinson, S. E. (1997). Psychosocial factors influencing academic persistence of American Indian college students. *Journal of College Student Development*, *38*(1), 3–12.
- Cabrera, A. F., Nora, A., Terenzini, P. T., Pascarella, E., & Hagedorn, S. (1999). Campus racial climate and the adjustment of students to college: a comparison between white students and African-American students. *Journal of Higher Education*, *70*(2), 134–160.
- Carlyle, G., Thompson, N., Hare, R., Miller, N., & Purvis, L. (2011). Postsecondary transitions of Mississippi Band of Choctaw Indians tribal scholarship program students. *Journal of American Indian Education*, *50*(3), 42–60.
- Carney, C. (1999). *Native Americans in higher education in the United States*. New Brunswick, NJ: Transaction Publishers.
- Chen, R., & DesJardins, S. L. (2010). Investigating the impact of financial aid on student dropout risks: Racial and ethnic differences. *The Journal of Higher Education*, *81*(2), 179–208.
- Chen, R., & St. John, E. P. (2011). State financial policies and college student persistence: A national study. *The Journal of Higher Education*, *82*(5), 629–660.
- Cooper, H. M. (1988). Organizing knowledge synthesis: A taxonomy of literature reviews. *Knowledge in Society*, *1*, 104–126.
- Cross, S. L., Day, A., Gogliotti, L. J., & Pung, J. J. (2013). Challenges to recruit and retain American Indian and Alaskan Natives into social work programs: The impact on the child welfare workforce. *Child welfare*, *92*(4), 31.
- Dean, R. A. (2003). Native American humor: Implications for transcultural care. *Journal of Transcultural Nursing*, *14*(1), 62–65.
- Deloria, V. (1969). *Custer died for your sins: An Indian manifesto*. Norman, OK: University of Oklahoma Press.
- Dodd, J. M., Garcia, F. M., Meccage, C., & Nelson, J. R. (1995). American Indian student retention. *NASPA Journal*, *33*(1), 72–78.
- Drywater-Whitekiller, V. (2010). Cultural resilience: Voices of Native American students in college retention. *The Canadian Journal of Native Studies*, *30*(1), 1–19.
- Durkheim, E. (1961). *Suicide* (J. Spaulding & G. Simpson, Trans.). Glencoe, IL: The Free Press.
- Falk, D., & Aitken, L. (1984). Promoting retention among American Indian college students. *Journal of American Indian Education*, *23*(2), 24–31.
- Flynn, S. V., Duncan, K., & Jorgensen, M. F. (2012). An emergent phenomenon of American Indian postsecondary transition and retention. *Journal of Counseling and Development: JCD*, *90*(4), 437–449.
- Fox, M., Lowe, S., Waterman, S., & McClellan, G. (2005). *Serving Native American students*. San Francisco: Jossey-Bass.
- Garrett, J. T., & Garrett, M. T. (1994). The path of good medicine: Understanding and counseling Native Americans. *Journal of Multicultural Counseling and Development*, *22*(3), 134–144.
- Garrett, M. T., Garrett, J. T., Torres-Rivera, E., Wilbur, M., & Roberts-Wilbur, J. (2005). Laughing it up: Native American humor as spiritual tradition. *Journal of Multicultural Counseling and Development*, *33*(4), 194–204.
- Gloria, A. M., & Kurpius, S. E. R. (2001). Influences of self-beliefs, social support, and comfort in the university environment on the academic nonpersistence decisions of American Indian undergraduates. *Cultural Diversity and Ethnic Minority Psychology*, *7*(1), 88.
- Gross, J., Hossler, D., Ziskin, M., & Berry, M. (2015). Institutional merit-based aid and student departure: A longitudinal analysis. *The Review of Higher Education*, *38*(2), 221–250.
- Gruber, E. (2008). *Humor in contemporary Native North American literature: Reimagining nativeness*. Rochester, NY: Camden House.
- Guiffrida, D. (2006). Toward a Cultural Advancement of Tinto's Theory. *The Review of Higher Education*, *29*(4), 451–472.
- Guillory, R. M. (2009). American Indian/Alaska Native college student retention strategies. *Journal of Developmental Education*, *33*(2), 12–38.
- Guillory, R. M., & Wolverton, M. (2008). It's about family: Native American student persistence in higher education. *The Journal of Higher Education*, *79*(1), 58–87.
- Hart, C. (1998). *Doing a literature review: Releasing the social science research imagination*. London: Sage.



- HeavyRunner, I., & DeCelles, R. (2002). Family education model: Meeting the student retention challenge. *Journal of American Indian Education, 41*(2), 29–37.
- Huffman, T. (2001). Resistance theory and the transculturation hypothesis as explanations of college attrition and persistence among culturally traditional American Indian students. *Journal of American Indian Education, 40*(3), 1–39.
- Huffman, T. E. (2003). A comparison of personal assessments of the college experience among reservation and nonreservation American Indian students. *Journal of American Indian Education, 42*(2), 1–16.
- Hurtado, S. (1992). The campus racial climate: Contexts of conflict. *The Journal of Higher Education, 63*(5), 539–569.
- Hurtado, S., Alvarado, A. R., & Guillermo-Wann, C. (2015). Thinking about race: The salience of racial identity at two- and four-year colleges and the climate for diversity. *Journal of Higher Education, 86*(1), 127–155.
- Indian Affairs. (2017). *Who we are*. Retrieved May 2, 2017, from <http://www.bia.gov/WhoWeAre/index.htm>.
- Ishitani, T. T. (2006). Studying attrition and degree completion behavior among first-generation college students in the United States. *Journal of Higher Education, 77*(5), 861–885.
- Jackson, A. P., & Smith, S. A. (2001). Postsecondary transitions among Navajo Indians. *Journal of American Indian Education, 40*(2), 28–47.
- Jackson, A. P., Smith, S. A., & Hill, C. L. (2003). Academic persistence among Native American college students. *Journal of College Student Development, 44*, 548–565.
- Johansen, B. E. (2003). Laughing: Good old Indian medicine. *Native Americas, 20*(3), 56–61.
- Katz, J. R. (2005). “If I could do it, they could do it”: A Collective Case Study of Plateau Tribes Nurses. *Journal of American Indian Education, 44*(2), 36–51.
- Lancaster, R. (1966). *Piegán: A look from within at the life, times, and legacy of an American Indian tribe*. Garden City, NY: Doubleday.
- Landes, R. (1937). *Ojibway sociology*. New York: Columbia University Press.
- Lee, J., Donlan, W., & Brown, E. F. (2010). American Indian/Alaskan Native undergraduate retention at predominantly white institutions: An elaboration of Tinto’s theory of college student departure. *Journal of College Student Retention: Research, Theory & Practice, 12*(3), 257–276.
- Lincoln, K. (1993). *Indi’n humor: Bicultural play in Native America*. New York: Oxford University Press.
- Lopez, J. D. (2015). Native American identity and academics: Writing NDN in edumacation. Teachers College Record. Accessed November 21, 2017, from <http://www.tcrecord.org/content.asp?contentid.18216>.
- Makomenaw, M. (2014). Goals, family, and community: What drives tribal college transfer student success. *Journal of Student Affairs Research and Practice, 51*(4), 380–391.
- Marroquín, C. A., & McCoach, D. B. (2014). Measuring cultural integrity through the lens of transculturation: Psychometric properties of the North American Indigenous College Students Inventory (NAICSI).
- Mendez, J. P., Mendoza, P., & Malcolm, Z. (2011). The impact of financial aid on Native American students. *Journal of Diversity in Higher Education, 4*(1), 12.
- Montgomery, D., Miville, M. L., Winterowd, C., Jeffries, B., & Baysden, M. F. (2000). American Indian college students: An exploration into resiliency factors revealed through personal stories. *Cultural Diversity and Ethnic Minority Psychology, 6*(4), 387.
- Motl, T. C., Multon, K. D., & Zhao, F. (2016). Persistence at a tribal university: Factors associated with second year enrollment. *Journal of Diversity in Higher Education*. <https://doi.org/10.1037/dhe0000034>.
- Museus, S. D., Nichols, A. H., & Lambert, A. D. (2008). Racial differences in the effects of campus racial climate on degree completion: A structural equation model. *The Review of Higher Education, 32*(1), 107–134.
- National Center for Education Statistics. (2012). *National Indian education study 2011* (NCES 2012–466). Washington, DC: Institute of Education Sciences, U.S. Department of Education.
- Ness, J. E. (2002). Crossing the finish line: American Indian completers and non-completers in a tribal college. *Tribal College, 13*(4), 36.
- Nora, A., & Cabrera, A. F. (1996). The role of perceptions of prejudice and discrimination on the adjustment of minority students to college. *Journal of Higher Education, 67*, 119–148.
- Patterson, D. A., & Butler-Barnes, S. T. (2016). Impact of the academic-social context on American Indian/Alaska Native student’s academic performance. *Washington University Journal of American Indian & Alaska Native Health, 1*(1), 3.

- Patterson, D. A., Waya, S. W. A. U., Ahuna, K. H., Tinnesz, C. G., & Vanzile-Tamsen, C. (2014). Using self-regulated learning methods to increase Native American College retention. *Journal of College Student Retention: Research, Theory & Practice*, 16(2), 219–237.
- Pavel, D. M., & Padilla, R. V. (1993). American Indian and Alaska Native postsecondary departure: An example of assessing a mainstream model using national longitudinal data. *Journal of American Indian Education*, 32(2), 1.
- Randolph, J. (2009). A guide to writing the dissertation literature review. *Practical Assessment, Research & Evaluation*, 14(13). <http://pareonline.net/getvn.asp?v=14&n=13>.
- Reyes, M. E. (2000). What does it take? Successful Alaska Native students at the University of Alaska Fairbanks. *Journal of College Student Retention: Research, Theory & Practice*, 2(2), 141–159.
- Reyhner, J., & Eder, J. (2015). *American Indian education: A history*. Norman: University of Oklahoma Press.
- Saggio, J. J., & Rendón, L. I. (2004). Persistence among American Indians and Alaska Natives at a bible college: The importance of family, spirituality, and validation. *Christian Higher Education*, 3(3), 223–240.
- Schmidtke, C. (2009). “That’s what really helped me was their teaching”: Instructor impact on the retention of American Indian students at a two-year technical college. *Journal of Industrial Teacher Education*, 45(3), 1–13.
- Schmidtke, C. (2016). The role of academic student services in the retention of American Indian students at a sub-baccalaureate technical college. *Journal of Career and Technical Education*. <https://doi.org/10.21061/jcte.v3i1i.1509>.
- Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Belmont, CA: Wadsworth Cengage learning.
- Shotton, H. J., Lowe, S. C., & Waterman, S. J. (2013). *Beyond the asterisk: Understanding Native students in higher education*. Sterling, VA: Stylus Publishing.
- Shotton, H., Oosahwe, E., & Cintrón, R. (2007). Stories of success: Experiences of American Indian students in a peer-mentoring retention program. *The Review of Higher Education*, 31(1), 81–107.
- Spady, W. G. (1970). Dropouts from higher education: An interdisciplinary review and synthesis. *Interchange*, 1(1), 64–85.
- Tachine, A. R., Cabrera, N. L., & Yellow Bird, E. (2016). Home away from home: Native American students’ sense of belonging during their first year in college. *The Journal of Higher Education*, 88(5), 785–807.
- Tate, D. S., & Schwartz, C. L. (1993). Increasing the retention of American Indian students in professional programs in higher education. *Journal of American Indian Education*, 33(1), 21–31.
- Tierney, W. G. (1992). An anthropological analysis of student participation in college. *The Journal of Higher Education*, 63(6), 603–618.
- Tierney, W. G., Sallee, M. W., & Venegas, K. M. (2007). Access and financial aid: How American-Indian students pay for college. *Journal of College Admission*, 197, 14–23.
- Tinto, V. (1975). Dropout from higher education: A theoretical synthesis of recent research. *Review of Educational Research*, 45(1), 89–125. <https://doi.org/10.2307/1170024>.
- Trechter, S. (2001). White between the lines: Ethnic positioning in Lakota discourse. *Journal of Linguistic Anthropology*, 11(1), 22–35.
- United States Census Bureau. (2015). FFF: American Indian and Alaska Native heritage month: November 2015. Retrieved February 27, 2017, from <https://www.census.gov/newsroom/facts-for-features/2015/cb15-ff22.html>.
- Wallace, W. J. (1953). The role of humor in the Hupa Indian tribe. *The Journal of American Folklore*, 66(260), 135–141.
- Waterman, S. J. (2007). A complex path to Haudenosaunee degree completion. *Journal of American Indian Education*, 46(1), 20–40.
- Waterman, S. J. (2012). Home-going as a strategy for success among Haudenosaunee college and university students. *Journal of Student Affairs Research and Practice*, 49(2), 193–209.
- Waterman, S. J., & Lindley, L. S. (2013). Cultural strengths to persevere: Native American women in higher education. *NASPA Journal About Women in Higher Education*, 6(2), 139–165.
- Windchief, S., & Joseph, D. H. (2015). The act of claiming higher education as Indigenous space: American Indian/Alaska Native examples. *Diaspora, Indigenous, and Minority Education*, 9(4), 267–283.