"That's What Really Helped Me Was Their Teaching": Instructor Impact on the Retention of American Indian Students at a Two-Year Technical College

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Abstract

Instructors have often been pegged as the major factor in the success of American Indian college students. In addition to personal and academic relationships, instructional methods and design play a pivotal role in student retention, and instructors must be sensitive to their students' needs when designing and delivering instruction. Given that American Indian students at the South Central Institute of Technology graduated at a rate five times higher than the reported national average for programs from which students planned to enter directly into the workforce, interviews were conducted with American Indian students to learn about their perceptions of how their instructors may have played a role in their success. To help improve American Indian student retention, implications for practice and research based on student responses are being offered.

Research studies over the past two decades have repeatedly confirmed that American Indian students had the least likelihood of all ethnic groups to enter and complete college. Despite significant gains, only 17.7% of American Indians age 18-24 were enrolled in post-secondary education as opposed to 41.6% of European-Americans in the same age bracket. In fact, American Indians had the lowest college

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participation rate of all major ethnic groups (Freeman & Fox, 2005).

In addition, statistical analyses from these studies indicated that only between 4% and 18% of those American Indians who did enroll in college eventually completed their degrees (Brown & Robinson-Kurpius, 1997; Carnegie Foundation, 1999; Huffman, 1991; Jackson & Smith, 2001; Pottinger, 1990; Tierney, 1993, 1995; Wilson, 1998), although one report about NCAA college athletes went as high as 36% (Pavel, Skinner, Cahalan, Tippeconnic, & Stein, 1998). Low graduation rates are part of a predicament faced by many tribes. Leaders with college educations and advanced training are needed to help preserve tribal languages, cultures, and identities; manage tribal resources; support tribal political and economic development; and work with institutions of the mainstream society. However, the lack of qualified leaders often forces tribes to hire either non-Native outsiders or underprepared tribal members (Benally, 2004; Demmert, 1997).

Scholars have argued for many years that American Indian students have unique values, beliefs, attitudes, goals, and needs that instructors at the college level must take into account if they want their students to be successful (Jackson & Smith, 2001; James, 1992; O'Brien, 1990; Pottinger, 1990; Scott, 1986; Swisher, 1994; Wilson, 1998). However, too few faculty members have understood, respected, and acted upon these needs, and their attitude has contributed to high non-completion rates among Native students (Dodd, Garcia, Meccage, & Nelson, 1995; Pewewardy & Frey, 2004; Tate & Schwartz, 1993).

According to Benjamin, Chambers, and Reiterman

(1993), American Indian cultures have their own ways of valuing and encouraging persistence, which manifest themselves in certain preferences for learning styles and assessment methods. Consequently, if instructors are truly student-centered, they must adapt to the needs of their students and not expect students to be the ones to change (Aragon, 2002; Gilbert, 2000; Wilson, 1998). Faculty members must show an understanding of their American Indian students' unique cultural backgrounds and classroom needs and adjust their instructional methods if students are to persist. Some scholarship suggests that technical education has been particularly successful in this regard and that its pedagogy as well as its workplace connection shows promise for strategies to increase American Indian student retention (Tierney, 1995; Tippeconnic, 2000; West, 1988).

The current study, to find out about students' perceptions of how their instructors had helped them learn and persist in their studies, involved graduating American Indian students at a mainstream sub-baccalaureate technical college. This researcher was particularly interested in those instructor attitudes and teaching methods that students responded to positively and that in their estimation contributed to their success.

Literature Review

There is ample evidence in the literature that instructors have the strongest influence on American Indian student perceptions of a positive and supportive campus atmosphere and ultimately on persistence (Cole & Denzine, 2002; Dodd, Garcia, Meccage, & Nelson, 1995; Reyhner & Dodd, 1995). Instructors can have a positive effect on motivation, on how students adapt to the campus environment, and on whether students will perceive the campus as racist and themselves as

victims of discrimination (Brown & Robinson Kurpius, 1997; Hornett, 1989). At the same time, significant stumbling blocks remain. Instructors' communication habits and general attitudes can impede learning (Dodd, Garcia, Meccage, & Nelson, 1995), and if the different values, beliefs, and attitudes of instructors and students remain unreconciled, the negative effect on persistence can be quite pronounced (Pewewardy & Frey, 2004). Instructors' greatest impact lies in areas of cultural sensitivity, academic and personal relationships, instructional methods and design, and sensitivity to student learning styles.

To understand how they can help their American Indian students be successful, college instructors must first become aware of the real and perceived barriers students face. The cultural conflict students experience because of their values, beliefs, and attitudes may be exacerbated by instructor ignorance. Expecting students to behave in ways that are culturally incongruent for them, using instructional methods students are unfamiliar with, and interacting with students in a manner they are unaccustomed to will be seen not only as confusing but also as downright hostile (Bowmann, 2003; Gilbert, 2000; Hornett, 1989; Huffman, 2001, 2003; Scott, 1986; Tate & Schwartz, 1993; Wentzlaff & Brewer, 1996). The perception of hostility is particularly pronounced if faculty members respond to student academic problems not with understanding, open-mindedness, or cultural sensitivity but with the advice to assimilate more into the campus culture (Huffman, 2001; Kirkness & Barnhardt, 1991).

This type of faculty reaction to student concerns is closely linked to student attitude toward their instructors. Interestingly enough, even students who are dissatisfied with their overall campus experience by and large report a positive attitude toward instructors and grant that their instructors try to be as helpful as possible (Huffman, 2001; Lin, LaCounte, &

Eder, 1988; Tate & Schwartz, 1993). Such positive attitudes, unfortunately, are easily canceled out by a lack of cultural awareness on the part of instructors. A lack of cultural awareness easily leads to perceptions of insensitivity, racism, and preferential treatment for non-Native students, even if there is no evidence for such perceptions (Pewewardy & Frey, 2004). This situation led O'Brien (1990) and Scott (1986) to ask how institutions and instructors must act not only to respond supportively but also to have their actions recognized as supportive.

Both academic and social integration (not assimilation) into the campus culture and environment are crucial if American Indian students are to be successful (Brown & Robinson Kurpius, 1997). Academic integration refers to the interaction of faculty members and students in the context of the classroom and the coursework. Students need faculty members who care about their academic progress, respond to them in a supportive manner, and are willing to help with academic problems (Lin, LaCounte, & Eder, 1988; Ortiz & HeavyRunner, 2003). Cultural interaction theory has been suggested as a framework for such exchanges. In this theory, instructors help students understand how to play a role in their own academic success, how to tend to their needs, and how to vent their feelings without developing an oppositional attitude that might lead them to withdrawal instead of persistence (Ortiz & HeavyRunner, 2003).

To facilitate building such student-instructor relationships, colleges are called upon to create opportunities for both sides to interact outside the classroom (Brown & Robinson Kurpius, 1997; Pavel & Padilla, 1993). If, in fact, faculty members can establish a relationship with students that emulates that of an extended family, students will have a greater sense of belonging and be more likely to persist in their studies (HeavyRunner & DeCelles, 2002).

In order to help their American Indian students learn and see the value in what they are learning, instructors must use instructional methods and learning activities that play to the strengths of American Indian students and are different from the ones used for non-Natives (Hornett, 1989; Kirkness & Barnhardt, 1991; Pewewardy & Frey, 2004; Wentzlaff & Brewer, 1996; Wilson, 1998). Instructional design based on student need is crucial for student learning in this context (Wilson, 1998). The cornerstone is for instructors to be aware of the holistic approach to learning preferred by American Indian students, meaning that they learn better when they have a chance to look at the whole before examining its components (James, 1992). If all new learning is built on and integrated with prior knowledge, students remain open-minded toward new knowledge instead of perceiving it as a threat and are willing and able to return to the whole and integrate the new knowledge (Gilbert, 2000; Kirkness & Barnhardt, 1991; Tierney, 1995; Wilson, 1998). Specific strategies recommended for instructors were to use examples from their own lives to illustrate how knowledge is integrated in the workplace, give students plenty of time to finish assignments, and provide detailed, positive feedback whenever warranted (Aragon, 2002; Dodd, Garcia, Meccage, & Nelson, 1995; Tierney, 1995).

As a result, the classroom focus must shift from the instructor to the student (Bowman, 2003; HeavyRunner & DeCelles, 2002). A major technique to accomplish that is to make sure students are actively involved in the learning process (Aragon, 2002; Tierney, 1995; Wilson, 1998), which can best be achieved through collaborative group activities (Aragon, 2002; Carnegie Foundation, 1999; Cole & Denzine, 2002; Gilbert, 2000; Reyhner & Dodd, 1995; Tierney, 1995) and experimental and experiential learning (Bowman, 2003; Tierney, 1995; Wilson, 1998). Students like a certain degree of

freedom to learn by trial and error at their own pace, and instructors must therefore include students in the decision-making process of what will be learned and at which pace, allow students self-direction in how they move through the steps of learning, and give students the opportunity to show mastery on their own terms, not just through pre-determined assessment activities (Aragon, 2002; James, 1992).   Such independence, James (1992) claimed, shows students that instructors are sensitive to their needs and also protects them from the greatest embarrassment they could possibly suffer, failure in front of their peers.

Gilbert (2000) suggested that instructors do the following to improve student learning:

1. Offer opportunities for reflection so students may develop a better understanding of their learning styles;
2. Discuss the same material repeatedly, which leads to better understanding and retention;
3. Incorporate collaborative assignments because students can learn at their own pace and understand material better by helping others;
4. Show students that completing a task is a process with a different set of skills required at each step of the process; and
5. Teach critical thinking skills and lead students to independent and creative problem solutions.

Pewewardy (2005) extended these recommendations further. Lamenting that despite all the research on teaching American Indian students, misconceptions among instructors remained persistent, he argued that rather than continuing to tinker with change and with instructors' perceptions, a radical shift was needed: "Indigenous Peoples' culture anchors them to reality and it must be the starting point for all learning" [sic] (p. 151).   As a result, an effective teacher, according to

Pewewardy, is someone who uses the students' cultural context as examples; accepts tribal cultural mores; develops personal relationships with students, their families, and community members; and prepares students for a world in which their culture is not the norm and is not respected. With regard to technology, Pewewardy (2001) observed that learning it and using it in Native communities could only be accomplished if it were integrated with the American Indian worldview.

Pewewardy (2001, 2005) was not alone in this assessment. Deloria & Wildcat (2001), Dyck (2001), James (2001b), and Thomas (2001) all seconded Pewewardy's idea that education and community be integrated, that all instruction emphasize the connection to the community, and that a mechanism be created to entice graduates to return to their communities. Education was not to imbue individuals with knowledge and skills that give them an advantage over others but to shape them to become contributing members of their communities. Knowledge acquisition is never a virtue in itself but becomes beneficial only in the context of how it can help others.

Thus, if American Indian students are to persist in educational programs, their knowledge and ways of finding knowledge must be respected. Not minor changes in teaching methods and instructional design but a major epistemological shift on the part of instructors will be needed, a shift that accepts indigenous knowledge as equal and puts the community, not the individual, at the center of all learning. However, James (2001b) still called for a cautious approach. He deplored Pewewardy's (2001) suggestion to focus entirely on Native traditions and to set aside Western ideas and methods. He saw the idea as meritorious but not yet ready to be fully implemented; a possible third way to him was more promising to him than going from one extreme to the other.

Research Questions

The current study collected data on the following questions:

1. What are the perceptions that some American Indian students enrolled in sub-baccalaureate programs at a mainstream technical college have of their experiences with their instructors that facilitate their learning and encourage them to persist in their studies and complete their degrees?

2. Which themes emerge from students' interpretations of their experiences in class that may lead to more effective instruction for American Indian students?

Research Methodology and Setting

Individual, structured qualitative interviews were conducted with 17 American Indian students who were in their final semester before graduation at the South Central Institute of Technology.   The purpose of this study was to fill a knowledge gap in the research and go beyond current findings to look for new evidence in the study of American Indian student success factors that could be drawn from student perceptions.   After having attended a college for several semesters, graduating students were seen as more likely than freshmen to have reflected on their experiences, especially on which ones had helped them persist, and to be able to point out situations where instructors had been helpful.

The South Central Institute of Technology (SCIT) is a sub-baccalaureate technical institution in eastern Oklahoma that offers predominantly Associate of Applied Science degrees in areas such as automotive technology, construction technology, heavy equipment technology, air conditioning technology, engineering technologies, information

technologies, health and environmental technologies, precision agriculture, visual communications, and culinary arts. Total student enrollment at SCIT was 2,403 for Spring 2007. Of these students, 62% were male and 38% female. 95.5% of students were from Oklahoma, 5.4% from 20 other states, and 0.1% from foreign countries. The ethnic composition of the student body was 65.8% white, 23.9% American Indian, 5.1% African American, 3% Hispanic, 0.7% Asian, and 1.5% unknown. All ethnic classification is based on student self-identification. The average student age was 24.3 years (23.6 male, 25.5 female). The average composite ACT score for new students was 18.7.

The following reasons led to SCIT's being chosen as the site for this research:

1. SCIT's average Associate's Degree graduation rate for American Indian students of 33.8% for the 1996 to 2003 student cohorts as compared to the reported nationwide rate of 6.2% (Bailey, Jenkins, & Leinbach, 2005).

2. The commitment made by SCIT in its strategic plan that the graduation rate of minority students groups will be doubled by 2012; that partnerships with Indian tribes will be expanded; and that the institution will make changes in curriculum and professional development to increase the cultural competence of all faculty, staff, and students (South Central Institute of Technology, 2007).

3. Statements by West (1988), Tierney (1995), and Tippeconnic (2000) about the potential benefits of technical education for tribal development and student motivation and retention.

Based on statements in the literature that learning about the experiences of American Indian students may lead to new findings on success factors and retention strategies (Deloria &

Wildcat, 2001; Huffman, Sill, & Brokenleg, 1986; Huffmann, 2001, 2003; Jackson & Smith, 2001), the purpose of these interviews was to elicit student perceptions, and such information is best collected through qualitative interviews as described by Rubin and Rubin (1995): "We are trying to find in detail how the conversational partners understand what they have seen, heard, or experienced" (p. 40).

Therefore, the decision to conduct a qualitative study in the first place and to take an interactionist perspective to see how student persistence was linked to their interaction with their instructors is the result of previous research findings and suggestions about the capacity inherent in qualitative research. Several studies had mentioned that there was a need for qualitative approaches to researching American Indian student retention. Jackson and Smith (2001) asserted that quantitative instruments and surveys are limited in the number of paradigms that can be used to frame a study, and Haig-Brown and Archibald (1996) even called for a rejection of positivist frameworks and empirical methods because research involving human subjects from different backgrounds and with different experiences than those of the researcher requires face-to-face interaction. A decade earlier, Huffman, Sill, and Brokenleg (1986) had already proposed that researching students' subjective experiences may reveal information on student retention that quantitative studies had missed, but Vaala (1993) and Wentzlaff and Brewer (1996) reported that little such research has occurred.

As a result, several authors recommended that the experiences of American Indian college students be explored in more depth (Deloria & Wildcat, 2001; Huffman, 2001, 2003; Jackson & Smith, 2001), and Huffman (2003) and Jackson and Smith (2001) called for qualitative interview studies that were designed to explore the experiences of students as they related to their being American Indian in a mainstream college

environment.   Huffman (2003) also reaffirmed his earlier prediction that the personal experiences of students would yield crucial information about how students' perceptions and experiences on campus and in class are tied to their cultural background.

All questions asked for personal impressions, not for what participants considered to be true, and the focus of several questions was the relationship of participants with their instructors. The importance of such relationships for American Indian students has been stressed repeatedly in the literature (see above). Other questions addressed instructor helpfulness, instructional methods, and testing. Questions were based on success factors mentioned in the literature and written to be open-ended to elicit more than a yes/no response.

Based on the definition given by Rossman and Rallis (2004), all interviews were standardized, meaning that all participants were asked the same set of questions. A tree-and-branch model (Rubin & Rubin, 1995) was used to allow the researcher to formulate questions for the specific branches of the tree he wished to explore without taking away his opportunity to follow up on answers and explore new branches as they came up during the interview. All interviews were recorded and transcribed in a slightly-edited format according to Powers (2005), meaning that everything was transcribed verbatim (including pauses, sounds, etc.), but standard spelling and punctuation were used.   Each participant signed an informed consent form before the start of the interview. The interviewer was a faculty member at SCIT at the time of the interviews, but none of the participants were his current students, and since they were all graduating, none would be his future students.

Findings

Participant comments reflected the role instructors play in student success. Participants stated that they had learned something every day and that they had done better and learned more at SCIT than at institutions previously attended, including four-year colleges: "I've done better here or learned more here than anywhere else." The two major themes can be divided into instructor attitudes as well as teaching and learning. A positive instructor attitude for participants meant that their instructors were enthusiastic, encouraging, available for questions, focused on student need at all times, willing to help when needed, and willing to establish more than a classroom relationship with their students. As for teaching and learning, participants enjoyed collaborative work, limited self-direction, hands-on learning, step-by-step instructions, individual attention from their instructors when they were struggling, and instructors with an industry background who were well organized in class.

By far, the most vital contribution to student success appeared to be instructor attitude, mentioned by all participants. On several occasions, they spoke about the need for instructor enthusiasm, for showing clear signs that instructors enjoyed their field and enjoyed teaching the material to novices: "[It helped me that instructors were] also having a good time doing it, actually wanted to be there instead of just kind of teaching on the board and leaving." What is important to realize here is that possessing such an attitude is not sufficient in itself; instructors must also exhibit incontrovertible evidence of enthusiasm.

One indication of enthusiasm was being encouraging. Participants wanted their instructors to project a positive attitude, meaning that they told students to persist, reassured them that they could master the material, supported student

ideas for projects, and were complimentary any time someone did well in class.

The second proof of enthusiasm was being available. Participants appreciated it when instructors were actually present for their office hours: "They're always there at their office hours when they say they were going to be there." However, even more important was a willingness to go above and beyond the required. Participants were grateful for instructors who were willing to stay behind after class to answer questions, who spent time outside their posted office hours to help students, and who always put student needs first, even it is was inconvenient or time-consuming for the instructor at that point: "Every time I had a question or wanted him to help me with this problem, he was willing to do it." Participants needed to know and personally experience that their instructors' focus was on them.

A corollary to student focus was a desire to have one's own insecurities and life circumstances acknowledged and respected. Participants appreciated instructors who learned student names quickly, who were proactive about continually informing students about their progress and requirements to earn a certain grade, and who showed flexibility when students had personal or family emergencies: "I feel like I'm not a typical student fresh out of high school. I do have a life outside of this place that's very important." Even if such actions on the part of instructors seemed redundant (such as repeating requirements already listed in the syllabus) or disruptive to course progress, they nonetheless indicated that instructors focused on what their students needed at that time, not what the course schedule demanded.

Finally, a willingness to help was mentioned a number of times. This success factor was stated very precisely by students—although they certainly appreciated any help, it was equally important that instructors did so willingly and gladly.

Instructors were exhorted to keep in mind that helping students was part of their job, and two behaviors favored by students were proactive help without having to be asked and tutoring outside of class to catch up those students who had fallen behind. One behavior that fascinated several participants was a willingness of instructors to help even those students not currently enrolled in their classes. One participant stated that receiving this help made her feel welcome and at home.

This last comment segues nicely into the next facet of instructor attitude, and that is a willingness to establish more than a classroom relationship with students: "[I] never had instructors that were that personable." Participants mentioned several times that being friendly and warm made instructors more approachable and students more likely to ask questions when they had not understood something. To a number of participants, knowing their instructors on a personal level and making a personal connection were important, especially because it made the other person appear more supportive: "If I needed something, I would not feel funny going to ask them for something." Examples of personal relationships were joking with students, chatting about non-class topics after class, and acknowledging students and talking with them when walking across campus. One participant even mentioned that his instructor invited him to play golf on occasion, which he gladly took advantage of.

Participants thus made a clear connection between having a personal relationship with their instructors and perceiving them as willing to help. Again, no matter how supportive and helpful instructors were, if they did not strive to develop a warm, caring relationship with students at the same time, students were less likely to ask questions, less likely to make any question asked specific, and less likely to approach the instructor with comments or concerns.

Another way for students to feel part of a community was through approaches to learning, and one of those approaches was collaborative work. Participants found study groups outside of class very popular, as they did working with and learning from classmates in class. They considered such experiences to be beneficial, and they also enjoyed the community and fellowship that collaborative work created: "The biggest thing for me that really helped me [was] when we do our group activities." At the same time, they were less enthused about graded group projects. Despite the upsides of collaboration, participants were sufficiently focused on their grades that the risk of having an irresponsible or neglectful group member lower everyone's grade was enough to make them leery of group projects.

What participants did enjoy, on the other hand, was collaboration in self-directed, hands-on learning. Both were desirable whereas only limited tolerance existed for experimental or experiential learning. A strong preference was expressed for step-by-step instructions. Participants wanted self-direction, but they did not like to be thrown into a problem-solving experience without detailed instructions and a safety net: "I liked it better whenever they went over it first and then give us some time for it to soak in, and then we got to get out there." After the instructor had introduced the work in detail and had explained what was to be learned, students were willing to learn by themselves and to solve problems on their own, but only if the instructor remained in the background and was ready to help out in a proactive fashion: "You learn as you go, but if you get stuck, the instructor will help us out just to get past that point, but then we're on our own again. For me, that's the best way to do it." There was no desire to work completely independently.

At the same time, the active involvement in learning that self-direction affords was important for participants, and as

a result, lab courses or lab components of other courses received favorable comments. They liked interaction in class, meaning that they wanted the instructor to ask questions, listen to students' ideas, and give students an opportunity to be involved without letting them become frustrated with new material. Participants explained that lab courses and self-direction afforded them the opportunity to learn according to their personal styles.

The one comment that was made most often was a desire for "hands-on" learning. This was, after all, technical education, and many participants chose their fields because they could work with their hands. Having the opportunity to actually try things themselves and to work with equipment helped them meet their learning goals: "I learn best [when] I actually do something than just seeing or hearing it from somebody." To accomplish these goals, they also preferred demonstrations to explanations. If a process was shown instead of explained, participants felt that they had a better understanding of which skills were needed to accomplish a task and what the learning outcome would be: "Once they start doing it and show me how to do the stuff, I pick it up pretty easy." These demonstrations, too, needed to be conducted in step-by-step fashion.

In conjunction with the desire for hands-on learning, participants realized that sometimes explanations would be necessary, but they wanted these to be given in simple terms. It was important that complex technical information be simplified so that beginners could understand, that material be repeated several times if needed, and that instructors not move on until everyone had understood. If participants had to ask for help, they preferred that it be given in one-on-one settings. One could say that participants craved individual attention from their instructors, which is supported by their earlier statements about needing to develop a personal relationship to

do well in class: "You need that one-on-one attention to be able to ask your question to be shown what you're not understanding." Participants stated that individual attention allowed them to ask questions unique to their learning problems and allowed instructors to tailor explanations to their needs and learning styles.

Two more conditions of effective teaching were mentioned. Participants needed instructors to be well organized. This meant coming to class prepared, having a lesson and semester plan, and not making any sudden changes to the curriculum or to due dates. Participants could learn best if they knew ahead of time what was expected of them and what they would have to do.

Finally, there is instructor background. Although not directly a teaching issue, several participants stated that industry experience was helpful for instructors and that students were more willing to learn if the instructor had worked in industry. Although it was mentioned that some instructors with industry background had trouble simplifying content enough, participants prized industry experience because they could learn real-world tricks and tips, instructors could illustrate content with examples from their experience, and instructors could function as a liaison to potential employers. It should be emphasized, though, that industry experience was valued not for how it might help the instructor be a better teacher but how the instructor's experience could give the students an advantage upon entering the workforce: "That's what you need. Somebody that's been there, come back, and is teaching your class. I mean, you can't get it any better than that."

Discussion

An overall assessment of participant responses reveals a pronounced desire for a modified pragmatic approach to teaching on the part of instructors. To review, educational pragmatism advocates a learner-centered approach that includes interests and experiences of students while offering them opportunities for active learning. Pragmatism tries to use experimental learning to develop problem-solving and teamwork skills, and the instructor's role is that of a facilitator helping students to integrate previous and new knowledge and experiences (Elias & Merriam, 2005). Many of these ideas were expressed by the participants, but there was a clear subtext of needing ongoing support and structure.

Implications for Instructors

The first implication for faculty members is to not only be prepared but also show preparedness. This can be accomplished through having detailed lesson plans, organizing materials needed for class, and showing preparedness in class by having everything ready and not fumbling through notes or handouts. Instructors must preview each day's lesson by telling students what the learning outcome for the day is and which skills will be used to reach it, making sure that all assignments come with detailed instructions, and following the plan announced at the beginning of class. Neither last-minute changes to schedules or test dates nor unannounced activities or exams are appreciated. Instructors might also benefit from preparing their lecture notes with several different ways of explaining the same content and using these alternate ways as needed. Further, they also need to break down new material into chunks that are as small as possible.

In addition to showing preparedness, it is equally important that instructors show enthusiasm for their chosen profession. Participants provided concrete examples of what that meant for them. They wanted instructors to be encouraging and reassuring, telling students frequently that they can handle the learning and that instructors are there to help them. Instructors must be available before, during, and after class and office hours because students pay keen attention to whether or not instructors follow through on their claims of helpfulness. Many students are reluctant to ask for help, so instructors must keep an eye on their classroom or lab and approach any student who appears to be struggling. This willingness to help is always appreciated. Finally, students need to experience that they are the center of their instructors' time on the job. That means simple things such as learning students' names quickly but also seeing students as individuals with their own life circumstances, not just a number in a crowd. In practical terms, participants wanted instructors to be understanding if they fall behind in their studies as a result of outside influences and to offer help and tutoring. Students' individual needs have to supersede the need of the class as a whole at any time.

Instructors should curtail lecture as much as possible. The preferred approach is to demonstrate a new skill in small steps and then let students try each step until they have had a chance to feel comfortable performing the task before moving on. Such a desire for hands-on learning among technical students is no surprise. According to one expert, up to 50% of secondary school students are kinesthetic learners while educational delivery is still about 80% auditory (University of Illinois Extension, 2008). Workers also tend to drift toward careers that favor their learning styles, and college students tend to choose programs of study for the same reason. Kinesthetic students often prefer technical education because

of the opportunity to do something besides listen (Gray & Herr, 1998), hence the distaste for lectures and the preference for hands-on activities. Doing something instead of absorbing information seems to have a clear link to retention for some American Indian students.

Instructors must be patient, repeat new content as needed, and wait until everyone has understood before they move on. Students need the opportunity to explore new knowledge one step at a time; they become overwhelmed with multiple steps to be figured out simultaneously. Instructors must be available for one-on-one help as needed and, in fact, provide opportunities for personal attention; students crave this format, especially if they have questions or problems. Participants in this study requested time to let the new information integrate with the old before they would make an attempt at showing mastery. The implication for instructors is to emphasize the process and also to be responsive to the holistic learning style of American Indian students by always returning to the whole after each new step before proceeding.

The literature encouraged instructors to use more experimental and experiential learning (Bowman, 2003; Tierney, 1995; Wilson, 1998). Instructors could consider taking class time to have students work on small projects during which they can sit down with each student individually and offer assistance as needed, which supports student requests for self-directed, problem-solving, kinesthetic learning without letting them become frustrated when learning becomes challenging. Because of the use of equipment, technical courses tend to have a limited number of students, which can make it easier for instructors to let students work independently and give them one-on-one attention.

At the same time, while students practice, they should be allowed to collaborate on their skill development and training without having to worry about a grade. The literature

strongly clamored for more group work and more collaborative learning (Aragon, 2002; Carnegie Foundation, 1999; Cole & Denzine, 2002; Gilbert, 2000; Reyhner & Dodd, 1995; Tierney, 1995). The implication for instructors thus would be to build more self-directed, collaborative assignments into their lesson plans. However, the lukewarm endorsement by the participants requires a degree of caution. First of all, simply putting a number of students together in groups is not collaboration. Group work can be effective if (1) it is carefully planned, structured, and supervised so that the intended outcomes are met, (2) students are prepared and trained for such interaction, or (3) students choose to collaborate on their own for their learning.

Last but not least, instructors should use their industry experience to their advantage. Dukepoo (2001) cautioned against just focusing on tips and immediate workplace application while neglecting foundational knowledge, but instructors can still inject real-world knowledge into their teaching when students can benefit. Participants stated clearly that they appreciated any type of learning that might give them an advantage once they apply for jobs.

Implications for Research

What do the findings and the suggestions for instructors mean for research? Several issues come to mind, especially with regard to the differences between participant responses and findings in the literature.

The first theme that was notably absent from participant comments was helping one's community. Not a single student mentioned his or her community as motivation to persist, despite the fact that community focus is frequently and repeatedly emphasized in the literature as a crucial element in American Indian student success (Deloria & Wildcat, 2001;

Dyck, 2001; James, 2001a, 2001b; Pewewardy, 2001, 2005; Thomas, 2001). If anything, participants tended to complain about skewed values in their communities and incompetence in their tribal administration, and the people they desired to support were their immediate nuclear families. Does this mean that community involvement as a tool for American Indian student retention is a fruitless pursuit? Not at all, but some qualifications may be in order. As most of the participants in this study did not grow up in traditional families and none in reservation environments, they may not possess the community focus that students from elsewhere bring with them. Research must remain broad enough to include all students from all different backgrounds and not focus on approaches for only those who hail from reservation communities as proposed by Mihesuah (2004). In fact, finding ways to reconnect already successful but culturally distant students with their communities may drive the retention rate even higher and may be worth further investigation.

The same as above holds true for any inclusion of Native culture into instructional content. Participants desired to learn more about their tribes and cultures in history and culture classes, but there was no urge to have Native themes included in technical classes. Again, several reasons must be investigated here. Are students disinterested because of where they are from or because they are little involved with their tribal cultures? Would adding Native themes even if not specifically requested help the retention rate even more, or is this idea useful in some programs of study or possibly at tribal colleges but not in technology? Does every American Indian student need the focus on tribal culture (this does not argue whether this focus may be desirable), or can some be successful without it? How should we define "success" when it comes to American Indian students in the first place?

Another factor is instructional methods. Although the literature once again supported culturally sensitive teaching methods, not a single participant complained about cultural insensitivity. Much of what happened in the classroom and what participants requested (demonstration, time to work on their own, further demonstration if needed, performance only after sufficient practice) very much resembles the five-step process of learning for American Indians mentioned earlier, but the question that poses itself now is if maybe this process is just something common to technical education. Does technical education pedagogy somehow correspond well to American Indian learning styles? Is the solution that what we need more of is simply good practice? What participants described about their classrooms and what they preferred simply sounded like good practice that might benefit anyone. Is this the key? Is technical education pedagogy more palatable to those students who fail in traditional instructional environments? Does technical education methodology hold some of the answers about the success of not only American Indian students but also many other students? Where is the distinction between good practice and American-Indian-specific teaching methods?

In addition, although the potential effectiveness of teamwork for American Indian students has been discussed in detail (Aragon, 2002; Carnegie Foundation, 1999; Cole & Denzine, 2002; Gilbert, 2000; Reyhner & Dodd, 1995; Tierney, 1995), further research will be needed to assess collaboration when it comes to retention and graduation rates. What exactly is the correlation between collaborative work and retention, and how do assignments have to be structured and facilitated so that students derive the most benefit? Participants enjoyed collaborative work, but only to a degree and as long as it did not directly influence their grades. Which type of collaboration exactly is desired by American Indian students and under which conditions? Participants talked about study groups,

projects, and presentations, but those were often not graded efforts. Is there a difference when scores are at stake?

Finally, there is the issue of the philosophical underpinning of one's instruction. A number of authors (Alfred, 2004; Deloria & Wildcat, 2001; Grande, 2004; Mihesuah, 2004; Pewewardy, 2005; Wilson, 2004) have recommended that a critical philosophy with an emphasis on decolonization methodology be adopted to help American Indian students be successful, but what the participants in this study described very much echoed pragmatist educational ideals. Is pragmatism the overlooked approach in American Indian education? Without diminishing a need to engage in decolonization pedagogy to overcome harmful educational legacies, is this the right approach for everyone and every situation? Are educators painting themselves into a corner if they make decolonization the ultimate solution? Is it true that Native instructors who do not subscribe to decolonization "influence Native students in the wrong ways" (Mihesuah, 2004, p. 196)? How open should everyone remain to different philosophies, and in which learning contexts are certain philosophies most effective?

Summary

To which degree the success factors mentioned by participants are factors for American Indian students in particular or might apply to all technical students will have to be explored through further research. More research will also be needed to determine if good instructional practice in technical education is truly an ethnic or cultural issue. Will students from different cultural backgrounds require different instructional methods, or is there a core of good classroom practice that can help anyone be successful regardless of background? Technical education pedagogy appears to be well

received by students who struggle in traditional mainstream classrooms. What exactly is the correlation between student background and instructional design and methods?

Instructors with American Indian students in any discipline might thus consider adopting some of the practices identified as success factors. Can instructors find more opportunities to demonstrate competencies or provide examples for students? Is there a way to organize some class periods as workshops where students work on their skills with help from their instructor as needed? Is there a possibility for collaboration among instructors from different departments to show students how the knowledge, skills, or attitudes they acquire in one course help them manage another, seemingly unrelated course better? Is it possible to take a pragmatist stance and allow some flexibility in course outcomes based on students' backgrounds and needs as long as certain competencies are met? Based on the responses from this study's participants, all these questions deserve some serious consideration if faculty members are truly dedicated to the success of their American Indian students.

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