Knowledge River: A Case Study of a Library and Information Science Program Focusing on Latino and Native American Perspectives

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ABSTRACT

This article discusses the development of Knowledge River, a program at the University of Arizona School of Information Resources and Library Science established through several Institute of Museum and Library Services grants designed to recruit Latino and Native American students to the library and information science (LIS) profession. Knowledge River (KR) was designed as a national model for increasing diversity in information organizations and LIS programs. The article describes the KR model and elements of the program that have increased its success. Included are participation in a residential cohort, real-world library work experiences, and formal mentoring by KR graduates and other ethnic minorities in the field. Knowledge River has served as a catalyst for increasing awareness of diversity issues and multiple perspectives in addressing issues in the LIS field. Knowledge River has also resulted in a requirement that all LIS students enroll in at least one diversity course. This article also provides a retrospective analysis of the KR model and presents a theoretical framework for developing future LIS diversity programs such as KR.

INTRODUCTION

Historically, library and information science professionals have primarily reflected mainstream populations. However, changing demographics in the United States have resulted in rethinking how library and information science (LIS) services are delivered and who delivers them. To accomplish diversification of the LIS profession Wheeler (2005) explains that "librarians must possess a level of cultural competency that enables them to function successfully and to provide effective information services

within a racially and culturally diverse society" (p. 181). Efforts to reach the goals of infusing the profession with culturally competent individuals and ensuring the delivery of multicultural LIS education have been supported by the American Library Association for decades (Du Mont, 1988; Josey, 1993; Randall, 1988). For example, in the *Standards for Accreditation of Master's Programs in Library & Information Studies* (ALA, 1992), ALA recommended that LIS curricula respond "to the needs of a rapidly changing multicultural, multiethnic, multilingual society, including the needs of underserved groups" (p. 12).[1] However, more than two decades after the standards were first introduced, the profession still struggles to demonstrate improvement in meeting the goals. Widespread efforts to educate, recruit, and retain culturally competent students from diverse cultural and ethnic backgrounds to fill positions as school, public, and academic libraries as well as other areas within the LIS profession have been less than stellar and have fallen short.

As an example, the population of Latinos has increased to over 15 percent of the population in the United States today and is expected to comprise 30 percent of the population by 2050 (Aizenman, 2008) but Latinos make up only 1.8 percent of the library workforce (Randall, 1988) and represent only 3.7 percent of enrollment in LIS schools (Saye & Wisser, 2003). Native Americans are equally underrepresented in the LIS profession. While they represent 3 percent of the population, they make up only .4 percent of LIS students (Saye & Wisser, 2003) and made up only .2 percent of the library workforce in 1988 (Randall, 1988).

In part the lack of success may be attributed to a lack of understanding about what is required to ensure success of diversity programs. Successful diversity programs in LIS have existed in the past but little if any analysis of the elements of success has been carried out. For example, a LIS program that demonstrated great success was the Graduate Library Institute for Spanish-Speaking Americans (GLISSA). Established in 1976, at the University of Arizona library school by Dr. Arnulfo Trejo, who envisioned the need for Latinos in the profession, GLISSA was extremely successful in educating and placing Latinos in librarianship. Despite its success, limited information is available on the GLISSA program (Trejo, 1978; Trejo & Lodwick, 1978).

A more recent example of a highly successful diversity program is Knowledge River, a program established to increase Latino and Native Americans in the LIS profession, which was built on its predecessor, GLISSA. This LIS program at the University of Arizona School of Information Resources and Library Science has successfully recruited and graduated a high number of Latinos and Native Americans. The Knowledge River model incorporates several elements that contribute to its success: a cohort experience, mentoring, and real work experience. These elements in addition to financial support from the Institute of Museum and Library

Services have resulted in one of the most successful LIS programs in the United States. This article examines the Knowledge River (KR) model retroactively and analyzes KR from a theoretical perspective to explain its success. The analysis of the KR model provides a conceptual framework for understanding the KR program and also provides a guide for future LIS diversity programs. This article conceptualizes KR as a model created and developed as a LIS diversity program to move the profession more rapidly toward ALA's stated goals of diversifying the profession.

THEORETICAL BACKGROUND

Multiple theoretical lenses influence the creation and development of diversity programs. A theoretical framework that clearly applies to the Knowledge River model is found in the works of sociohistorical cultural psychologists Vygotsky (1978), Cole (1996), and Wertsch (1985; 2007). Each provides theoretical frameworks for designing diversity programs such as KR to which social interactions are considered essential elements to learning. Vygotsky (1978) theorized that learning occurs through social engagements with others within sociohistorical and cultural contexts. His theoretical structure was built on his work with children. However, Vygotsky's ideas are applicable to adult learners and provide a lens for understanding learning as a social process in which meaning is constructed from discussion among group members. Of particular interest are Vygotsky's ideas regarding the zone of proximal development, a construct which suggests that learning is facilitated through social interaction with instructors, and individuals with more experience as well as peers. The theoretical framework suggests that teaching and learning is improved through social engagement. The writings of numerous LIS professionals suggest that LIS education is improved through social interaction when diverse cultural perspectives are present (Alire, 1996; Balderrama, 2000; Cohen, 1980; de la Peña McCook, 2000; Grady & Hall, 2004; Guĕreña & Erazo, 2000; Holland, 1997; Jones, 1999; Peterson, 2005; Turlock, 2003).

Building a Framework: Concepts and Definitions

During the past several decades, as issues involving diversity, multiculturalism, ethnicity, and cultural competence have been discussed in LIS publications (Alire, 1996; American Library Association, 1999; de la Peña McCook, 2000; Du Mont, Buttlar, & Caynon, 1994; Holland, 1999; Josey, 1993; Moen & Heim, 1988) multiple meanings of key terminology associated with diversity have emerged. To set the stage for the following discussion of Knowledge River the following definitions are provided to establish a common understanding.

Diversity. Diversity refers to acceptance and respect for differences in culture, language, religion, ethnicity, and sexual orientation, which have become primary areas of interest in discussions about diversity (de la Peña

McCook, 2000; Josey, 1993; Holland, 1999). The term *diversity* has generally replaced the words *multicultural, ethnicity,* and *race,* which were strongly associated with affirmative action and equity issues. Some have argued that the shift in terminology is detrimental to the cause of equality (Pawley, 2006; Peterson, 2005) because the term *diversity* provides too broad an umbrella for social issues such as discrimination and preferences given to certain groups over others. In the KR program, diversity is used to define cultural, linguistic, and ethnic differences. The KR diversity program focuses on the ethnic, cultural, and linguistic backgrounds of Latinos and Native Americans. Diversity is also used to describe differences in perspectives and ways of thinking about reality, which would likely be found in LIS programs from recruiting Latino and Native American students.

Culture. Culture is defined as the daily activities that occur in the lives of groups of individuals or organizations (Rosaldo, 1989). Rosaldo's ideas move beyond anthropological notions of culture as systems, customs, and behaviors transmitted from one generation to the next (Bates & Plog, 1990), which are sometimes associated with the exotic cultures of "others" (i.e., ethnic minorities) rather than everyday practices of all individuals. In the KR program culture is used to describe the daily practices of Latinos and Native Americans. Cultural practices are examined in relationship to information environments and cultural differences evident in every individual recruited to KR. These differences are viewed as enhancing the overall LIS program.

Cultural Competence. Cultural competence is defined as a highly developed ability to recognize the significance of culture in one's own life and in the lives of others; to come to know and respect diverse cultural background and characteristics through interaction and association with individuals from diverse ethnic, linguistic, and cultural groups; and to fully integrate diverse ethnic groups into services, work, and institutions in order to enhance the lives of those being served by library professionals (Montiel-Overall, 2008). This definition from a recently proposed cultural competence model for librarianship proposed by Montiel-Overall (2009) builds on definitions of cultural competence in other fields (American Psychological Association, 2003; Campinha-Bacote, 1999; Cross, Bazron, Dennis, Isaacs, 1989; Sue, Arredondo, & McDavis, 1992). The goal of KR has evolved to include the broad definition provided above, specifically as it relates to sensitivity to diversity issues involving Latinos and Native Americans.

Ethnicity. Ethnicity identifies individuals' national origin, historical identity, and commonality with geographic areas or language groups (Cohen, 1980). In the past, European groups (white ethnic) have focused on the ethnicity of African Americans, Asians, Latinos, and Native Americans (Pawley, 2006). As a result, the term *ethnicity* is often used to refer to minority groups and in particular "people of color" (de la Peña McCook,

2000). The broader use of ethnicity in discussions of ethnic groups such as Irish, German, and Norwegian is less common than the narrow use to define specific groups such as African Americans (Glazer, 1977). Knowledge River focuses on two ethnic groups, Latinos and Native Americans, and recruits students from Latino and Native American ethnic backgrounds (or individuals from other ethnicities who demonstrate an understanding of and a commitment to Latino and Native American issues).

Race. Race, a social construct (American Psychological Association, 2003) used to distinguish humans by the color of their skin, is intentionally not used by the authors of this article for the following reasons. First, it does not get at the heart of the social issues encompassed by discussions of diversity and culture used in the article. Second, the focus on color of skin is often superficial and often more important issues such as language, culture, social injustice, poverty, and inequity are overlooked.

Considerations for Diversity Program Development

In designing a diversity program such as Knowledge River, consideration must to be given to several important aspects of the program, which appear to ensure success. Included are recruitment and retention, and curriculum reform. Within these areas are also ancillary considerations including mentoring students and connecting students with community and with members of the profession. These are complex issues and require a broad understanding of current LIS culture as well as an understanding of the cultural backgrounds, experiences, and motivation of students. Recent literature on career choice indicates that family considerations as well as factors such as spirituality, religion, and motivation for social service are "constraints or motivators" for choosing a particular career path (Duffy & Dik, 2009, p. 39). The following sections discuss these and other challenges in developing diversity programs within LIS education.

Recruitment and Retention and Mentoring

Recruitment of ethnic minorities to the LIS profession is a challenging endeavor that requires careful consideration of students' backgrounds and needs (Dawson, 2000; Guĕreña & Erazo, 2000; Liu, 2000; de la Peña McCook, 2000; Patterson, 2000; Robbin, 2000; Yamashita, 2000) and opportunities available to them once they enter the profession. (See Moen & Heim, 1988, for a discussion of library positions envisioned for librarians in the new millennium in cataloging, children's services, science, academic, and school libraries). Although early studies in career choice theorized that individuals selected careers by matching values, interests, skills (Dawis & Lofquist, 1984; Holland, 1997), self concept (Savickas, 2002; Super, 1990), and ability to perform certain tasks (Krumboltz, 1996; Lent, Brown, & Hackett, 1994), ethnic minorities may base their decisions to continue their education on external factors unrelated to these

reasons. For example, a study of Native Americans living on the Northern Plains provides insights into reasons influencing Native American career choices. These include family, service, personal satisfaction, and contributions to community, which would result from selecting one career over another (Juntunen, Barraclough, Broneck, & Seibel, 2001). The following statement by a participant in the study illustrates this: "When I decided to get into school, I was undecided what to do and I [saw] the demand for certain professions in the Indian country. That's what really motivated me then" (p. 279).

A second challenge in developing and sustaining diversity programs in LIS schools is retention of students, particularly Latino and Native American students. Pottinger (1989) reported that attrition rates at four-year institutions for students living on the reservation were over 75 percent. Latino attrition is also extremely high (Mcfadden & Zepeda, 2007). Although students who complete a bachelor's degree represent a special group who have overcome many obstacles to education that often affect ethnic groups (e.g., transportation, adequate undergraduate experiences, financial needs), these challenges do not go away in graduate school. In fact, they are often compounded for older graduate students who often face greater financial responsibilities such as starting a family or supporting aging parents.

Additional challenges in recruiting and retaining ethnic minorities to LIS programs include lack of knowledge about the profession by potential recruits (Hollaway, 2005) and persistent negative images of librarians (Moen & Heim, 1988). Too few faculty to mentor students once they are admitted (Dunkley & de la Peña McCook, 2005) and lack of course offerings related to diversity issues (Dunkley & de la Peña McCook, 2005; Neely, 2005) are also challenges for ethnic minorities to overcome. Finally, limited financial support to stay in school (Alire, 1996; Josey, 1993) and the prospect of low professional salaries once students have graduated (Neely, 2005) are additional serious challenges in recruiting and retaining ethnic minorities.

Lack of positive experiences with libraries for Latinos and Native Americans is another factor in recruitment (Guĕrña & Erazo, 2000; Patterson, 2000). For Latinos, a factor negatively affecting recruitment is the perception that libraries do not address linguistic needs of Spanish speakers; although progress has been made in shifting Latinos' perceptions of libraries toward more positive views, 46 percent of Latinos still do not use libraries due to the lack of Spanish speaking staff or access to Spanish language materials (Flores & Pachón, 2008). A similar situation exists for Native Americans who also have a history of being underserved and underrepresented by the LIS profession (Patterson, 2000).

For both Latinos and Native Americans, recruitment and retention largely depend on individual contact with professionals who are willing

to convince applicants of the benefits of a career in librarianship and the unique contributions they can make to the profession (Neely, 2005). Recruitment also depends on incentives, particularly financial support for graduate studies (Josey, 1993; Neely, 2005; Zhang, 2009). Addressing these issues as well as the personal needs of recruits is critical to the success of programs for ethnic minorities such as KR.

Curriculum Reform
Another major consideration in developing and sustaining a diversity program such as KR is "curriculum relevance" (Randall, 1988, p. 16) and ensuring that the cultural interests of ethnic minority students are met. Traditional LIS curriculum has not generally included minority perspectives nor has it included topics addressing issues of concern to ethnic minorities such as social justice, racism, and cultural diversity. Figure 1 illustrates various stages of LIS educational programs as they incorporate diversity issues into the curriculum.

The leftmost drawing depicts a traditional LIS curriculum. Diversity issues are perceived as special topics outside the core curriculum. The center illustration shows an LIS curriculum in transition. The drawing on the far right illustrates an LIS program in which diverse cultural perspectives and issues are fully incorporated into curriculum and instruction. In this illustration, multiple cultural perspectives are woven into the fiber of the LIS curriculum. The LIS curriculum is redesigned to include diverse cultural perspectives, which are considered a core value of the LIS program. Input from cultural groups ensures that multiple cultural perspectives and views of reality are included in teaching and learning within the LIS program.

This model has been proposed over the years as a way to improve the LIS education for future LIS professionals (Abdullahi, 2008; Chu, 2009; Welburn 1995; Wheeler, 2005; Winston, 2005). However, few programs nationwide have fully integrated diversity courses and diverse cultural perspective into all aspects of LIS education. The KR program at the School of Information Resources and Library Science (SIRLS), University of Arizona, attempts to replicate the model on the far right of figure 1. All LIS students must now enroll in at least one diversity class as a requirement for graduation.

In preparing for a curriculum reform of the type identified on the far right of figure 1, the SIRLS faculty participated in a diversity workshop organized by the director of SIRLS. As recommended by Winston (2005) an experienced facilitator provided the workshop, resulting in open discussions among faculty about curriculum changes.

The benefit of integrating diverse cultural issues into LIS education has broad implications to LIS teaching and learning (Knefelkamp & David-Lang, 2000); for example, improved intellectual development is
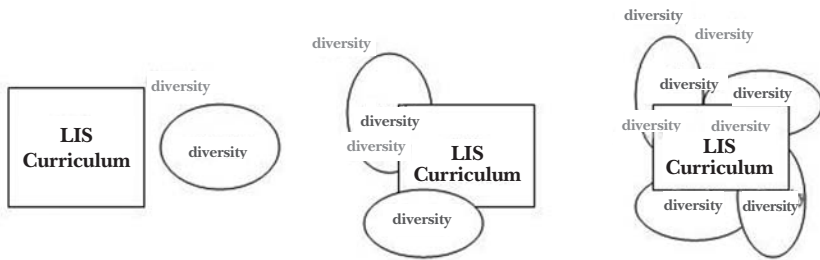
Figure 1. Stages of Incorporating Diversity into LIS Curriculum

attributed to incorporating diversity into teaching. Other benefits identified in the literature are reduced prejudice and increased understanding of diverse perspectives. (For further discussion of benefits of integrating diversity into LIS curriculum see Kim & Sin, 2008.)

Ensuring the success of curriculum reform, however, requires extensive planning and communication (Wheeler, 2005). One form of communication among faculty and students is through surveys, which have been used successfully for sharing perspectives, planning, and evaluation. For example, Kim & Sin (2008) used a nationwide Web-based survey to collect data on recruitment and retention of ethnic and cultural librarians' experiences. The survey showed that not all ethnic minorities have the same needs and often tailor-made solutions are required to adequately meet the needs of different populations. Rural Native Americans, for example, indicated a preference for distance learning options rather than relocation to an LIS institution to pursue an LIS degree.

Connecting with Community
The literature also suggests that many ethnic minorities want to connect with their communities upon graduation and that ethnic minorities perceive community involvement as an important responsibility (Luna & Prieto, 2009; Montiel-Overall, 2008). Chu (2009) and Roy, Jensen, and Hershey Meyers (2009) suggest service learning for LIS ethnic minority and other students as a strategy to bridge theory and practice and to provide students with real-life experiences in communities. Service-learning is a pedagogy that integrates professional learning experiences and academic curriculum (Billig & Eyler, 2003; Eyler & Giles, 1999; Furco & Billig, 2002; Kraft, 1996), and helps students meet educational goals while providing community service of interest (Roy, et al.). Service learning also helps students develop interpersonal skills and social responsibility (Eyler & Giles, 1999; Eyler, 2000), two essential attributes required of LIS professionals to adequately provide culturally competent services to communities (American Library Association, 1999). A service learning component was recently added to the KR curriculum with considerable success.

KNOWLEDGE RIVER

A Brief History and Background

From its inception, Knowledge River benefited from the leadership of individuals who played major roles in the development of courses addressing diversity at the LIS graduate school program at the University of Arizona.

As previously mentioned, the Knowledge River programs at the University of Arizona was preceded by the Graduate Library Institute for Spanish-Speaking Americans (GLISSA) founded by faculty member Arnulfo D. Trejo. Between 1976 and 1980, the GLISSA program educated fifty-four Latino librarians (Guёŕña and Erazo, 2000) with Dr. Trejo being directly involved with recruiting and teaching students. An activist and advocate for Latino librarians, Dr. Trejo set the tone for recruitment of Latino librarians, and provided a forum for discussion of issues related to the needs of the Spanish-speaking population (Trejo, 1978).

The forward-thinking of diversity advocate Carla Stoffle, dean of the University Libraries and Center for Creative Photography, promoted the creation of Knowledge River as a way of building on the groundwork that Dr. Trejo had developed in the 1970s. Stoffle, along with Patricia Tarín, collaborated to establish the initial framework for KR. Tarín's vision, creativity, and problem-solving abilities were the driving force behind the creation of the program and as its first director, KR grew and flourished. With the unwavering support of directors of SIRLS, Brooke Sheldon and Jana Bradley, as well as the significant support from campus partners such as the University of Arizona Libraries, the program found strong institutional support.

The Knowledge River Model

Knowledge River was initiated through the support of a federal grant from the U.S. Institute of Museum and Library Services (IMLS). IMLS grant funds, combined with institutional support from the School of Information Resources and Library Science (SIRLS) and community partners, have supported the Knowledge River program.

Knowledge River (KR) was created to recruit Latino and Native American students to the LIS profession in order to improve services for a more diverse society. Knowledge River's goal was to provide a master's degree education in library and information science to Latinos and Native Americans. The educational experience was designed to meet the learning needs of Latinos and Native Americans, and to address the information needs of ethnic and cultural populations they represented. The KR program was also designed to be successful in recruitment and retention of Latinos and Native Americans by meeting their financial needs, creating cohorts for students, providing specialized advising and mentoring opportunities, providing real-world work experiences, offering a curriculum

infused with diversity components, and developing leadership skills through professional development and opportunities to associate with leaders in the LIS field (see table 1).

Knowledge River Advisory Board. A KR advisory board was established from the very beginning to provide support and guidance as the program was initiated and developed. The advisory board included representatives from key stakeholder groups, such as Hispanic and Native American librarians and professionals, representatives from the University of Arizona and partner institutions, members of the wider Arizona community, leaders and experts in the LIS profession, and other individuals with subject expertise (e.g., first and second language acquisition specialists and literacy specialists). Later advisory boards have also included KR alumni as well as KR current student representatives.

Knowledge River Financial Aid. Knowledge River was initiated through the support of a federal grant from the U.S. Institute of Museum and Library Services (IMLS). Grant funds, combined with institutional support from the School of Information Resources and Library Science (SIRLS) and community partners, have allowed the program to graduate 102 students since 2002, including sixty-seven Hispanics and thirty-five Native Americans.

From the beginning, Knowledge River invested in collaborative relationships with cultural and educational institutions on and off campus to provide work experiences and outreach initiatives. Library partners and supportive departments on the University of Arizona campus include The University Libraries of the University of Arizona (UA), UA Law Library, Arizona Health Sciences Library (AHSL), Special Collections, and the Arizona State Museum. KR's major off-campus partner has been the Pima County Public Library (PCPL) system, with branch libraries throughout the Tucson area. KR also partners with the REACH Pima County Cervical Cancer Prevention Partnership at the University of Arizona Center of Excellence in Women's Health. Two additional partners are local school districts, the Tucson Unified School District and Sunnyside School District in Tucson, which serve Hispanic and Native American populations.

The dedication of Knowledge River partners has allowed the program to shift financial support for students from grant funds toward graduate assistantships as the primary means of financial support. Each year, partner libraries set aside funds to hire Knowledge River students as graduate assistants. This financial support for graduate assistantships is critical for recruiting and retaining KR students. In addition to the stipends earned through graduate assistantships, Knowledge River scholars receive a tuition waiver for up to twenty hours of work per week at assigned locations (e.g., Arizona Health Sciences Library (AHSL)). For one academic year for a non-resident student, the amount of financial support is close to $50,000, which includes the tuition waiver, course fees, and salary. This is

Table 1. KR Program Elements

Financial Support	Work Experience	Cohort Support	Professional Development	Curriculum	Mentorship/ Leadership
Tuition waiver from graduate assistant-ship	Graduate Assistant-ships in local libraries, WE Search Program, & KR office	All students of a cohort take a semester-long course together	Student conference travel funds	Diversity component required in all SIRLS courses	Invited guests to present at KR
Stipend (course fees)		Cohort-building activities each semester		Diversity across the SIRLS curriculum	
Salary from graduate assistant-ship		Participation in student organizations diversity		Well-known experts in issues teach a number of SIRLS courses	Networking opportunities

Note: WE Search, initiated in 2006, provided additional IMLS support for KR students.

a tremendous benefit to many out-of-state students who would not be able to afford the non-resident tuition on their own.

The program's initial partner, the University of Arizona Libraries, continues to support the program by providing graduate assistantships to Knowledge River students as well as a mentorship program for KR students. The KR liaison from the main campus library coordinates the graduate assistantships and maintains contact with the Knowledge River program manager.

Knowledge River Work Experiences. By having opportunities in libraries on campus and in the public libraries, KR students are exposed to a breadth of professional library experiences. For example, students who express an interest in medical librarianship are placed at AHSL where they are exposed to medical librarianship and are often provided financial support by AHSL to attend medical library conferences and professional development workshops. Pima County Public Library hires five to six Knowledge River students each summer and fall and places them in neighborhood libraries to work primarily with youth services librarians in developing programs aimed mostly at minority refugee and immigrant populations. Spanish-speaking KR students who work at the public library are in great demand and highly valued.

Another early champion of Knowledge River was the Arizona State Library, Archives, and Public Records. The State Library provided seed funds to help establish the program, collaborated with SIRLS to provide internships and graduate assistantships to KR students, and provided

initial seed money for diversity faculty. Knowledge River students have worked in tribal libraries through the State Library partnership, including the Dr. Fernando Escalante Community Library and Resource Center on the Pascua Yaqui Indian Reservation and the San Xavier Learning Center and Library on the Tohono O'odham Indian Reservation.

In addition to placements in public and academic libraries locally and on tribal reservations, Knowledge River students have had opportunities to work as graduate assistants in WE Search (Wellness Education), a program at a local high school serving primarily Latino students. The program was initiated in 2006, to provide opportunities for KR students to participate in outreach and workforce development by mentoring high school students in developing health information-seeking skills. Knowledge River students mentor and teach small groups of high school students about health issues in their community. Knowledge River students focus on developing health information literacy and providing hands-on instruction about how to find and evaluate health information. The experience for both KR students and the high school students was designed to demonstrate the power of information to change lives. The WE Search program provides a small stipend to high school participants and additional financial support for KR students.

Knowledge River graduate assistantships are also available for students to work with the KR program manager and with SIRLS faculty. Knowledge River students provide essential support to the KR program by assisting with recruitment, coordinating social and outreach events, assisting fellow students, and assisting the KR project manager with day-to-day operations of the program. Knowledge River students also have graduate assistantships with SIRLS faculty to assist faculty in finding relevant resources on diversity issues that can be woven into course content. The ultimate goal is to create an environment in which diversity issues are part of the overall curriculum of SIRLS.

Cohort Development. Cohort building begins with the first required class for the SIRLS master's degree, IRLS 504: *Foundations of Library and Information Services.* Often informally referred to as "Library School Boot Camp," the course requires being in Tucson for a one week face-to-face intensive introductory course about the profession and on expectations of the SIRLS graduate program. The one week course takes place at the University of Arizona campus in the summer with KR students and other students admitted to SIRLS. The course is the first opportunity for the KR cohort to bond with each other and with other SIRLS students over a shared learning experience.

Cohort building continues during the IRLS 550 course, which is offered each fall semester and is a required course for all KR students. The course IRLS 550: *Information Environments from Hispanic and Native American Perspectives* is the foundations course that all KR students must take,

but it is open for any SIRLS student to take. The official course description is as follows: "The context for this course is information environments in a multi-cultural society. After an initial exploration of multiculturalism, community and co-cultures in general, the course focuses on the perspectives of two co-cultures: Hispanics and Native Americans. The information environments include the media, museums, libraries, archives, and the Internet."

Offered as a face-to-face course, IRLS 550 provides KR and SIRLS students a safe harbor to explore information issues from the perspective of the two target communities, Latinos and Native Americans. In this course students wrestle with varied and unique concerns related to library and information science as well as issues that affect the targeted communities. Students often find that they have a lot to learn from each other as they become more immersed in discussions about cultural differences. For example, a Native American student with strong traditional beliefs may find that their worldviews conflict with a Native American student who comes from a less traditional background. A student from Bolivia will have a chance to discuss readings and issues with a student from Mexico, a student from Los Angeles, and a student from rural New Mexico. A Native American student who grew up in Phoenix can learn from a Native American student from Ohio. The cultural diversity within KR's Latino and Native American students requires considerable flexibility and tolerance to arrive at a meeting of the minds. The KR experience begins to shape students' cultural perspectives and their understanding that different ways of knowing is what makes the world of information complex and multifaceted, even within the same ethnicity.

Since the primary delivery of courses at SIRLS is online, face-to-face courses give students a chance to get to know each other in a non-electronic environment. After taking IRLS 550, many Knowledge River students elect to take the rest of their courses online. Having already developed relationships with other students, KR students are able to reach out to their fellow cohort members for help with assignments and projects in their classes throughout the program. Many KR students become active in the student organizations within SIRLS and hold elected offices within these organizations. These include the Library Student Organization (LSO), the Progressive Librarians Guild (PLG), and the student chapter of the Special Library Association (SLA). Additionally, the Tucson REFORMA chapter provides an opportunity for KR students and other SIRLS students to meet with and collaborate with professional librarians in the Tucson area, many of whom are KR alumni. REFORMA members also become mentors to KR students. This type of relationship building and networking has become a hallmark of the KR program.

Diversifying the Curriculum. The curriculum planned for KR students includes a wide range of courses designed to expand students' understanding

of diversity issues related to Native Americans and Latinos; strategies used by the LIS profession in addressing these issues. Over the years, KR has recruited well-known experts in the LIS field as lecturers for courses such as Issues, Culture, and Technology; Equity of Access for Diverse Populations; Health Issues for Latinos; Children and Young Adult Literature in a Multicultural Society; and Diverse Cultures, Communities and Libraries to name a few. Instructors for these classes have included individuals well known for their contribution to topics related to issues of culture and diversity.

These courses have been available to all students at SIRLS and have served to open the door to discussions about incorporating diversity courses into the regular curriculum. As mentioned, a diversity requirement resulted from these discussions and, in 2006, a diversity requirement for graduation from SIRLS was initiated, distinguishing SIRLS for its focus on diversity issues within the LIS curriculum.

Mentoring and Leadership Development. Because of the high demand for Latino and Native American LIS graduates, a mentor and leadership component of KR was designed as an integral part of the program. Leaders in the LIS profession have served as mentors to KR students and have also provided professional development. For example, panels of well-known LIS professionals have presented to KR students on various topics related to leadership, management, and other areas critical to their success. For example, John Berry, former editor of *Library Journal*, was a guest lecturer for several KR classes. During its first two years, Brooke Sheldon, author of several books on leadership and management, was co-instructor of the KR foundation course, IRLS 550, sharing her knowledge and expertise in leadership and management throughout the course. Knowledge River students have also had opportunities outside their class setting to meet and network with LIS leaders. Advisory board members have had opportunities to mentor KR students formally and informally. For example, social events have been planned for informal mentoring opportunities and to provide KR students with opportunities to network with KR advisory board members, instructors, invited lecturers and panelists.

University of Arizona faculty from SIRLS, the UA Library, and other departments at the University of Arizona, such as American Indian Studies, and Mexican American and Raza Studies, have also served as mentors to KR students.

Professional Retention and Career Development. Making the decision to pursue graduate education is not easy for many KR students. Because of the one week Tucson-residency requirement noted above, a potential student must be willing to temporarily relocate to Tucson if his or her residence is outside of the local area. This often means making a decision to be on leave from a full-time job or to make major adjustments in the family dynamics, such as childcare and eldercare. The consequences of these

adjustments outweigh the benefits of pursuing graduate education for some potential KR students. As observed by Patterson (2000), sometimes it takes years of encouragement for students from Native American backgrounds to feel that they are ready to apply to an LIS program. Because this is a major decision, especially for those who must leave behind a family and a community, the program places a high value on interacting with potential students to develop relationships throughout the often daunting application process. A KR student who made the sacrifice to move to Tucson writes:

> We have no MLS programs in [my home state], so I knew I'd have to leave the state to get my degree. I couldn't move my family, and so I knew I'd have to leave them for the time it would take me to get the degree. I traveled back and forth a lot. I did this knowing that the effort would be worth it—that in the end I would have a degree and be on my way towards having a career in the field that I wanted, as opposed to what I was limited to in my state. Also, with my background, the very idea of getting a professional degree was a really big deal, and the support of KR was like an extended hand, giving me the sense that it was something I could really do. (Personal communication)

To address the anxiety of relocating, potential applicants are immediately put in touch with a current KR student to open up conversations about life in Tucson and to provide relocation assistance, such as suggesting places to live or things to do in the community. Potential applicants are also reminded that many students finish the program within eighteen months, so the commitment to stay in the area seems less daunting. When recruiting for KR, students are made aware of benefits that come from being part of a cohort. Potential students frequently indicate that they were drawn to the idea of learning from and with other students in a cohort. Finally, students are also drawn to SIRLS for courses available with strong cultural components.

Indications of Success. The success of KR is evident in the graduation rates shown in table 2 and table 3. Table 2 provides data on enrollment and graduation of KR students from 2002–9. The program has graduated 105 students since the program was initiated, including sixty-eight Latinos and thirty-seven Native Americans. As of December 2009, there were twenty students in various stages of the LIS program, with thirteen students making up the latest KR cohort, KR-8. The average cohort size is fifteen students. Cohort KR-1 was the largest cohort with twenty students, and the smallest cohort was KR-6 with twelve students. The program's cohort for 2010, KR-9, may include up to twenty students. Since its inception, only ten students have withdrawn from the program, giving KR a 93 percent retention rate. Table 3 provides information on enrollment and graduation rates by ethnicity.

Future Directions

Knowledge River has found great success with the Tucson residency model that encourages social interaction and the building of strong relationships among cohort members. However, many interested students cannot temporarily relocate to Tucson to participate as part of the Knowledge River cohort. Native Americans living in rural reservation communities who have strong ties to their homeland often cannot temporarily relocate to participate in Knowledge River. Their ties to their communities and cultures are important to maintain, and give them a perspective that differs from individuals who leave the reservation. In order to maintain that strong sense of identity that comes from residing in one's homeland (Juntunen et al., 2001), the program is investigating ways to find alternative means to support these students without compromising KR's success in retaining and graduating students.

Recognizing that there is no true substitute for face-to-face interaction, the program is working to identify effective and culturally responsive strategies to overcome the limitations of developing relationships for online, distance education students. The incorporation of new technologies as well as program development that builds in brief, but required, in-person meetings, are possible ways of addressing this situation. Another possible means of supporting distance education students is to incorporate a peer-mentoring program in which more senior KR students are matched with incoming and/or distance education students. This method has been shown to have positive results for the retention of minority students, not only for the mentees, but also for the mentors (Savickas, 2002).

Another initiative that has been included in the program, but not fully explored, is service learning. Although service learning is a large component of the KR foundation course (IRLS 550), it is an area that can be expanded to give students greater practical and community-based educational opportunities. Being active in civic activities and giving students a sense of giving back to the community has been shown to give students, especially Latino students, a sense of belonging (Crisp & Nora, 2010). Outreach is certainly one of the major goals of KR, and incorporating more opportunities to be involved in the community will only enhance a student's educational experience. Loriene Roy's ALA presidential task force focused on service learning in LIS education has identified models of successful service learning approaches that have been used in LIS programs across the country (Roy et al., 2009). Current service learning used in the KR foundations course (IRLS 550) could be added to these models.

Conclusion

Knowledge River was created with two primary purposes in mind. First, KR was designed to educate Latino and Native American students to provide professional leadership in transforming the LIS field to meet the

Table 2. Number of Enrolled and Graduated Students 2002–9

Year	Started (at least 1 class)	Dropped out	Still enrolled	Graduated
Cohort				
2002 KR-1	22	1	0	21
2003 KR-2	15	0	0	15
2004 KR-3	19	2	1	16
2005 KR-4	18	2	0	16
2006 KR-5	21	4	0	17
2007 KR-6	14	1	1	12
2008 KR-7	13	0	5	8
2009 KR-8	13	0	12	0
Total	135	10	20	105

Table 3. Number of Enrolled and Graduated KR Students by Ethnic Area of Interest (Latino, Native American) for 2002–9

Year Cohort	Started (at least 1 class		Dropped out		Still enrolled		Graduated	
	NA	L	NA	L	NA	L	NA	L
2002 KR-1	6	16	0	1	0	0	6	15
2003 KR-2	5	10	0	0	0	0	5	10
2004 KR-3	8	11	1	1	0	1	7	9
2005 KR-4	6	12	0	2	0	0	6	10
2006 KR-5	7	14	1	3	0	0	6	11
2007 KR-6	5	9	0	1	0	1	5	7
2008 KR-7	4	9	0	0	2	3	2	6
2009 KR-8	6	7	0	0	6	7	0	0
Totals	47	88	2	8	8	12	37	68
Grand Total	**135**		**10**		**20**		**105**	

Note: Enrollment for ethnic groups shown include individuals who are not Latinos or Native Americans but whose area of interest focused on one of these ethnic groups.

needs of a changing social, cultural, and linguistic society. Second, KR was designed to diversify the LIS curriculum and instruction at SIRLS. The goal was to broaden the perspective about current course offerings in order to make them more inclusive in their focus on societal issues, particularly those related to culture and ethnicity. The KR model has succeeded in meeting these goals. It has successfully educated Latinos and Native Americans who currently hold positions in every area of the LIS profession. Several students are pursuing doctorates; others are directors and branch managers, academic librarians, health librarians, and law librarians. Knowledge River is successfully educating future librarians whose diverse perspectives will undoubtedly begin to change the profession. The program embraces Latino and Native American students as well as those who have extensive experience with Latinos and Native Americans and

are committed to issues involving these communities. The KR program demonstrates the strength of partnerships in the cultivating champions of cultural diversity in the LIS profession and transforming it into a field representative of communities served.

The KR model, funded by IMLS, deserves the national recognition it has received as an extremely successful LIS diversity program. The model has demonstrated its success in its high retention, graduation, and placement of Latinos and Native Americans in LIS positions through three main components: building cohorts, work experience, and mentoring by experts in the LIS profession. Other LIS diversity programs, which draw on these elements and the theoretical framework underlying KR, most assuredly could develop equally successful LIS diversity programs for the profession.

Finally, Knowledge River provides a model for increasing diversity in the profession and for developing a more culturally competent library and information science workforce. Knowledge River's true success is that it reaches beyond Latinos and Native Americans and provides students, faculty, and staff a greater appreciation, understanding, and respect for cultural and ethnic issues. Knowledge of these cultural issues by those entering the profession will inevitably have broad implications for the future success of LIS professionals.

Note
1. ALA *Standards for Accreditation of Master's Programs in Library & Information Studies* (2008) replaced the words "of a rapidly changing multicultural, multiethnic, multilingual society" to "a diverse society" (p. 7). Diversity is "defined in the broadest terms" (p. 14).

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