

# Information-Seeking Behaviors of Spanish-Speaking Populations: An Annotated Bibliography



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March 2007



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## Summary

The incorporation of newer and more sophisticated electronic and digital resources into library collections have created challenges for librarians charged with ensuring these technologies are useable and accessible to all. Although most libraries now provide online public-access catalogs and Internet computers, information illiteracy, language and cultural barriers are just some of the reasons that keep many ethnic and low socio-economic groups from fully utilizing these technologies. (Bertot, 2002; Fogel, 2003; Fisher, 2004; Liu, 1995; Pew Hispanic Center, 2007; Shapiro, 2003; Slate, 2002).

One type of technology that has become popular in Colorado is Colorado's virtual reference service, *Ask Colorado*. However, the Spanish queue of this service is underutilized. In an effort to promote this service to the Spanish-speaking population in the state, the Colorado State Library requested a review of the research on the information-seeking behaviors of Spanish-speakers.

The search was conducted using the following databases: EBSCO's Academic Search Premier, and Business Search Premier; Library Literature and Information Science; Education Resources Information Center (ERIC); Library Information Science And Technology Abstracts; University of Denver's Penrose Library online catalog; and Google Scholar. Boolean searches were done using the following terms: information-seeking behavior OR user behavior OR search strategies AND virtual library, OR electronic libraries OR digital resources AND Spanish-speaking people OR Latinos OR Hispanics.

The following annotated bibliography contains the most pertinent sources found. Although the literature covers a variety of fields and examines both theoretical and practical aspects of Hispanics and information-seeking behaviors, overarching themes were found:

- The Spanish-speaking population is very diverse and consists of peoples of various races, cultures, countries, beliefs and Spanish language dialects, (Alire, 1998; Bertot, 2002; Griggs, 1999; Spooner, 2001).
- There is a lack of research on the information needs, uses and behaviors of Hispanic populations, (Fleshman, 1995; Fisher, 2004; Rodney, 2002; U.S. Dept. of Health, 2006; Web Junction, 2007).
- Spanish-speakers prefer face-to face and/or group interaction, and they are more inclined to seek information from close family, friends and well respected, trusted community organizations/resources/leaders, (Alire, 1998; Bertot, 2002; Fiedler, 2006; Fisher, 2004; Fleshman, 1995; Liu, 1995; Maldonado-Young, 2002; Metoyer-Duran, 1993; Tanno, 2003).

- Nationwide, young Hispanics' (under 30) use of online technology for entertainment, health resources and e-mail is increasing, (Pew, 2001).
- Many studies show Hispanics believe that computer literacy and owning a computer is important, (Slate, 2002; Tornatsky, 2002; Wilhelm, 1997). However, they have the lowest computer ownership rate, highest high school drop-out rate and lowest rate of attaining a college degree, (Pew Hispanic, 2007; Slate, 2002; Tanno, 2003; Tornatsky, 2002).
- The importance of “gatekeepers” (agents of acculturation who disseminate information within their ethnic communities), (Metoyer-Duran, 1993) in the access and retrieval of information in Hispanic communities cannot be overstated. (Liu, 1995; Rodney, 2002).
- Libraries should understand the cultural facets of Hispanic subgroups and build relationships with community leaders to reach greater numbers of Spanish-speakers. (Alire, 1998; Bertot, 2002; Gross, 2005; Liu, 1995).
- Language barriers and low literacy are two of the main barriers to Spanish-speakers seeking and using information. (Alire, 1998; Bertot, 2002; Fisher, 2004; Fogel, 2003; Wilhelm, 1997).

### **Addendum**

- ▶ AskColorado, Colorado libraries' 24/7 virtual reference service, may be found at [www.askcolorado.org](http://www.askcolorado.org)
- ▶ Diversity/Special Populations resources may be found at [www.cde.state.co.us/cdelib/librarydiversity.htm](http://www.cde.state.co.us/cdelib/librarydiversity.htm)

## **Information-Seeking Behaviors of Spanish-Speaking Populations: An Annotated Bibliography**

Alire, C., & Archibeque, O. (1998). *Serving Latino communities: A how to do it manual for librarians*. New York: Neal-Schuman.

This book was written from a workshop developed to fulfill the request of librarians in Southwestern Colorado who wanted to better meet the information needs of their Latino patrons. The book is an excellent guide for understanding the culture and demographics of the growing Latino population in the United States. It provides public libraries step-by-step information on assessing, planning, developing and implementing library services to Spanish-speaking communities. For information professionals looking to understand the information-seeking behaviors of Latinos, it explains some of the social and cultural aspects of this diverse and complex community. Some beliefs that may influence their information gathering include; the importance of religion, family, the patriarchic role of fathers and the importance of very close family/friends. The authors include many templates of forms, interviews, bilingual flyers and a Spanish language questionnaire used by the Santa Barbara Public Library.

(A new edition of the book was published after preparation of this bibliography. *Serving Latino Communities: A How-To-Do-It Manual for Librarians, Second Edition*, C. Alire & J. Ayala. New York: Neal-Scuman. Alire and Ayala, both past presidents of REFORMA (the National Association to Promote Library and Information Services to Latinos and the Spanish-Speaking), build the case for increased service to this important and growing community and provide ideas for making outreach a success, features a new emphasis on electronic and Web resources, strategies for conducting focus groups and bilingual surveys, an increased number of programming ideas, and even more examples of bilingual promotional materials. A completely revised and updated resource directory points to the best publications, organizations, and sites.)

Bertot, J.C., & McClure, C.R. (2002). *Assessing SEFLIN's virtual library Mi Servicio de Biblioteca: User and reference librarian focus group report*. Tallahassee, FL: Bertot Information Consultant Services. Retrieved January 15, 2007, from [www.seflin.org/membinfo/bertot-report](http://www.seflin.org/membinfo/bertot-report)

This report from the Southeast Florida Library Information Network provides examples of how the State Library of Florida and participating libraries planned, organized and implemented virtual library services to their Spanish-speaking communities. It details an evaluation of the Spanish web-based service Mi Servicio de Biblioteca. Goals and results from two separate focus groups (librarians and Hispanic library users) show both groups produced similar answers and concerns on what information and services were critical to this population. Findings from the librarian group stressed the need to view the diversity within Hispanic communities as well as the general information needs of the whole population. Both the librarians and Spanish users emphasized that information-

seeking is often through trusted friends, family and community organizations. Therefore a connection between community leaders and the library must be made. This report includes a summary of statistics of the Hispanic population in the U.S., graphs from the Census Bureau on technology, computers and Race/Hispanics and a literature review of Hispanic information needs and how libraries are meeting those needs.

Dawson, E. M., & Chatman, E. A. (2001). Reference group theory with implications for information studies: A theoretical essay. *Information Research*, 6(3). Retrieved January 18, 2007, from: <http://InformationR.net/6-3/paper105.html>

This article discusses how information professionals might use reference group theory in understanding the needs and use of information by diverse library service populations. Reference group theory states that an individual's or group's perception of what others think of them affects how they view themselves and their world. This theory provides another point of reference for those researching information-seeking behaviors of Hispanics. The authors include a 1994 study by Hurado et. al. that looked at how Mexican immigrants' behaviors were dependent on whether they associated themselves with those who accept or reject traditional American culture. The article further helps to explain how low socioeconomic groups struggle to obtain access to information and learn how to use information technologies. By understanding the various cultural norms and attitudes, librarians can more fully understand the information environment of their unique reference groups and focus the promotion of new information technologies.

Fogel, J., Phd. (2003). Internet use for cancer information among racial/ethnic populations and low literacy groups. [Electronic version] *Cancer Control*, 10 (5 Suppl.), 45-51. Retrieved January 18, 2007, from <http://moffitt.org/moffittapps/ccj/v10s5/pdf/45.pdf>

Because new research indicates that Internet use by cancer patients for health information may positively impact their psychological and social well being, the author conducted a search to see if there are studies on racial/ethnic and low literacy use of health information from the Internet. Boolean searches using health and ethnic search terms were done in major information and health databases. Three tables sufficiently help summarize results. Although very little empirical evidence was found on this subject, the limited results on Hispanic Americans show that many do not have access to a computer or do not use the Internet. The study reiterates the fact that language barriers and low literacy prevent ethnic populations from using the Internet. Moreover, if websites are made easier to understand, navigate and more culturally relevant, the use of these important electronic resources by ethnic groups would increase. A table of questions for future research is included.

Fiedler, A.M., Lash, P.B., Wong, R.M., & Tiainen, T. (2006). *The impact of individual employee difference on information seeking in today's information rich*

*environment*. Paper presented at the International Consortium for Electronic Business (ICEB) conference. Retrieved January 20, 2007, from [www.ebrc.fi/kuvat/Fiedler\\_Lash\\_Wong\\_Tiainen.pdf](http://www.ebrc.fi/kuvat/Fiedler_Lash_Wong_Tiainen.pdf)

In an effort to understand how employee information-seeking behaviors affect job satisfaction and commitment, this study interviewed 183 employees of a major cut flower importer in the United States. The sample included African Americans, Hispanics, Whites, males, females, hourly and salaried workers. The researchers list nine hypotheses based on gender, race and type of employee. Using four survey instruments, the researchers identified three information-seeking behavior types: observation, social networking and posted information. Results for information-seeking tactics, method preference, and collaboration methods are discussed and charted. The data for examining race may be somewhat skewed by the small sample size of African-Americans, but the study provides good data on the larger Hispanic population. It shows that even in more formal settings like the workplace, the Hispanic/waged group preferred social networking or consultation with peers but not observation to obtain information. The authors note that this “involves high richness, high interactivity and low specificity”. A PowerPoint presentation of this paper is also available on the Internet.

Fisher, K. E., Marcus, E., Miller, L.S., Sanchez, A., & Ramirez-Cunningham, E. (2004). Information behavior of migrant Hispanic farm workers and their families in the Pacific Northwest. *Information Research*, 10(1), paper 199. Retrieved January 20, 2007, from <http://InformationR.net/ir/10-1/paper199.html>

Using two community technology centers (CTCs) in the Yakima Valley of Washington state, the authors conducted field observations and interviews with CTC staff, administrators and immigrant farm workers to study both the information habits and information grounds of this population. Discussion and statistical figures thoroughly describe the demographics, environment and needs of the area’s immigrant population. Key findings reveal this population prefers close interpersonal relationships and trustworthy sources for their information needs. Specific examples of the types of people and community or cultural resources providing this information are given as well as the types of information individuals view as most important for themselves and their families. Language, culture and economics were identified as the biggest obstacles to information-seeking. Lists of both the benefits and drawbacks of the CTC’s and the information sources used provide important data to consider when developing information resources for this population. Because there is a lack of empirical research on immigrants and information behavior, the authors discuss future areas for study including the “berry picking” model. It describes a way in which information users look for information and resources in many different places, taking what they need along the way. For immigrants this includes a high use of individuals over documents and evolves as they become more acculturated. Excellent use of studies contributing to this area of research and list of references is provided.

Fleshman, K. K. (1995). *Hispanos unidos: An analysis of information needs and practices in Austin's Latino immigrant community*. Master's thesis, University of Texas, Austin. Retrieved January 21, 2007, from [http://db.latinosandmedia.org/bibliography/author\\_f.html](http://db.latinosandmedia.org/bibliography/author_f.html)

This study analyzes the information climate and information-seeking behaviors of recent Latino immigrants to Austin, Texas by testing theories on why people communicate and what blocks the diffusion of information. Using interviews, surveys, and qualitative research, the data show that undocumented immigrants demonstrate more active information-seeking behaviors, including the drive to learn English, than their documented counterparts. Both groups, however, recognize the importance of seeking out the information they need and generally know where to go to find it. The numbers of those that never seek out information and those that feel there is nowhere to go to find needed information is low. As reported in other studies, the Latinos rely primarily on both formal institutions designed to serve them, and informal sources, like friends, to obtain information.

Griggs, S., & Dunn, R. (1995). Hispanic-American students and learning style. *Emergency Librarian*, 23(2), 11-17. Retrieved February 10, 2007, from EBCO database.

Using the Dunn and Dunn learning style model, this article presents a study of the learning styles of Hispanic-American students to determine if these might be used to understand and address their statistically low level of success in school. The Dunn model includes 21 elements including environmental, emotional and physiological. The main assessment tool is a 104-item self-report questionnaire. These students predominantly live in urban areas on the coasts and retain much of their customs, language and religious values. They are usually less educated and take lower-income, less-skilled service jobs. Although generalizations cannot be made due to the high amount of diversity among Hispanic subgroups, the researchers provide a very helpful list of Hispanic student learning styles for teacher and counselors to consider. These include preferences for: a cool environment, formal design, conformity, peer-oriented learning, kinesthetic instructional resources, high structure, variety, late morning and afternoon peak energy levels and field-dependent cognitive style.

Gross, M. (2005). The impact of low level skills on information-seeking behavior: Implications of competence theory for research and practice. *Reference and User Services Quarterly*, 45(2), 155-162. Retrieved January 20, 2007, from Library Literature and Information Science database.

This paper examines students and academic settings to explain competency theory and its application in analyzing information seeking behaviors in those who do not realize their own incompetence and therefore overestimate their abilities and other people's performance. Low-level information-seeking skills may then affect individuals' ability to

recognize the need for information and the value of libraries and other information-providers. Information professionals need to recognize low-level literacy skills and library anxiety in all service populations in order to provide outreach and systems to assist these students or patrons.

Järvelin, K. & Ingwersen, P. (2004). Information-seeking research needs extension towards tasks and technology. *Information Research*, 10(1). Retrieved January 21, 2007, from <http://InformationR.net/ir/10-1/paper212.html>

This article analyzes the research of information-seeking behaviors and information retrieval. The authors posit that gaps exist in relating information-seeking research to users, their activities and interests (work tasks), and system design. After a highly analytical discussion of information-seeking and retrieval models, the authors list nine dimensions of information seeking and retrieval that should be considered but are often lacking in traditional information-seeking research. They suggest information research should expand to include context of retrieval, tasks and technology. This paper adds to the body of research indicating organizational, social and cultural context is critical to information needs assessment and design.

Johnson, C.A. (2004). Choosing people: the role of social capital in information seeking behavior. *Information Research*, 10(1), paper 201. Retrieved January 21, 2007, from <http://InformationR.net/ir/10-1/paper201.html>

This study, done as part of a dissertation, examines the daily information behaviors of residents in Ulaanbaatar, Mongolia, to examine the theory of social capital, and how it affects the way people seek information from personal sources. Network and information-seeking information data was collected from a questionnaire. The theory of social capital suggests that when usual channels of interpersonal sources cannot provide the information, people will seek sources outside their community. Results indicate that many people will use “weak ties” with better resources or higher social or intellectual levels to get information rather than their closer network. This study provides another aspect of information-seeking behavior theory that can help information professionals in evaluating how ethnic groups' information-seeking behavior changes as they become more comfortable in new surroundings and with new technologies.

Liu, M. (1995). Ethnicity and information seeking. *The Reference Librarian*, 23(49/50), 123-134.

Although this article is over ten years old, it provides a thorough overview of the needs, barriers and solutions for librarians in providing information accessibility and resources to increasing ethnic populations. With well researched sections on ethnic group's conceptual awareness, learning patterns and the importance of gatekeepers in their



communities, this author's paper is a call to action for libraries and reference librarians to provide effective communication, programming and outreach to their multi-ethnic populations.

Lorence, D. P. Park, H. & Fox, S. (2006). Racial disparities in health information access. *Journal of Medical Systems*, 30(4), 241-249.

Studies in the health industry have shown that online health information can have positive results in educating people on health care. This article investigates whether there are differences among racial groups in access to online health resources and whether policy measures in recent years have helped increase digital access to all ethnic groups. Using surveys from the Pew Internet and American Life Project from 2000 and 2002, the authors find that computer use has increased for all racial groups but gaps in access to the Internet remained. Moreover, there is a significant disparity between Whites' and Hispanics' access to online health information. This suggests that new programs and improved efforts need to be implemented in order to address the health information and information literacy needs of ethnic populations.

Madden, M. (2003). The changing picture of who's online and what they do. *Pew internet and American life project*. Retrieved January 20, 2007, from [www.pewinternet.org/pdfs/PIP\\_Online\\_Pursuits\\_Final.PDF](http://www.pewinternet.org/pdfs/PIP_Online_Pursuits_Final.PDF)

This 101 page report from the Pew Charitable Trusts provides a comprehensive view of Americans' use of the Internet. It statistically analyzes and summarizes every major demographic and the type of information being accessed. Much of the data is presented in tabular form. This site is essential to anyone interested in information studies, equity of information, information access and the impact of the Internet on American society.

Martinez, M. E. (1994). Access to information technologies among school-age children: Implications for a democratic society. *Journal of the American Society for Information Science*, 45(6), 365-400. Retrieved February 10, 2007, from Academic Search Premier database.

This is an older article investigating whether a digital divide exists among school children. A diverse sample of 24,000 school children from third, seventh and eleventh grades was questioned about computer technology, applications and programming. The data indicate Hispanics and Blacks were 5-10 % lower than Whites in computer competency and experience. This directly correlated with a lack of access to computers in informal settings (at home) for Hispanics and Blacks.

Maldonado-Young, M. (2002, January 31). *Hispanic health information outreach: recommendations for NLM strategy and tactics*. Paper presented at the joint meeting of MLGSCA/NCNMLG, Scottsdale, AZ. Retrieved January 15, 2007, from <http://nml.gov/evaluation/tools/hispanicoutreach.pdf>

The bulk of this long paper is devoted to planning and implementing outreach activities to meet the health information needs of Hispanics. Excellent pie charts and graphs provide valuable demographic information and geographic statistics. Sections B and D provide insightful summaries of the value, culture and information-seeking characteristics of Hispanics. The project stresses that an understanding of cultural diversity among Hispanic subpopulations is critical to understanding information-seeking behaviors. Values such as personal relationships, respect, trust/confidence and familial group emphasis must be taken into consideration. The author found that information is primarily sought from personal formal and informal networks, primarily from community organizations and gatekeepers and secondarily from Spanish broadcast media. The Internet is primarily used for local, low literacy, cultural information if it is in Spanish. Although this project focuses on health information, the lists and examples of community outreach, programs and organizations provide excellent examples and contacts for library and information centers looking to promote the use Spanish language resources and information. A PowerPoint presentation of this information is also available online.

Metoyer-Duran, C. (1993). Information gatekeepers. In M.E. Williams (Vol. Ed.), *Annual Review of Information Science and Technology*: Vol. 28, (pp.111-150). Medford: NJ. Learned Information Inc.

In this article, the author defines the term “gatekeeper” and discusses its interpretation in the fields of health, communication, journalism, education, technology and library science research. From this literature review, two definitions of gatekeeper emerge. The first type is one who filters and limits the scope of information and thus lowers its access. The second is described as a leader who acts as a conduit to the community and increases the transfer of information. Supporting her discussion with extensive research into previous information needs and user studies, the author reveals a glaring lack of research on the information-seeking behaviors of ethno-linguistic communities. Stressing that information-seeking behavior studies must consider an individual’s cultural environment, the author cites her own studies of cross-cultural groups in Los Angeles, California. Using the gatekeeper model and taxonomy, the author examines the cognitive, affective and data usage attributes of gatekeepers in this area, and provides profiles of their influence on information flow. Although the author concedes that informal information-seeking behavior studies are complex, this article and related studies provide valuable information for information professionals assessing and serving ethnolinguistic communities. Further areas for research and an extensive bibliography are provided

*Pew Hispanic Center* (n.d.) Retrieved February 14, 2007, from <http://pewhispanic.org/>

This non-partisan organization is part of the Pew Charitable Trusts. The website provides a plethora of reports, statistics and information on the Hispanic population in the United States. Although no specific articles on the information-seeking behaviors of this group were located, it does provide information and research on demographics, education, economics, politics, identity, immigration, labor and geography. Because of its comprehensiveness and scope, the site is a useful resource for librarians and other information professionals in evaluating and understanding the use of information services by this population.

Rodney, M.J. (2002). *Information needs of special populations in Colorado: Literature review census and community analysis information*. Denver, CO: Colorado State Library, Colorado Department of Education. Retrieved January 21, 2007, from [www.cde.state.co.us/cdelib/download/pdf/](http://www.cde.state.co.us/cdelib/download/pdf/)

This report from the Colorado Council for Library Development Special Populations and Issues Committee provides an extensive literature review on the information needs and behaviors of major multicultural, multi-ethnic and underserved communities. It acknowledges a common concern in the lack of primary studies that exist in the area of information-seeking and ethnicity/race, and finds socio-economic factors play a much greater role than race in affecting information needs. Its focus is on studies and resources libraries can utilize to better understand and serve multi-ethnic, poor and underserved communities. The section on Hispanics provides some older studies on needs assessment and service but few specifically on the behaviors associated with information-seeking. It provides an excellent, extensive list of resources from national and Colorado organizations.

Shapiro, M. (2003). *Developing virtual Spanish language resources*. Oregon Library Association, 9(2), 15-19. Retrieved January 20, 2007, from [www.olaweb.org/quarterly/quar9-2/ola-summer2003-cover.pdf](http://www.olaweb.org/quarterly/quar9-2/ola-summer2003-cover.pdf)

This article gives an unscientific examination of the Spanish-language digital resources available at five major U.S. public libraries: Multnomah County Public Library in Oregon, Los Angeles Public Library, Queens Borough Public Library and San Antonio Public Library. Each has varying degrees of Spanish materials and resources. Some similarities that make their digital Spanish resources good include: prominent display of "En Español" on webpage, bilingual or Spanish language interfaces, links, databases and catalogs. The author notes that many large public libraries serving significant Spanish populations provide little Spanish language information online, including Denver. A helpful list of guidelines to follow when creating digital Spanish resources is provided.

Slate, J.R., Manuel, M., & Brinson, K.H. Jr. (2002). The "digital divide": Hispanic college students' view of educational uses of the Internet. *Assessment & Evaluation in Higher Education*, 27(1), 75-92. Retrieved February 10, 2007, from the Academic Search Premiere database.

This paper reports the results of a study of 226 Hispanic college freshmen to ascertain what their attitudes were toward the Internet, computers and the use of these technologies for educational purposes. The results reveal that male Hispanic students showed more favorable attitudes toward computers and the Internet than female students. Another significant finding was that students who spoke Spanish at home did not feel computers and the Internet were that useful and felt more anxiety when using these technologies than students who spoke English at home. The fact that the Internet is primarily in English and that a majority of English speakers own computers could be reasons for these differences. Further, those students without computers at home were compelled to learn the Internet from school, friends and books. Although this is a small study and geographically isolated, it adds to the important research on information behaviors of Hispanic students and communities

Spooner, T. & Rainie, L. (2001, July 25). *Hispanics and the internet. Pew internet and American life project report*. Retrieved January 20, 2007, from [www.pewinternet.org](http://www.pewinternet.org)

This large report is one of many produced by the Pew Charitable Trusts' and the Pew Internet and American Life Project, whose mission is to examine the impact of the Internet on Americans. Using digital telephone interviews and online surveys, it compiles and reports on the use and behavior of Americans online. This particular report focuses on the American Hispanic's use and perceptions of the Internet. It begins with an overview of findings and then details the results from self-reported Hispanics (primarily adults 18 and up). Primary findings show an increase of Internet use of 25% by Hispanics; and more older Hispanic women than older men are using the Internet and believe it is a worthwhile tool. Additional insights reveal Hispanics are more likely to use the Internet for fun, browsing, music and entertainment than whites or African-Americans. Also online Hispanics are usually younger due to their experience with the Internet in schools and the fact that there are a greater percentage of Hispanics under the age of 30. The interviews do not specifically ask respondents about language or race, so it is difficult to discern if language or cultural factors affect how and why certain information is used or not used.

Susan G. Komen Breast Cancer Foundation. (2005). *Hispanics/Latinas: Developing effective cancer education print materials* [Brochure]. Dallas, TX: Author. Retrieved January 20, 2007, from [www.komen.org/stellent/groups/harvard\\_group/@dallas/documents/-komen\\_site\\_documents/ppg\\_hisp.pdf](http://www.komen.org/stellent/groups/harvard_group/@dallas/documents/-komen_site_documents/ppg_hisp.pdf)

This brochure, produced by the Susan G. Komen Foundation, provides basic guidance to health information providers making and marketing cancer information to Hispanic women. It stresses the need to take into account the heterogeneous nature of Hispanics, and to tailor material so that it is culturally relevant, effective and non-offensive to Latina readers.

Tanno, D. V. (2003). When education, media and technology converge, what do Latino/a students gain? *Journal of Latinos and Education*, 2(1), 39-46. Retrieved February 10, 2007, from Academic Search Premier database

This article examines the environment for Latino students in higher education and primarily addresses the negative effects that the proliferation and requirement of information literacy and technology play in the success of Latino students. The author supports her position with a review of the literature and bulleted statistics to explain the reasons for the poor enrollment and low success rates of Latino college students in the United States. Studies indicate that a high percentage of Latinos fall within the lower socio-economic status and far too many lag behind in access and use of computer technologies. Further, many studies suggest the new generation of students are more skill-focused, pragmatic, and status- and money-oriented. This increasingly individualistic environment combined with the prerequisite of information technology proficiency clashes with the cultural foundations of Latino students who prefer and are more successful in face-to-face, group and personal interaction with faculty, staff and students.

Tornatzky, L. G., Cuttler, R. & Jongho, L. (2002). *College knowledge: what Latino parents need to know and why they don't know it*. Claremont, CA: Thomas Rivera Policy Institute. Retrieved January 20, 2007, from ERIC database.

This study used telephone interviews of 1054 Latino parents in Chicago, New York and Los Angeles and a "mini test" of 41 Latino parents in those cities to collect data to determine their knowledge on acquiring the necessary information and procedures in preparing their children for college. Demographics, immigrant generation and socioeconomic status were compared to examine patterns of information search techniques. The tests indicated parents received college information primarily from school counselors, teachers, then family members, their child or the child's friends. The Internet was seen as an important resource but an indirect one. The findings are well documented statistically in charts and graphs. The researchers conclude that although Latino parents valued the need for a college education, the limited amount of information-gathering by Latino parents equated to lower levels of college matriculation and perpetuated lower socioeconomic status in new immigrant communities. The paper provides several suggestions to overcome these issues as well as the questionnaire used in the study.

Triana, A.R., Welsch, H.P., & Young E. C. (1984). Information search patterns among Hispanic entrepreneurs. *Journal of Small Business Management*, 22(4), 39-48. Retrieved January 20, 2007, from Business Source Premier database.

This study, conducted over 25 years ago, examines the personality characteristics and information source preferences of Hispanic small business owners. The researchers sent 476 questionnaires to Hispanic small business owners and Hispanic Chambers of Commerce in a large Midwestern United States city. The information sources used as dependent variables were categorized as professional, personal, written, institutional and electronic. Personality scales used as independent variables were locus of control, Machiavellianism, self-esteem, risk-taking, openness to innovation, and rigidity. Some of the major findings show that this group has openness to innovation and prefers to get their business information from professionals and experts. Financial problems were a major reason to seek information from professionals, institutions or seminars. Perhaps not so surprising was that electronic sources did not correlate to any independent variables. Although somewhat dated, this study provides a specific and historical look at the information needs of this demographic.

U.S. Department of Health and Human Services. (2006). *Mapping diversity to understand users' requirements for e-health tools: Expanding the reach and impact of consumer e-health tools* (chap. 2). Retrieved January 20, 2007, from [www.health.gov/communication/ehealth/ehealthTools/default.htm](http://www.health.gov/communication/ehealth/ehealthTools/default.htm)

Although the focus of this document is health information on the World Wide Web, it is a comprehensive look at the challenges, requirements and vision needed for connecting this information to underserved communities. Chapter 2 examines factors which promote or prevent the use of electronic health resources. Their findings reiterate the challenges of low language and computer literacy, which result in lower motivation and “engagement” with electronic information resources. A literature review reveals a lack of research being done on ethnicity and information-seeking behavior. Studies that do exist indicate that users want the interaction with technology to be meaningful to them personally. It emphasizes the need for the information-provider to consider such criteria as language spoken, socioeconomic position, disabilities, age, and attitudes about privacy when promoting the use of electronic information sources. For example, some studies suggest that Hispanics will use online resources if they believe the content is relevant to them. Because so much government information is only available on the Internet, this report provides a better understanding of the multiple demographic characteristics and correlating disparity of access to technological resources in diverse populations.

Web Junction (n. d.). *Web junction services to Spanish speakers*. Accessed February 10, 2007, from [www.webjunction.org/do/Navigation?category=7840](http://www.webjunction.org/do/Navigation?category=7840)

Through a grant from the Bill and Melinda Gates Foundation and led by OCLC, the Web Junction site is one of the premiere portals for connecting libraries and librarians with current information technology resources and events and discussions. This section provides tons of PDF articles, presentations, fact sheets and message boards containing information on Spanish-speakers. Some key areas on connecting Hispanic communities and information technologies can be found under: *Bienvenidos! Outreach and Publicity for Spanish Speakers*. This article suggests the need to build a relationship with well liked businesses and community organizations like churches, schools, Hispanic Chambers of Commerce and others that play a central role in Hispanic communities. It goes on to recommend using informal networks to get library information out to the community because people are more apt to listen to friends than formal advertisements. Another section focuses on meeting the technology needs of Spanish-speaking patrons, and includes presentations and studies on the equity of virtual reference and highlights from Web Junction's *Virtual Reference Desk Conferences*.

Wilhelm, A. (1997, October 30-November 1). *Buying into the computer age: A look at Hispanic families*. Paper presented at the Families, Technology and Education Conference. Chicago, IL: Retrieved on January 15, 2007, from [http://eric.ed.gov/ERICDocs/data/ericdocs2/content\\_storage](http://eric.ed.gov/ERICDocs/data/ericdocs2/content_storage) and <http://ceep.crc.uiuc.edu/eearchive/books/fte/equity/wilhelm.pdf>

Using focus groups and interviews, this study assesses the attitudes and opinions of Hispanic families about computers, information-seeking behavior, and experience with computers outside the home. In general the group viewed computers as necessary to future progress and success. Moreover, a majority of respondents believe computers provide access to information and convenience, and they say they would use disposable income to purchase a computer over more traditional expenses. Hispanics remain concerned about their lack of computer knowledge and confused about the cost and what type of computer to purchase. This group's information-seeking behaviors heavily relied on television, radio and newspapers. Most felt these sources more trustworthy and authoritative than the Internet. Some suggestions to alleviate fears of computer technology and increase its use as an information tool include: increased access to computers at community centers/libraries, a Spanish-language consumer guide on computer software/hardware and advertisements through ethnic media outlets.

Wilson, T. (2006). Information-seeking behaviour and the digital information world. *Indexer*, 25(1), 28-31. Retrieved January 18, 2007, from the Library, Information Science & Technology Abstracts database.

This brief article suggests that today's digital searchers often use traditional methods learned by using tools such as telephone directories and book indexes. Using information-seeking models to delineate the complexity of cognitive and affective factors involved in information-seeking behavior, the author believes electronic reference

designers need to build systems congruent with the simple search strategies employed by most users. This article is limited in theoretical or practical information but the flow charts could be helpful in understanding the basic factors in information-seeking behaviors and “intervening variables” affecting information use.