

# **INFORMATION NEEDS AND AN EFFECTIVE INFORMATION SUPPORT SYSTEM FOR AFRICAN-AMERICAN GRADUATE STUDENTS<sup>\*</sup>**

## **Bharat Mehra (corresponding author)**

School of Information Sciences, University of Tennessee, 425 Communications Building, 1345 Circle Drive, Knoxville, TN 37996; Tel: 865-974-5917. Email: [bmehra@utk.edu](mailto:bmehra@utk.edu).

## **Cheryl Ann Lambert**

Ph. D. Student, School of Advertising and Public Relations, 476 Communications Building, Knoxville, TN 37996; Tel: 865-974-8200. E-mail: [clamber4@utk.edu](mailto:clamber4@utk.edu).

## **ABSTRACT**

This paper reports the results of a pilot study that assessed the priority information needs of 8 African-American graduate students studying in various units from the social sciences and humanities at the University of Tennessee campus in Knoxville, Tennessee. The paper also presents key components of an effective information support system identified by participants to meet their information needs and develop a better teaching and learning atmosphere, enhanced campus services and facilities, and an altogether supportive climate for racial/ethnic minorities. Both quantitative and qualitative tools were used to collect data from participants about their graduate experiences and information seeking behaviors during their program of study. Findings reported in this research have implications to improve basic university-and-program level essentials in information support services for minority students, as well as develop resources for building student careers and strengthening their professional and social networks.

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## **INTRODUCTION AND RESEARCH SIGNIFICANCE**

Many institutions of higher education in the United States are struggling to find ways to increase minority student enrollment and retention and diversify their institutions in the 21<sup>st</sup> century (Clark, 2002; Dumas-Hines, Cochran, & Williams, 2001). There is need for concerted and ongoing efforts to increase enrollment and retention of African-Americans, Hispanics, and Native Americans in American colleges and universities since there continues to be alarming disparities between the graduation rates of minority students from these racial/ethnic groups and their White and Asian counterparts (Swail, Redd, & Perna, 2003; Furr & Elling, 2002). Providing necessary information and social support that is relevant to the learner's experience is significant in retaining minority students and insuring higher rates of their graduation (Gary, Kling, and Dodd, 2004; Guiffrida; 2004). However, there needs to be greater efforts to implement culturally appropriate retention strategies in regional settings to ensure student success in response to localized campus climates around the country (Padilla et al., 1997; Tinto, 1993; Astin, 1984). Additionally, it is important to find out from the students' point of view what is relevant to them in their learning process (Gonzalez, 2002; APA, 2000). This is especially pertinent for minority students in graduate education who face lack of integration in their academic programs and university environments as significant barriers towards professional success and graduation (Bass et al., 2003; DeFour & Hirsch, 2002; Chaney et al., 1998). This paper provides missing gaps in minority graduate student education by documenting the experiences and perspectives of African-American students about what information and support they consider relevant to their learning process and the role of different environmental factors (e.g., social and academic integration) in their academic and personal development (Mayo, Murguia, & Padilla, 1995). Findings are especially relevant for predominantly-White institutions (such as the University of Tennessee) that can be perceived as more alienating than the environment in predominantly-minority institutions (Loo & Rolinson, 1986; Steward, Jackson, & Jackson, 1990).

## **RESEARCH QUESTIONS**

This study addressed two main research questions:

1. What are the priority information needs of African-American graduate students?
2. What are the key components of an effective information support system for African-American graduate students to meet their information needs and develop a better teaching and learning atmosphere, enhanced campus services and facilities, and an altogether supportive climate?

## **METHODS**

Quantitative and qualitative methods were employed to gather data from 8 African-American graduate students studying at the University of Tennessee (UT) campus in Knoxville, Tennessee. The students were recruited through institutional contacts at the UT's Black Cultural Center and the Office of Minority Student Affairs, and the Black Graduate and Professional Students Association, through announcements in various electronic mailing lists and at popular student places (coffee shops, library), and through personal social networks and snowballing (asking initial participants to provide contact to others who may participate in the study). The authors developed two instruments for data collection: an interview instrument they used during the individual interviews with the students and a structured questionnaire that the participants completed towards the end of data collection. The data were collected in summer 2006.

Data were analyzed based on grounded theory principles. Together with the application of open, axial, and selective coding, this method helped cross-reference the data collected from the two instruments and generated complementary themes and patterns (Glaser & Strauss, 1967; Jobes et al., 1996) that provided a detailed understanding of the students' information needs and information support services they used (and desired) to navigate their educational process. The structured

questionnaire provided participants' responses in relation to their top priority information needs (Priority 1-3). These were compiled and weighted to generate a ranking list based on importance of priority. It helped identify key components in an effective information support system to meet the information needs of African-American graduate students. The collected information through the structured questionnaire was put together, verified, and further extended based on data that was collected using the interview instrument. The interview instrument provided a qualitative and rich understanding about participants' experiences and perspectives during their graduate education at UT. It included feedback about participants' sense-making process, adjustment concerns, and the use of existing (and/or desired) information support services. Findings identify specific examples of key components and strategies in creating effective information support systems to meet the information needs of minority students. The use of both quantitative (structured questionnaire) and qualitative (interview instrument) tools for data collection yielded complementary datasets that were significant in providing a holistic understanding about participants' experiences and perspectives. Incorporating both these datasets in data analysis provided a more relevant and deeper outline of what an effective information support system should look like to meet the needs of this disenfranchised population.

## **PRELIMINARY FINDINGS**

Understanding the complex learning experiences of African-American graduate students in a land-grant university in Southern United States required gathering background information about their student status, age, discipline of study, state/region of permanent residency, living arrangement, and other associated demographic variables. Table 1 presents a demographic profile of the participants and shows that all eight were female between 23-29 years of age. All participants were studying in various units from the social sciences and humanities at the UT. In order to maintain participant

confidentiality since there are so few African-American graduate students in each unit, additional details about participants' programs of study are not revealed in this paper.

<b>Student Status</b>	<b>Count</b>	<b>State of Permanent Residency</b>	<b>Count</b>	<b>Living Arrangement</b>	<b>Count</b>
Masters student	4	Tennessee	4	Off-campus, on your own	6
Ph. D. student	3	Alabama	1	Off-campus housemates	2
Ph. D. candidate	1	California	1	TOTAL	8
TOTAL	8	Georgia	1		
		North Carolina	1		
		TOTAL	8		
Note: All 8 participants were female between 23-29 years of age.					

Table 1. Demographic information about African-American graduate students.

This study addressed two main research questions. The findings are presented within the context of these questions.

### **Priority Information Needs**

Table 2 summarizes the participants' responses in relation to their top priority information needs (Priority 1-3). These provide a written verbatim representation of participants' information needs. It is important to indicate that some participants identified multiple information needs in relation to their top three priorities as well provided feedback about other information needs in addition to their top three priorities. For Priority 1 participants reported a range of information needs related to career development, sensitive faculty/staff support, help in the research process, faculty and staff mentoring, financial aid and scholarship information, and minority networking. Some information needs for Priority 2 were related to library services and information technology support, connection to the curriculum, social support groups, and specific resources for minority students, in addition to some

priorities identified for Priority 1. Information needs for Priority 3 were related to personal development and growth, connection to campus activities and events, and readily available information on various topics of concern, in addition to some priorities listed above. Other information needs in addition to the top three priorities were related to international/intercultural involvement and awareness, lack of availability of appropriate resources, research opportunities, and avenues to represent student voices, amongst others.

<b>Priority 1 Information Need</b>	<b>Priority 2 Information Need</b>	<b>Priority 3 Information Need</b>	<b>Additional Information Needs</b>
Career development	Library services and information technology support	Personal development and growth	International/intercultural involvement and awareness
Sensitive faculty/staff support	Faculty and student mentoring	Financial aid and scholarship information	Availability of various resources to meet students' needs
Help in research	Help in research	Computer and information technology support	Research opportunities
Faculty and student mentoring	Connection to the curriculum	Connection to campus activities and events	Connections to other students/cohorts
Financial aid and scholarship information	Social support groups	More effective library resources and online catalog for searching	Avenues to represent student voices
Minority networking	Sensitive and open-minded faculty/staff who are available for providing support	Information readily available on various topics of concern	Sensitive and open-minded faculty/staff/peers
	Resources for minority students		Ethnic social activities
			Social support groups
			Minority resources and organizations

Table 2. Top three priority information needs of African-American graduate students.

Table 3 provides a ranking of the participants' information needs after they were compiled and weighted based on the importance of priority. It provides specific examples of key components and strategies in creating effective information support systems to meet the information needs of African-American graduate students. Provision of minority information support services (10 points) was the highest ranked information need and called for availability of resources to address race/gender-based

experiences shared by participants. The second position in the ranking of participants' information need was occupied by three categories (8 points each), namely, need for sensitive faculty/staff/peers, help related to the research process, and lack of readily available information and resources (e.g., connections to campus activities and events). The next position in the ranking of participants' information need included five categories (7 points each): need for career development resources and connections to the curriculum, faculty/student mentoring, and library and information technology services. Financial aid and scholarships (6 points) and social support (5 points) were other information needs that were ranked by participants.

Rank	Information Need	Number of Points Based on Priority	Examples
1.	Minority information support services	10	Minority resources, organizations, social activities, networking, international/intercultural involvement and awareness
2.	Sensitive faculty/staff/peers	8	Open-minded, available, refrain from stereotyping, positive support
2.	Research-related help	8	Possible research processes and procedures
2.	Readily available information and resources	8	Connections to campus activities and events, resources to meet students' needs, avenues to represent student voices, personal development
5.	Career development and connections to the curriculum	7	Possible choices, paths, & opportunities
5.	Faculty/student mentoring	7	Pairing faculty with students based on common area of interest
5.	Library and information technology services	7	IT support, computer use, effective searching tools in the library
9.	Financial aid and scholarships	6	Information, opportunities
10.	Social support	5	Connections to students & cohorts

Table 3. Ranked information needs of African-American graduate students.

## **Information Support System for African-American Graduate Students**

Based on data collected in this research, Table 4 provides a guideline for what an effective information support system for African-American graduate students should look like in order to address their marginalized information needs. The design identifies components that are specifically related to the information needs, experiences, and perspectives of the research participants. It includes components for improving basic university-and-program level essentials in information support services for minority students, as well as developing resources for building student careers and strengthening their professional and social networks. Applications towards making such components a reality at UT include expansion of appropriate information support systems, creation of technological resources (and associated social support services), and development and implementation of a proactive marketing plan for generating greater awareness of the existing information support resources, amongst other directions of work.

<b>Sr. No.</b>	<b>Component for Minorities</b>	<b>Implications for Information Support Systems</b>
<b>1.0</b>	<b><i>ESSENTIALS (UNIVERSITY + PROGRAM LEVELS)</i></b>	
1.1	Minority information support services	Development and proactive marketing of minority information resources and services via on-campus and web-based systems (e.g., website development, e-newsletter and mailing lists, class visits, seminars, and workshops); Equitable minority representation in leadership, visible images, professions, research, everyday experiences, etc.; International and intercultural services in individual programs
1.2	Readily available information and resources	Analysis of students' needs program-by-program; Development and proactive marketing of appropriate resources; Evaluation and assessment of program/university services by the students (formative and summative) (e.g., anonymous suggestion box); Public speaking and self-efficacy courses;
1.3	Library and information technology services	Development and proactive marketing of appropriate services (e.g., training workshops, availability of help in writing services; computer and database use; statistical analysis)
<b>2.0</b>	<b><i>BUILDING CAREERS</i></b>	
2.1	Career development and connections to the curriculum	Discussion and analysis of discipline and how courses/curriculum relates to the professional discourse and practice in the program-level new student orientation; Holistic frame of viewing (past, present, future); Connected to program through group involvement activities
2.2	Research-related help	Required attendance at workshops on research processes/procedures and research methods; learning to read articles/research materials; developing a research proposal; Address biased view of history of the profession
2.3	Faculty/student mentoring	Greater faculty role in student life-cycle in the program; Regular advising and mapping of student progress via annual reports; Mapping progress in career action plan; Expectations of a graduate student; Formal and/or informal efforts for student-to-student mentoring; Introduce nature of challenging situations that may be encountered; Informal lunches
2.4	Financial aid and scholarships	Formal and informal teaching and research opportunities; Equitable distribution of support and resources and rationale for selection; At least tuition waivers and paid work opportunities; conference travel support; internships
<b>3.0</b>	<b><i>STRENGTHENING PROFESSIONAL AND SOCIAL NETWORKS</i></b>	
3.1	Sensitive faculty/staff/peers	Compulsory diversity and sensitivity training for faculty and new students; Intersections of variables of diversity (e.g., ethnicity, gender, and discipline); Develop cultural competencies (e.g., ignorance statements, shoulder responsibility for the entire group); Willingness to address controversial issues
3.2	Social support	Development and proactive marketing of appropriate services; Acclimatization efforts during new student orientations; Connections between isolated campus units

Table 4. Design of information support system for African-American graduate students.

## CONCLUSIONS

Based on data collected, analyzed, and reported in this paper, African-American graduate students experience major difficulties during their educational process at UT. Information needs of African-American graduate students who participated in this study ranged from guidance in navigating academic procedures and policies and unfamiliarity to the research process to a lack of faculty/staff/peer support and financial aid opportunities. What made the shared stories of our research participants different from experiences of other graduate students was their perception of their treatment and experiences that were colored owing to race-and-gender based overtones. The University of Tennessee needs to provide more fine-tuned information support systems and services for African-American graduate students and others from different racial/ethnic groups to address their perceived barriers and challenges and improve their learning experiences. Design components presented in this paper for creating an effective information support system for African-American graduate students initiates a positive direction in this regard. Future research will expand our understanding of the experiences, perspectives, and needs of African-American students and other racial/ethnic minorities studying at the University of Tennessee to develop culturally-appropriate information support systems that reflect their needs, wants, and expectations.

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