



Center for Governmental Services

Economic Impact of Graduate Education for the State of Alabama:

**Alabama Council of Graduate Deans
November, 2001**

Auburn University

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Alabama Council of Graduate Deans Impact of Graduate Education for the State of Alabama

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Economic Impact of Graduate Education for the State of Alabama
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Executive Summary

During the spring of 2000, The Alabama Council of Graduate Deans contracted with Auburn University's Center for Governmental Services (CGS) to conduct research on the *Economic Impact of Graduate Education for the State of Alabama* to provide information for Alabama decision-makers to help them understand and support the role of graduate education programs in the State. To implement these objectives, CGS conducted several independent surveys. These included:

- (a) An in-depth telephone survey of targeted high-growth Alabama businesses;
- (b) A broad-based telephone survey of a large group of Alabama businesses and organizations that have had contact with Alabama graduate programs or have employed Alabama graduate degree holders;
- (c) A telephone survey of recent alumni from graduate programs in Alabama; and
- (d) A survey and analysis of the activities and approaches of comparable graduate schools in the southeastern United States.

Among the project findings are the following:

- (1) From the perspective of emerging and growing firms in Alabama, graduate education programs in the State make a significant contribution to the economy and quality of life in the State. These firms value their relationships with university-based graduate programs and strongly endorse even closer collaboration and cooperation.
- (2) Among Alabama's growing technology and service sectors, there is a strong demand for employees with graduate degrees, as well as strong commitment and openness towards increased support for graduate programs in the State.
- (3) Investment in graduate education provides an immediate payoff to the State. This is indicated by the fact that over eighty percent of recent alumni of graduate degree programs from Alabama universities are professionally employed in the State.
- (4) Although graduate degree alumni value their education and appreciate the commitment the State has made to their education, they strongly urge that more funding and attention should be paid to the further development of graduate education in Alabama.
- (5) To survive and prosper, graduate schools and graduate programs must also aggressively initiate community and business partnerships and engage in expanded inter-university collaboration and collaborative governmental relations.

Impact Of Graduate Education for the State of Alabama
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I. Introduction

The project encompasses two related, but distinctive, objectives. The **First Objective** is to provide information for decision-makers in Alabama to help them understand and support the role of graduate education programs in the State of Alabama. During the spring of 2000, The Alabama Council of Graduate Deans contracted with Auburn University's Center for Governmental Services (CGS) to conduct research on the *Economic Impact of Graduate Education for the State of Alabama*. The **Second Objective**, represented by the brochure **Graduate Education in Alabama: The Key to a Successful Alabama in the 21st Century**, is to publicize the considerable value added by Alabama's graduate programs to the economy and society in Alabama. This report summarizes the information received in support of the first objective of the project.

CGS conducted several independent surveys and analyses to appraise the role and potential of graduate education in the State of Alabama. These included:

- An in-depth telephone survey of targeted high-growth Alabama businesses and organizations;
- A broad-based telephone survey of a large group of Alabama businesses that have had contact with Alabama graduate programs or have employed Alabama graduate degree holders;
- A telephone survey of recent alumni from graduate programs in Alabama; and
- A survey and analysis of the activities and approaches of comparative graduate schools in the southeastern United States in support of social and economic development in their respective states.

This report provides a summary account of each survey, as well as overriding themes and recommendations for a plan of action.

The intended audience for this report on the appraisal and potential for graduate education programs in the State of Alabama consists of the following groups: Alabama State Legislators; Economic, Commercial, and Community Leaders in Alabama; and the Governing Boards of the Alabama Universities and the Alabama Educational Community.

State Legislators

The purposes in working with this group are to:

- (1) Develop an awareness of and appreciation for the link between graduate education programs and economic growth, general prosperity, and social development in the State;
- (2) Document the benefits to the State from enhanced graduate education support;

- (3) Outline the competitive situation of graduate education in the region, and Alabama's position in that environment; and
- (4) Project a plan of action through which the Legislators can alleviate any shortcomings.

Economic, Commercial and Community Leadership

The focus with these groups is to:

- (1) Heighten awareness about the importance of graduate education to the general and specific growth of Alabama business, economy, commerce, and society;
- (2) Elicit support for partnership programs with graduate education universities in Alabama;
- (3) Document the importance of graduate education to the creation, expansion, and diffusion of knowledge; and
- (4) Demonstrate how support for graduate education in other states has generated growth and enhanced the quality of life in those states.

Governing Boards and the Educational Community

Our expectations with these groups are to:

- (1) Articulate the contributions of Alabama's university based graduate programs;
- (2) Document the importance of strengthening the links between undergraduate education and the development of research capacity in the universities; and
- (3) Unify the interests of these groups with the economic and community leadership in support of a common program of action.

II. Business Survey of Emerging and Growing Alabama Businesses

The Center for Governmental Services (CGS) at Auburn University surveyed businesses in Alabama that were identified by members of the Alabama Council of Graduate Deans as having a strong interest in and relationship with graduate programs in the State. The objectives were to:

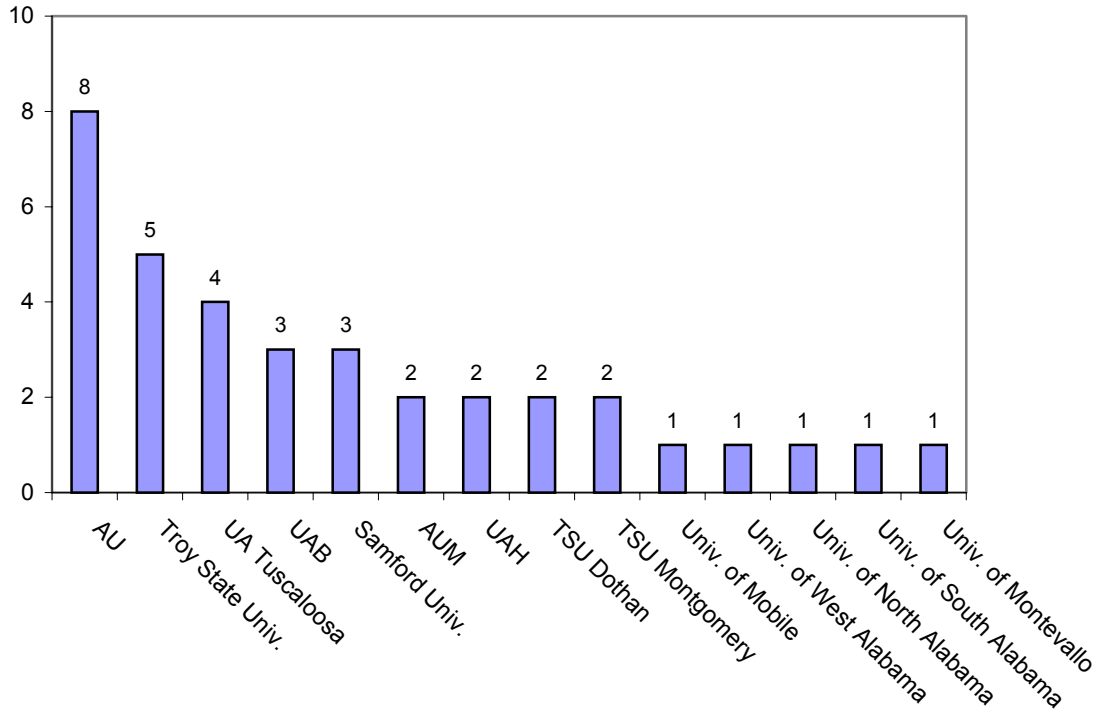
- (1) Gauge the level of support for graduate education by businesses in the State of Alabama;
- (2) Determine specifically what the graduate programs are doing best, what needs to be improved, and how graduate education in the State could be strengthened; and
- (3) Identify the level of support that these businesses have for increased State funding for graduate programs.

A. Methodology

In October 2000, graduate school deans from each participating university were asked to provide to CGS information on emerging and growing Alabama firms and businesses with which their respective graduate programs had formed partnerships or had extensive contact. Information requested included: contact person, title, name, address, telephone number, and description or type of firm or business. These contacts were limited to those firms or businesses that expressed a particularly strong interest in advanced degree programs or graduate research with university partners in Alabama. Preference was given to firms with an exclusive or strong Alabama presence. Doctoral/Research Extensive universities were requested to provide 10-15 contacts, while Doctoral/Research Intensive 7-10 contacts, and Masters Comprehensive 5-7 contacts each.

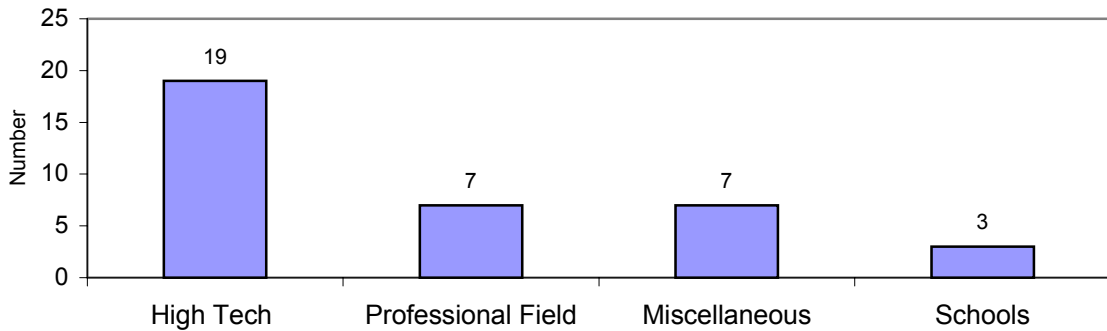
Several of the graduate schools submitted a list of contacts with a high number of organizations that were not private or business related (e.g. school districts, non-profit organizations, and local and state governmental entities). In order to stay within the scope of the project, business contacts were given priority for inclusion in this survey. In addition, many of the businesses appeared on more than one graduate school listing. Thus, some universities have a higher percentage of business contacts in the survey than did others, but all the participating universities are represented. In total, CGS contacted 36 firms and businesses for an interview that generally exceeded thirty minutes in length (See Figure 1).

Figure 1: Number of Businesses Contacted (by Referring Institution) for In-Depth Survey



The thirty-six completed contacts included nineteen high tech companies, seven growing companies currently hiring graduate professionals, seven miscellaneous businesses, and three school systems. Of the firms hiring graduates with degrees in a professional field, there were five accounting firms, one architectural firm, and one health care organization (see Figure 2). Of the 36 individuals who responded to the survey, 23 human resource directors, and 13 high-level company decision-makers.

Figure 2: Types of Businesses Contacted in the In-Depth Survey



The interviews followed a protocol (Appendix A), but were conducted in an informal conversation style to provide respondents with the opportunity to describe their experiences, thoughts, and suggestions. The instrument was pre-tested on 4 businesses, and modifications were made as needed. Because this survey was designed to be qualitative, rather than quantitative, some respondents spent more time on certain questions than others. The survey was designed to take approximately fifteen minutes, but many of the respondents spent considerably more time discussing the issues with our interviewers.

The data gathered from the in-depth business survey was grouped into three categories, namely; (a) Contacts with Graduate Programs, (b) Importance of Graduate Education, and (c) Support for Expanding Funding for Graduate Education (Appendix B).

B. Results

1. *Contacts with Graduate Education:*

As expected, the majority of the interactions with graduate programs in Alabama by Alabama businesses relate to the recruitment of highly skilled and professional employees. The most frequent form of contact between businesses and students is through recruitment and self-advertising at job fairs, career days, and intern\co-op programs. A select few companies were involved in providing presentations and outreach efforts to classes and student organizations. In addition, joint projects involving both business and university groups were also mentioned as possible contact avenues.

Some of the most helpful resources for businesses in accessing university information are the universities' web pages. Respondents suggested that student resumes and outlines of required curricula for degrees be placed on each university's web site. Furthermore, several businesses report difficulty in obtaining access to password-protected pages that contained more in-depth information about students, faculty, and services provided by the university.

Intern and co-op programs were overwhelmingly chosen by the businesses surveyed to be positive and beneficial. According to one respondent: "*The intern program is used to groom future employees to work in our company. It has been economical for us, and we get extra help at a lower cost.*" Other positive results from these programs are the influx of fresh ideas into local businesses, and the flexibility in wages and work hours that the interns provide. Some of the advantages for the students, as listed by the businesses, are *exposure to corporate culture and gaining of valuable relevant, work experience.*

Many of the businesses surveyed listed alumni employees as a possible source of contact among the schools, students, and businesses. These alumni facilitate better communication and help make the intern/co-op programs more useful for both the businesses and students. Businesses reported that enhanced communication between the business and academic worlds will lead to *real world* curriculum development, more cooperative projects, and advantageous new opportunities. Joint projects as well as web-based or distance-learning programs were some of the other resources listed as being helpful to the business community.

2. Importance of Graduate Education:

The businesses were also asked about the value that advanced degree holders add to their respective business activities. Some of the high-tech companies report that employees with graduate degrees add value to the company by making the company more marketable and helping the company win contracts.

Employees with advanced degrees were also listed as being more knowledgeable, more likely to advance, more helpful, more productive, more self-confident and more proficient with new technology. One respondent stated, "*Advanced degree holders are exposed to a broader view of the world, not just what is going on inside the company.*"

3. Support for Expanding Funding for Graduate Education:

The businesses were somewhat split on whether or not the State of Alabama should give more funds to graduate school programs. Eighteen of thirty-three respondents supported increased funding for general education. Some of the respondents were in favor of additional funds, but not at the expense of other State needs or if it resulted in higher taxes. A few were opposed to increased funding, and one respondent argued that *more funding was not necessary because the business community was already funding graduate education through its employee education support programs.*

Despite the reluctance to back additional State support, funding issues were the most frequently cited response to address improvement of graduate education in Alabama. Opening communication between the Legislature, the business community, and the academic community was the second most frequently cited solution.

C. Discussion

Survey respondents involved with a graduate internship program were very positive about their experiences. The majority of cited positive aspects related to the recruitment of quality students, enhanced research opportunities, and the relationships these programs foster among the participating entities. *The best graduate programs have internship programs.* (Comment by one survey respondent). Involvement of the business community in expanding internship and co-op programs would also enhance cutting edge curriculum development so that Alabama's graduate students will be better prepared to contribute to a rapidly changing world of work.

Several businesses use their alumni to develop contacts with university programs. Alumni Associations may be one method of enhancing discussion between these two communities. Such an on-going and structured method of collaborating and responding to the needs of the business community would also assist in communicating the needs of the universities to the State. Improved working relationships might also result in the ability to see and take advantage of new opportunities for research projects or other joint efforts. The inclusion of small, start-up companies in this communication network may result in the development of additional long-term relationships and joint programs.

Websites appear to be a crucial component of university/business relations. It also appears that some companies are more successful in learning to access the web page resources that are available. There is a need for more collaboration between the two communities in developing and advertising web pages that meet the needs of the students and the businesses community. Regardless of size, the development of an informative, relevant, and user-friendly website is imperative for every university graduate program.

III. Broad-Based Business Survey

CGS conducted a telephone survey of a relatively large number of diverse Alabama businesses and firms that were reported to have a working relationship with graduate programs in Alabama to obtain a reliable and valid sample of opinions from Alabama businesses that employ graduate-degreed students. The study examined the impact of graduate education on the world of business in Alabama. These organizations and businesses were surveyed about their perceptions regarding the quality of graduate education in Alabama, their experience with graduate students from universities in Alabama, and the importance they ascribe to further development of graduate education to Alabama.

A. Methodology

In October 2000, graduate school deans from each participating university were asked to provide to CGS information on Alabama businesses and firms that recruit graduate degree holders from their respective university. Information requested included: contact person, title, name, address, telephone number, and description or type of firm or business. Preference was given to organizations with a predominant or strong Alabama presence.

A survey protocol was constructed in coordination with the Alabama Council of Graduate Deans (Appendix C), and subject areas were comparable to those addressed in the in-depth business survey. Issue areas included: business needs for graduate-degreed employees, method of contact with graduate degree programs, company support for graduate education of employees, and willingness to expand opportunities for graduate education in Alabama. The survey instrument was reviewed and pre-tested.

Telephone interviews were scheduled between February 27 and March 2, 2001, and 255 surveys were completed. The original database consisted of 668 telephone numbers, of which 64 were determined to be incorrect numbers. 2619 dials were completed, with 604 contacts made to the businesses. Of the 255 organizations contacted, 249 (98%) report they are interested in or plan on hiring graduate degree holders. Appendix D provides the question-by-question frequency responses.

B. Results

Of the organizations surveyed, 71% state they would prefer to have more employees with advanced degrees. Sixty-six report that they are currently or have recently hired graduate degree holders. Concurrently, 74% of the businesses report having no difficulty obtaining graduate degreed students from

universities in Alabama, while 21% report slight difficulty, and only 5% report extreme difficulty (Table 1).

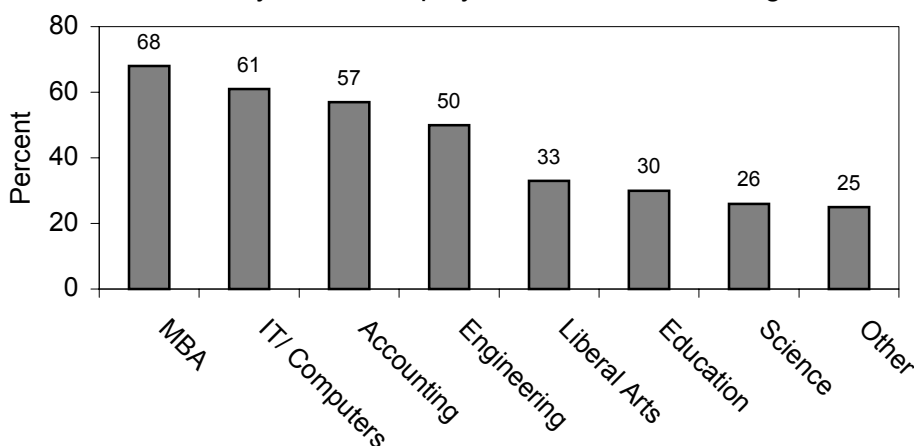
Table 1: Level of Difficulty in Hiring Graduate Degree Applicants from Alabama Universities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No Difficulty	118	46.3	74.2	74.2
	Slightly Difficult	33	12.9	20.8	95.0
	Extremely Difficult	8	3.1	5.0	100.0
	Total	159	62.4	100.0	
Missing	Not Sure/ Do not know	21	8.2		
	System	75	29.4		
	Total	96	37.6		
Total		255	100.0		

When queried on where they recruit advanced degreed employees, most businesses report that they have no preference in regard to state of residency (66%). Those that do have a preference, favor Alabama students (26%).

Plans for hiring of graduate degree employees vary by type of degree. As expected from a business clientele, business and engineering degrees were more in demand than other fields of study (Figure 3). Two-thirds of the organizations report that they are likely to hire employees with a Masters degree in Business Administration. Meanwhile, 61% are likely to hire graduate degreed employees in Information Technology and Computers, 57% in Accounting, and 50% in Engineering.

Figure 3: Degree Fields where Alabama Businesses are Likely to Hire Employees with Graduate Degrees



When asked about the relationship between businesses and graduate programs, 56% of the organizations report that they are very satisfied with the level of cooperation between their organization and universities in Alabama. An additional 38% are satisfied with the quality of interactions with Alabama-based

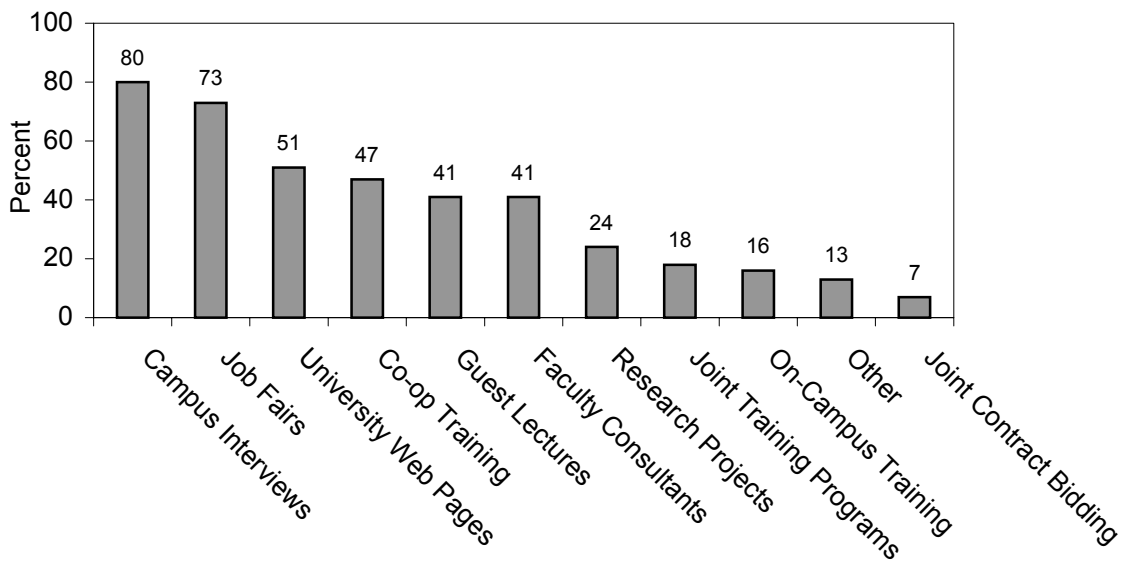
university graduate programs. Only 1% of the organizations contacted expressed dissatisfaction.

Table 2: Level of Satisfaction by Firms and Businesses with Alabama-based University Graduate Degree Programs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dissatisfied	2	.8	1.0	1.0
	Neutral	12	4.7	5.7	6.7
	Satisfied	79	31.0	37.6	44.3
	Very Satisfied	117	45.9	55.7	100.0
	Total	210	82.4	100.0	
Missing	Not sure/ Do not know	37	14.5		
	System	8	3.1		
	Total	45	17.6		
Total		255	100.0		

In response to a question about the avenues of contact that organizations employ to reach graduate students in Alabama, 80% report utilizing campus interviews, while 73% utilize job fairs, 51% utilize university web pages, and 47% utilize co-op training programs. Furthermore, 40% report participating in a graduate internship program with an Alabama university, in which most of the interns (96%) were hired as full-time employees upon the completion of their graduate program and internship.

Figure 4: Type of Contact Utilized by Businesses in Alabama to Reach Graduate Students



Many Alabama firms significantly contribute to the graduate education of their employees. Sixty-eight percent of the organizations contacted report that they provide incentives for employees to go back to school to obtain a graduate degree (Table 3).

Table 3: Does Your Organization Offer Incentives for Employees to Obtain a Graduate Degree?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	77	30.2	32.5	32.5
	Yes	160	62.7	67.5	100.0
	Total	237	92.9	100.0	
Missing	Not sure/ Do not know	10	3.9		
	System	8	3.1		
	Total	18	7.1		
Total		255	100.0		

Organizations also report that a number of employees make use of the company subsidized assistance for graduate education each year. Twenty five percent of the organizations have 1-2 employees annually obtain a graduate degree, 11% have 3-5 employees, 5% 6-10 employees, and 11% over 10 employees annually (Table 4). Additionally, 56% of the organizations surveyed report that they would consider increasing the amount of support to employees who want to pursue a graduate degree.

Table 4: How Many Employees Obtain a Graduate Degree Through Your Company's Graduate Assistance Program Each Year?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 -2	40	15.7	25.0	25.0
	3 -5	18	7.1	11.3	36.3
	6 -10	8	3.1	5.0	41.3
	Over 10	17	6.7	10.6	51.9
	0 or unsure	77	30.2	48.1	100.0
Total		160	62.7	100.0	
Missing	System	95	37.3		
Total		255	100.0		

Among the firms and organizations utilizing graduate degree holders, there is a strong consensus that the State of Alabama should provide stronger support for graduate education (Table 5). Eighty percent of the respondents state that there should be an increase in the number of Alabama students able to receive support for graduate education. Most significantly, 87% of the company representatives indicate that the State should increase its support for graduate

programs in Alabama, and only 8% of the respondents oppose enhanced State support for graduate education programs (Table 6).

Table 5: Would Your Company Like to See an Increase in the Number of Alabama Students Able to Get Support for Graduate Degrees?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Definitely Not	9	3.5	4.2	4.2
	Probably Not	14	5.5	6.6	10.8
	Maybe	20	7.8	9.4	20.2
	Probably Yes	52	20.4	24.4	44.6
	Definitely Yes	118	46.3	55.4	100.0
	Total	213	83.5	100.0	
Missing	Not sure/ Do not know	34	13.3		
	System	8	3.1		
	Total	42	16.5		
Total		255	100.0		

Table 6: Should the State of Alabama Increase its Support for Graduate Programs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Definitely Not	5	2.0	2.4	2.4
	Probably Not	7	2.7	3.4	5.8
	Maybe	15	5.9	7.2	13.0
	Probably Yes	59	23.1	28.5	41.5
	Definitely Yes	121	47.5	58.5	100.0
	Total	207	81.2	100.0	
Missing	Not sure/ Do not know	40	15.7		
	System	8	3.1		
	Total	48	18.8		
Total		255	100.0		

C. Discussion

The survey of businesses that have had a record of working with university graduate programs in Alabama indicates that these organizations have had a satisfactory relationship with the graduate schools. At the same time, the survey suggests that the relationship between businesses and Alabama-based university graduate programs are often not very intense nor involve extensive collaborative relationships. It is interesting to note the high percentage of companies that will work with a graduate program in recruiting new employees

through job fairs, but the comparatively low number of organizations which partner with the graduate programs in a long-term and more substantive way.

Special efforts must be undertaken to encourage deeper and more extensive involvement of Alabama's business community with the graduate programs in the State. Businesses act and think nationally and globally, and geographical proximity between the firm and the university graduate program is not sufficient to induce a firm to collaborate with a neighboring university graduate program. This impacts hiring decisions as well, since relatively few businesses heavily weight residence in Alabama as a factor in recruiting graduate degreed employees.

Graduate schools throughout the State also need to cooperate with each other to market and promote their programs. Few businesses have the capacity or interest to investigate the offerings of 18 separate graduate schools in the State, and most would benefit from single web-based source of information.

IV. Graduate Alumni Survey

In addition to the surveys of the business community in Alabama, the Center for Governmental Services (CGS) at Auburn University conducted a random telephone survey of recent alumni from graduate programs throughout Alabama. The purpose of the survey was to obtain information about that individual's experience while being a graduate student in Alabama; including, reasons for attending graduate school in Alabama, evaluation of the experience, and comparisons with other graduate experiences.

A. Methodology

In October 2000, the Alabama-based graduate schools provided contact information on advanced degree holder alumni. Information requested included: name, telephone number, degree awarded, field, and date of graduate degree. Table 7 provides information about the requested number of contacts, target number of completions, number of received contacts (with completed information), and actual number of alumni contacted (by school).

Table 7: Alumni Contacts by Participating University

	Requested	Target	Received	Contacts
Alabama State University	70	35	72	23
Auburn University	240	120	*1000	79
Auburn University (Montgomery)	70	35	*0	15
Samford University	40	20	49	14
Troy State University	150	75	78	10
Troy State (Dothan) University	90	45	109	29
University of Alabama	260	130	260	56
University of Alabama (Birmingham)	260	130	276	80
University of Montevallo	60	30	59	21
University of North Alabama	70	35	50	19
University of South Alabama	150	75	60	4
University of West Alabama	50	25	25	8

*Contacts received from Auburn University also included contacts for Auburn University Montgomery.

■ Formula = (number of Master's degrees awarded 1999 * 12%) + 15 + (Points awarded for number of Doctoral degrees awarded 1999). Information obtained from Alabama Council of Graduate Deans Survey, November 10, 1999

The survey questionnaire was developed in coordination with the Alabama Council of Graduate Deans (Appendix E). Questions examined the alumnus's experiences in graduate school while in Alabama, his/ her experiences upon completion of the graduate degree, and the comparative experiences of their peers. The survey instrument was reviewed and pre-tested prior to implementation.

Telephone interviewing occurred between February 15th and 18th, 2001; resulting in 357 completed surveys. The original database consisted of 1,347 telephone numbers, with 319 numbers found to be unusable or inaccurate; 4,276 numbers were dialed, and 1,028 contacts made. The significant demographic characteristics of the respondents were as follows: 43% are 25 – 34 years of age; 73% earned a Master's degree; 60% are Auburn University, University of Alabama, or University of Alabama Birmingham alumni. Forty-two percent have earnings between \$40-74,000 per year (See Appendix F).

B. Results

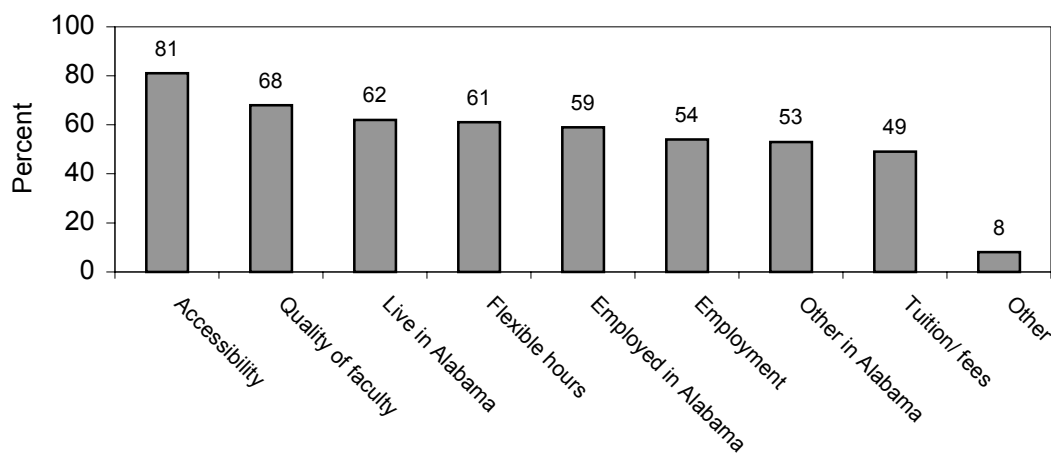
Of the alumni contacted, 74% report that they are currently working in their field of study, and 80% report that they have been professionally employed in Alabama at some point during their post-graduate degree career. Of those who have been professionally employed in Alabama at some time, 88% are currently employed in the State. Significantly, 92% of the graduate alumni state that they would strongly consider employment in Alabama if the right opportunities were available (Table 8). These data emphatically stress the importance that graduate education has on enhancing the technical and professional competitive capacity of the State. In short, graduate education in Alabama is an exceptionally effective investment.

Table 8: Given the Opportunity, Would You Consider Employment in Alabama?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	29	8.1	8.3	8.3
	Yes	322	90.2	91.7	100.0
	Total	351	98.3	100.0	
Missing	System	6	1.7		
Total		357	100.0		

When asked their reasons for matriculation in graduate school in Alabama, 81% state that accessibility was a major consideration. Other significant reasons include: quality of faculty (68%), desire to live in Alabama (62%), flexible hours (61%), and employed in Alabama at the time (59%). Factors such as employment opportunities (54%), having a significant other in Alabama (53%), and tuition (49%), did not appear to have a strong influence on the decision to seek a graduate degree in Alabama (Figure 5).

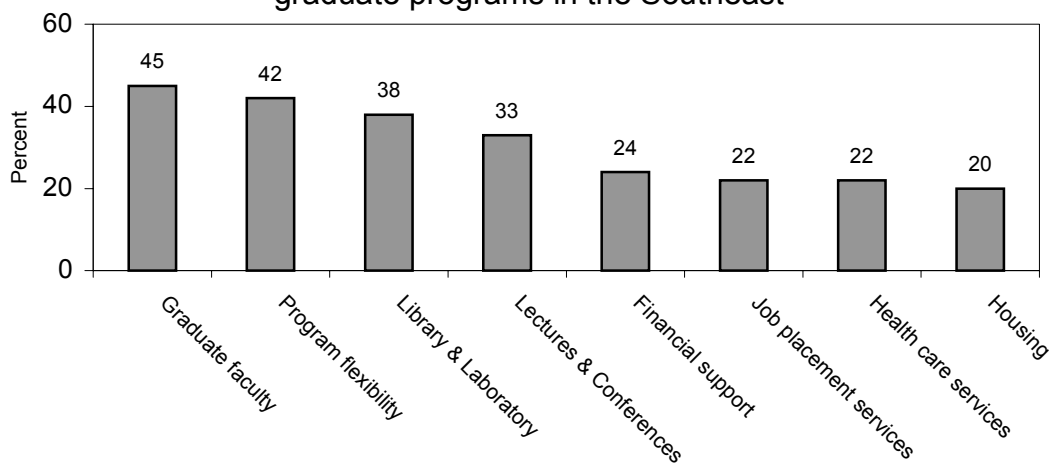
Figure 5: Reason for Matriculation in Graduate School in Alabama



When asked to compare their graduate experience in Alabama with their understanding or perception of other graduate programs in the Southeast, graduate program alumni from Alabama universities state that Alabama's graduate programs are *better* or *much better* than others in the Southeast (52%). Forty-seven percent report that they are *equal to others in the Southeast*.

In evaluation of specific factors, graduate program alumni evaluate Alabama graduate programs to be "better" to "much better" in graduate faculty (45%), program flexibility (42%), library and laboratory resources (38%), and lectures and conferences (33%) than other comparable universities in the Southeast.

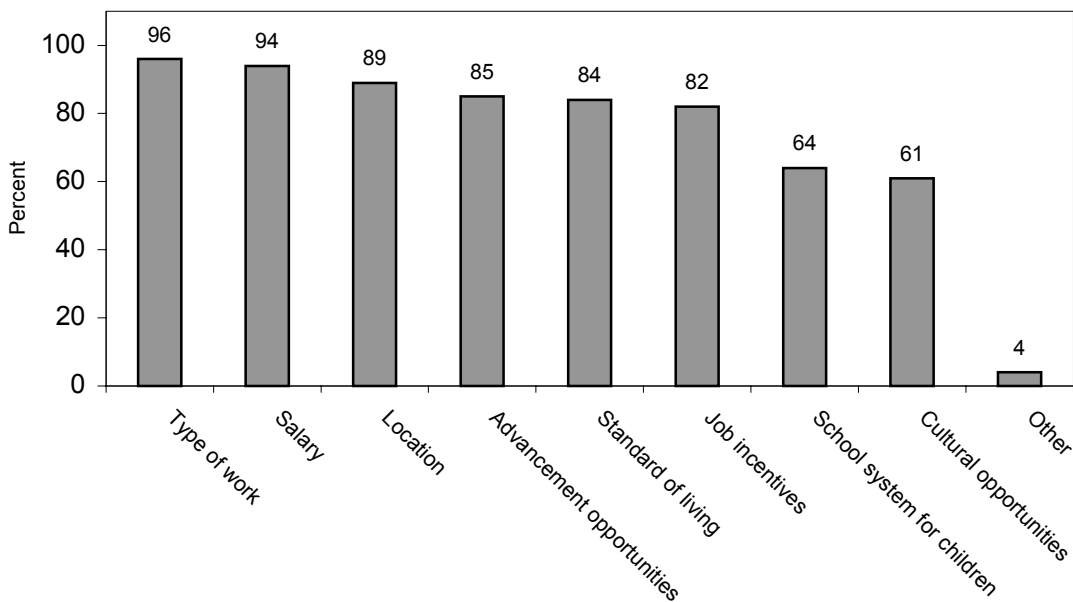
Figure 6: Factors Alabama Schools are "Better" or "Much Better" in comparison to other graduate programs in the Southeast



From the perspective of the alumni, graduate education programs in Alabama are well received and evaluated. Only 2% of the graduate program alumni believe that Alabama graduate schools are worse than others in the Southeast, and relatively few respondents state that their graduate programs were inferior to programs in other universities in the Southeastern United States

Many factors affect the decision to accept professional employment following the award of a graduate degree. Those considered to be of particular significance include: type of work (96%), salary (94%), location (89%), potential for job advancement (85%), standard of living (84%), and job incentives (82%). Factors that are less significant, but still important, include: the school system for children (64%) and cultural opportunities (61%) (Figure 7). Given the right environment and support, it is likely that an even higher percentage of Alabama's graduate degreed alumni would remain in or return to the State.

Figure 7: Important Factors to Alumni of Graduate Programs in Alabama when Accepting Professional Employment



When asked to compare the level and quality of support for graduate education by the State of Alabama to other southeastern states, 38% of the graduate degree alumni believe that the level of support to graduate education in Alabama was better than in other Southeastern states. Thirty-seven percent categorize Alabama state support as inferior to our neighboring states, and 26% thought that the level and quality of support between Alabama and other regional university systems were equivalent (Table 9).

Table 9: The Level and Quality of Support Provided by the State of Alabama for Graduate Programs in Comparison to Other Southeastern Universities.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Much worse	37	10.4	11.7	11.7
	Worse	78	21.8	24.7	36.4
	Neutral	81	22.7	25.6	62.0
	Favorable	96	26.9	30.4	92.4
	Very favorable	24	6.7	7.6	100.0
	Total	316	88.5	100.0	
Missing	No opinion	33	9.2		
	System	8	2.2		
	Total	41	11.5		
Total		357	100.0		

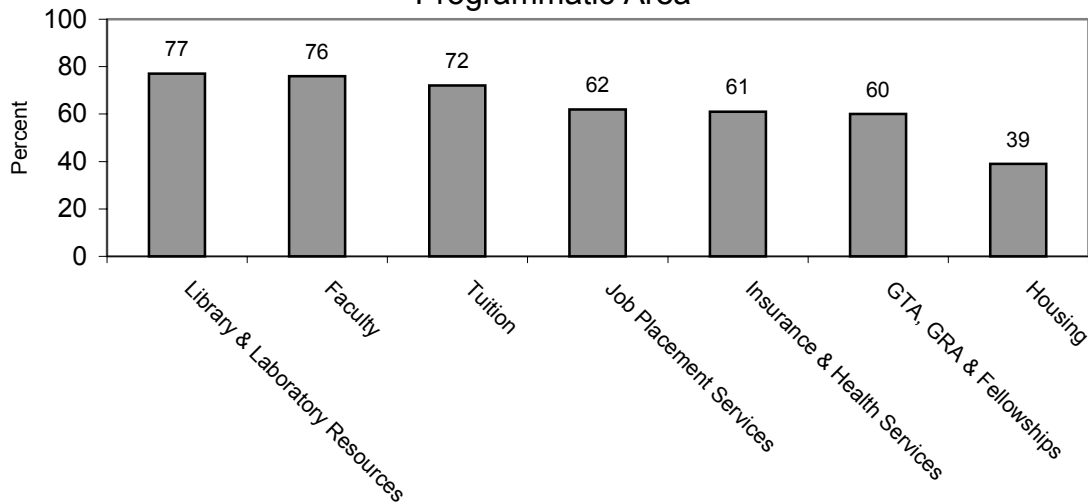
The data in Table 9 do not imply a high degree of satisfaction with the level of support available to graduate degree programs in the State of Alabama. Ninety-seven percent of the graduate degree alumni queried argue that additional funding is necessary (Table 10).

Table 10: Agreement with the Statement –
“Alabama Graduate Programs Do Not Need Any More Funding”

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	335	93.8	96.5	96.5
	Yes	12	3.4	3.5	100.0
	Total	347	97.2	100.0	
Missing	System	10	2.8		
Total		357	100.0		

Alumni support for increased state funding is strongest among six programmatic components of graduate education. They include: Library and Laboratory Resources (77% support), Faculty (76% support), Tuition (72% support), Job Placement Services (62% support), Insurance and Health Services (61% support), and Graduate Teaching Assistantships, Graduate Research Assistantships, and Fellowships/Scholarship Assistance (60% support).

Figure 8: Support for Increased State Funding by Programmatic Area



C. Discussion

The survey of graduate degree alumni from universities in Alabama underscores a very significant point; namely eighty percent of graduate degree alumni remain in Alabama following the receipt of their degree. The rate of attrition to other states is low, and the long-term economic benefit to Alabama more than reimburses the State for its investment in graduate programs. Additionally, those graduate degree individuals who are not currently employed in Alabama would gladly return to the State if a satisfactory position became available. Graduate education, in short, is an outstanding investment for the State.

Not surprisingly, few graduate degree alumni from Alabama universities disparage their graduate education experience. The quality of faculty, accessibility of programs, and other available resources for graduate education in Alabama are perceived by the alumni to be equal to or superior to other universities in the Southeast.

Graduate alumni, however, are not complacent about the level of support or funding provided by the State. They overwhelmingly endorse the need to increase funding. Overall, the cadre of graduate degree individuals from Alabama universities is an untapped resource in mobilizing support for graduate education in the State. These alumni are a knowledgeable and committed constituency for support of graduate education.

V. Peer Institutional Qualitative Comparisons

In an effort to identify strengths and establish benchmarks for comparison, the Center for Governmental Services (CGS) interviewed Deans or Associate Deans of graduate schools at universities throughout the Southeast.

A. Methodology

Graduate Deans at thirty-one universities located in Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, and Tennessee were contacted and interviewed (Appendix G). The interviews ranged in length from ten to sixty minutes, and the universities selected represent the major graduate level classifications included in the Carnegie Classification Code. Eight universities were included from the Carnegie *Research Extensive* category, eight from the *Research Intensive* category, and fourteen universities from the *Master's Comprehensive* category for a total of 30 completed interviews out of 46 attempted (65% response rate). Each graduate office was contacted at least twice.

An open-ended interview procedure allowed the Graduate Deans to elaborate on the positive attributes of their graduate school, while paying particular attention to the future of graduate education in their respective state. Respondents were encouraged to elaborate on issues related to:

- (1) Successes of their graduate education program;
- (2) Activities which demonstrate to key stakeholders the importance of graduate education;
- (3) Specific examples of contributions to their state by graduate education
- (4) Resources utilized to secure current and future funding for graduate programs; and
- (5) An appraisal of the future of graduate education within their state and their university.

B. Results

1. Role of Graduate Education

Many of the Graduate Deans, stated that the role of graduate education is to maintain and increase intellectual capital while expanding the knowledge base. The most obvious way graduate schools contribute in this fashion is by educating students. Also, as underscored by the Graduate Deans, research is an equal contributor or partner in this process. Graduate students influence research productivity in several ways including conducting their own research, working with faculty on research, and/or inspiring faculty to excel.

2. Technology

A second common theme voiced by the Graduate Deans is that technology is the foundation of the future. Technology can be utilized to recruit, educate, collaborate, market, and advertise graduate education programs. Furthermore, Graduate Deans report that access to the latest technology is crucial to the success of graduate education. Through technology, graduate schools can recruit the highest quality student utilizing the Internet and university web pages, as well as attract those students interested in technical fields of study. Technology is also a critical feature in promoting and maintaining collaborative partnerships with industry.

Mississippi State University (MSU) provides an example of how the technology of a university can attract new industry. At this campus, graduate faculty have been integrally involved in the recruitment of the new Nissan Assembly plant, demonstrating to Nissan that the University's has made a strong commitment to support the technical needs of the industry. Due to this strong commitment, Nissan is also considering moving their Research and Development offices to Mississippi. This project will contribute to Mississippi's economy, providing increased opportunities for the advancement of graduate education. This may not have been possible without the University's technical capacities, its graduate faculty, and its demonstration of support for quality graduate education.

3. Needs assessments

When discussing the future of graduate education, the most common theme among all graduate deans surveyed, is the ability of graduate schools to address simultaneously the needs of the students, the community, and the economy. At the University of North Florida, a community advisory committee assisted in completing a needs assessment to identify and prioritize the needs of the community. This effort directly led to the development of a Master's Degree in physical therapy on that campus. Georgia College & State University regularly uses community practitioners to assist with the campus needs assessment in order to keep programs and curricula current with community needs. At the University of Central Florida, yearly statistics are recorded that analyze the needs of students. Typically, they report that financial support for graduate education is their greatest need.

The needs assessments of these different universities reveal some common impressions about the future of graduate education:

- *Alternative learning opportunities*, including web-based classes, video classes, one-time training sessions, night and weekend classes, certificate programs, and distance learning programs, are keys to the success of graduate education. These programs provide education while establishing community links and attracting new students.

- Universities within a state must work together to eliminate the *unnecessary duplication of services/programs*. This may include working together to offer joint programs.
- *External mentoring programs* provide continuity and stability for graduate education. These programs provide graduate students with links to the reality of their profession, as well as develop relationships with local businesses and increase the potential for financial liaisons with the university. Every university typically has at least one alumnus in an influential position, and collaborative relationships with these individuals can assist both the students and the university.
- *Internal mentoring programs* such as at Appalachian State University provide links of communication between faculty, graduate students, and undergraduate students, which contribute to recruitment, retention, and innovation at the graduate level.

4. Community & Business Partnerships

The most innovative and financially successful avenues for furthering graduate education are those that involve the collaboration of several different types of entities, including: universities, businesses, civic groups, and governmental organizations. In many cases, notable partners are local school districts, which are under great pressure to improve standards for teachers and administrators. Many school districts have received federal funding to reach these goals, and universities such as Francis Marion, Arkansas Technical University, Georgia Southern, North Carolina A & T University, and Southern Arkansas University report establishing effective partnerships that provide the schools with needed training, while enrolling new students in the university programs.

Other significant partnerships exist with companies and industries. Examples include: General Electric and Clemson University; Procter and Gamble and the University of Florida; Digital Media and East Tennessee State University; Lucent Technologies and University of Central Florida; and Wal-Mart and Arkansas Technical University.

5. Alternative Funding & Collaborative Lobbying

A final major concern reported by Graduate Deans relates to the attainment of financial resources. A large majority of the Deans make reference to the need for “alternative” funding, which typically refers to financial support from grants, joint ventures, foundation entities, and alumni fundraising.

Several Deans recommend that graduate schools find ways to better utilize grant dollars. The respondents report that often a funded project may be completed under budget, resulting in unused grant dollars following the completion of a project. These Deans recommend the need to continue positive project management, while allowing the university to retain any unused funds. Deans report that effective project management would allow for efficiency as well as promote more research and employment opportunities for graduate students upon completion of the grant work.

The Deans recognize the importance of financial support from their state, and two themes were predominate:

- Graduate schools must lobby for money in an organized, comprehensive, and *collaborative* fashion. For many states, this means that one proposal is sent to the legislator on behalf of all the universities in the state. Many schools report having paid lobbyists to promote these goals at both the state and national level. Deans report that the key to effective lobbying is emphasizing the qualitative contributions of graduate education, not quantitative contributions.
- Education must be treated as a single entity, and educators should cooperatively emphasize the importance of education at all levels. Deans report that language such as “K-20” is key to establishing a unified front on the importance of education. This unity increases the bargaining power of the lobbyist, and eliminates internal turmoil that reflects negatively on all education.

C. Discussion

In regard to the future of graduate education throughout the Southeast, neither size, location, nor Carnegie Classification category are sufficient to explain the varying treatment of graduate education and graduate programs across the state. Based upon interviews with graduate deans in other states, the key factors for the successful future of graduate education are commitment, capital investment, and collaboration with the community and with other universities. Capital is the development of human intellect to fuel the innovations needed to ensure a prosperous financial and social future. Collaboration is needed for technological advancement, as well as lobbying and business relationship development. Working jointly together with key stakeholders in an effort to develop partnerships will stimulate increases in funding through lobbying, advancement in technology, and a proliferation of business alliances.

VI. Conclusion and Recommendations

Graduate education programs make a significant contribution to the economy and quality of life in the State of Alabama. Representatives from Alabama's growing, firms value their relationships with university-based graduate programs in Alabama and strongly endorse even closer collaboration and cooperation. These firms also understand and underscore the importance of campus interviews, job fairs, web pages, co-op programs and internships as valuable tools to advance their competitive potential in developing Alabama's economic infrastructure.

Among Alabama's growing technology and service sectors, there is a strong demand for employees with graduate degrees. This is particularly true for the fields of information technology, business administration, engineering, and accounting. These businesses, while not dissatisfied with the level of cooperation with the university-based graduate programs in Alabama, perceive that more can be done and strongly emphasize the need for increased support for graduate programs in the State. Many firms also invest heavily in graduate education programs for their employees, and capitalize on their proximity to a university-based graduate program to enhance their organizations skills and their workforce's capabilities.

Investment in graduate education provides an immediate payoff to the State. Over eighty percent of recent alumni of graduate degree programs from Alabama universities are professionally employed in Alabama and contribute directly and immediately to the economy and quality of life in the State. Over ninety percent of recent graduate-degreed alumni have a preference to pursue their career in the State.

Accessibility of high quality graduate education, high quality graduate faculty, and an affinity to Alabama all contribute significantly to the decision to attend graduate school in the State. Although graduate degree alumni value their education and appreciate the commitment the State has made to their education, they strongly feel that more funding and attention must be paid to the further development of graduate education in Alabama.

Alabama has much to learn from the experiences of graduate schools in other southeastern universities. The graduate deans from our peer institutions emphatically point out that graduate education programs must have a higher profile and priority, both within the university and among state-level decision-makers. Graduate programs must lead by becoming the early adopters of technology and by their eagerness to invest heavily in technology in all fields of study.

Graduate school deans from successful programs throughout the southeast underscore the necessity for graduate programs to partner with their

communities in accessing emerging needs and providing rapid and effective responses to these needs. To survive and prosper, graduate schools and graduate programs must also aggressively initiate community and business partnerships and engage in inter-university collaboration and collaborative governmental relations. To lay the foundation for growth in the 21st century, the K-20 education community must approach decision-makers with an integrated and unified program of action and a common vision for the future.

Recommendations:

1. Strengthen collaboration among the graduate schools in Alabama to encourage inter-university graduate school partnerships in marketing graduate programs State-wide, communicating with State decision-makers, and in strengthening relationships with potential clients and supporters.
2. Foster cooperation among the universities in developing and implementing a strategic plan to strengthen, distribute, and evaluate graduate program offerings, based upon a common community-based needs assessment strategy.
3. Promote a unified public affairs and governmental relations program based upon the adoption of a “K-20” approach to education in Alabama.
4. Work with university governing boards and the central administration to raise the visibility of the importance of graduate education on individual university campuses.
5. Encourage graduate programs to increase and strengthen partnerships with the business, service, and commercial sectors.

Recommendations:

1. Strengthen collaboration among the graduate schools in Alabama to encourage inter-university graduate school partnerships in marketing graduate programs State-wide, communicating with State decision-makers, and in strengthening relationships with potential clients and supporters.
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3. Promote a unified public affairs and governmental relations program based upon the adoption of a “K-20” approach to education in Alabama.
4. Work with university governing boards and the central administration to raise the visibility of the importance of graduate education on individual university campuses.
5. Encourage graduate programs to increase and strengthen partnerships with the business, service, and commercial sectors.

Appendix A

Protocol for in-Depth Business Survey

Contact: email
Title: HR phone:
Contact: email
Title: phone:
Company:
Address:
City, State, Zip:
Referring Univ:

Introduction: "Hello Mr./Mrs. _____ I'm _____ from Auburn University, I'm conducting a survey about graduate education for the Alabama Council of Graduate Deans. The purpose of the survey is to find out how graduate programs are doing a good job, how they can be improved and if there is support to increase funding for graduate education. The results will be shared with graduate programs, the business community and the legislature. Can you answer a few questions for me?"

(You were recommended by one of the universities, because you have some first hand knowledge about graduate education.) Don't say unless they ask.

A. CONTACTS WITH THE UNIVERSITY COMMUNITY GRADUATE PROGRAMS

1. What are the areas you estimate you will need to hire employees who have advanced degrees in the next few years? Can you estimate how many?

2. Will you describe any contacts your company has with any university in Alabama?
For example: job fairs, recruitment, projects or joint effort, guest lectures, faculty consulting services.
 - a. What university resources have been most helpful to you? (For example: labs, training programs, web pages, libraries, etc.)

- b. What have been some of the positive results of your contacts with the university community? Or, What did you get out of the relationship?
- c. What other kinds of projects/contacts would be helpful to your company?

If there are no links:

- a. Are you located close to a university with a graduate program?
- b. What kinds of contacts (projects or joint efforts) between your company and that university would be helpful to your company?

B. COMPANY COMMITMENT TO GRADUATE EDUCATION

3. Does your company work with a university graduate internship program?

___ Yes ___ No

If yes:

- a. What universities do you work with?
- b. What types of degrees do you need interns to have?
- c. What are some of the benefits you have experienced through this program?
- d. Would you say intern students are never, sometimes, or usually hired as regular employees?

If no:

- a. Have you considered working with a graduate internship program?
4. In what ways can cooperation between graduate education and the business community be promoted or expanded? Is the issue of cooperation important to you? If so, can you explain why?
5. If specific examples of cooperation were given ask:

Where can we find materials to illustrate this example: photos, graphs, quotes.

6. Describe any incentives your company offers for employees to go back to school to get an advanced degree. Can you give me a rough estimate as to the number of employees who have taken classes or earned an advanced degree?
7. Can you give an example of how employees with an advanced degree add value to your company?
8. If more of your employees had a graduate education what kind of difference would it make?

III. SUPPORT FOR EXPANDING FUNDING FOR GRADUATE EDUCATION

In thinking about graduate education from the perspective of the university: Many universities have funds to help students get an advanced degree. For example: funding graduate teaching, funding graduate research assistantships, or waiving tuition.

9. Do you think it would be helpful (or would you like to see) if more funds were appropriated by the legislature for graduate education?
10. What has, or could, the State of Alabama do to help the university community? Help your business? (Grow and prosper)
11. Could you tell me the name and number of your Public Relations/ Public Affairs Officer?
Name:
Phone:
Address if different:
Do you have any other comments?

Thank you for your time. Your responses have been most helpful.

Appendix B: Summary of In-Depth Business Survey Results by Question

1. What are the top three areas you estimate you will need to hire employees who have advanced degrees in the next few years?

By far, technical degrees were in greatest demand by the businesses surveyed. However, these numbers are misleading because the majority of the businesses surveyed were involved in technical markets. The most frequently cited area of need was in the engineering field, and more specifically, electrical and mechanical engineering. Employees with graduate degree in information technology, MIS, and computer science degrees are also among the most coveted. Among the less technical degrees, an MBA, and to a lesser extent, specific accounting, finance, and marketing degrees, were the most heavily demanded. One point of significance is 7 of the 36 respondents specifically mentioned that their company does not require a graduate degree for employment.

2. Please describe any contacts your company has with any university in Alabama? For example: job fairs, recruitment, projects or joint efforts, guest lectures, and faculty consulting services.

The most frequently cited point of contact between businesses and universities is through recruitment efforts. These efforts include job fairs, career days, and career development services. Intern/co-op programs are the second most frequently used method of contact. A few of the more proactive companies made efforts to contact individual graduate schools and programs in an effort to offer business seminars and business outreach programs. There were two mentions of joint effort programs between a graduate school and a business in providing a consulting or research project.

The vast majority of businesses were pleased with the University's career centers designed to assist students with job placement services and collaborate with businesses. Those businesses that had established relationships with graduate programs were pleased with the results. Most respondents believe that they were successful in recruiting quality applicants through these efforts.

A. What university contacts/resources have been helpful to you? For example: labs, training programs, libraries, etc.

The most frequently used and most helpful of all university resources is the university's web page. The web page provides an easy avenue for contact and research. Web pages that provide resumes and curriculum outlines of course work for degree paths were seen as being the most beneficial. A few companies report being provided with a university password in order to access even more in-depth

information over the Internet. Additional information desired were salary ranges for graduates of the various disciplines. The university consulting and training services and the university career development services were also mentioned as being helpful to businesses.

B. What have been some of the positive results of your contacts with the university community? Or, what did you get out of the relationship?

The Internship and co-op programs were overwhelmingly chosen as providing the most beneficial and positive results. These programs were used to “groom future employees.” Additionally, the programs offer an economical alternative to outright hiring of new employees. Graduate students can infuse the business with new ideas and high productivity standards. Another frequently mentioned benefit from the university contacts was through increased communication channels. Networking and communication is seen as essential to the business-university relationship. By developing these communication lines, future opportunities develop for joint efforts.

C. What other kinds of projects/contacts would be helpful to your company?

From a business perspective, the Internet seems to offer numerous educational opportunities. Businesses think that universities in Alabama need to increase the number of web-based and distance learning programs. Increasing the number of graduate internships and joint efforts were also seen as being helpful in the future. Many of the businesses feel that increasing the communication between the business and academic worlds would allow for greater collaboration, including real-world or real-time curriculum development and supportive research initiatives.

3. Does your company work with a university graduate internship program?

Out of the thirty-six respondents, nineteen respondents report having an internship program specifically for graduate students, fifteen did not possess such a program, and two were in the process of developing a program. Much of this disparity spawns from there being history of having internship programs only for undergraduates or co-op programs instead of internships. Several of the accounting firms stated that they hired graduate students during tax season, however the program is not a formalized one. Nearly all of the companies with a graduate internship program were happy with the results of providing benefits to the company while giving the intern invaluable work experience.

A. Which universities do you work with?

The majority of companies surveyed work with graduate programs from universities within Alabama. Only three respondents mentioned working with graduate programs from other states. Out-of-state universities that were mentioned

as having partnerships with businesses within Alabama include: Purdue, Louisiana State University, Murray State, Georgia Tech, and the University of Tennessee.

B. What types of degrees do you need interns to have?

Engineering and computer related degrees were the most frequently cited degree. Other degrees that were identified as being helpful were education, business, and accounting degrees.

C. What benefits have been experienced through this program?

The most frequently mentioned benefit of the internship program was in employee recruitment. The internship program helps mold potential future employees. Likewise, there are large cost savings through using interns instead of full-time employees. As one respondent stated, interns provide “cutting edge skills and knowledge at an hourly rate.” Another added benefit is reinvigoration of the business. Interns tend to bring fresh ideas to a company, ideas that have not yet been confined to the corporate mentality

D. Would you say – intern students “never”, “sometimes”, or “usually” are hired as regular employees?

Out of the eighteen respondents with an internship program, seven reported that interns were *usually* hired; nine reported that interns were *sometimes* hired, and two reported that interns were *never* hired. The chances of being hired following completion of an internship increased based upon that person’s grade point average and college degree.

4. In what ways can cooperation between graduate education and the business community be promoted or expanded? Is the issue of cooperation important to you? If so, can you explain why?

Communication and increased contacts were, by far, the most sought after improvement. Most of the businesses expressed a desire to communicate their needs and ideas. Stronger communication was believed to directly affect the amount of university consulting projects and breadth of opportunities. Examples of greater personal contacts include students and university staff touring outside businesses. Along the same reasoning, increased communication and contacts enables students to achieve higher work experience levels. By giving students more work experience, time and costs are severely reduced in a company that is assimilating them as new employees.

5. If specific examples of cooperation were given ask: Where can we find materials to illustrate this example: photos, graphs, and quotes.

Possible examples include joint business projects and university government contracts. One respondent stated that university websites that provide salary surveys and similar information were very helpful.

6. Describe any incentives your company offers for employees to go back to school to get an advanced degree. (Can you provide me a rough estimate as to the number of employees who have taken classes or earned an advanced degree? Examples: pay increases, paid tuition, time off work to attend class.)

The majority of companies provided at least some incentives for employees to go back to school to earn an advanced degree. Twenty-one out of the thirty-five respondents provide full tuition reimbursement, four provide partial reimbursement, one provides flextime, and nine provide no incentives. Several of the companies also help pay for textbooks and allow time off of work to attend classes. A few of the incentive programs have certain requirements that must be met such as maintaining a set grade level and pursuing a job-related degree. Of the companies that did not offer any incentives to pursue a graduate level degree, several do have educational incentives for employees to earn an undergraduate degree.

7. What are examples of how employees with an advanced degree add value to your company?

Employees with advanced degrees were seen as being more knowledgeable, more prepared, more helpful, and more productive. A key value added by advanced degree holders was increased company marketability, especially in the case of high tech companies. Several of the high tech companies mentioned that employees with advanced degrees were large factors in company contract bids because they added credibility to the company. Another key value mentioned was employees with advanced degrees were more knowledgeable and capable with new technologies. One respondent mentioned that such employees, frequently have a global view and were able to detect trends.

8. If more of your employees had a graduate education, what kind of difference would it make?

By obtaining an advanced degree, employees increase their self-esteem, make themselves more marketable, and increase their innovation. These employees also increase overall company innovation by sharing their knowledge with others and initiating thought processes among employees they contact. In other words, most

companies feel that advanced degree holders will improve the company position and move it forward into the future.

9. Do you think it would be helpful (or would you like to see) for more funds to be appropriated by the legislature for graduate education?

Overall, businesses support increasing funds for graduate education. Out of the thirty-three respondents, eighteen firmly agreed that more funds should be provided, while sixteen reported mixed positive responses. Of the two negative replies, one respondent disapproved of more State funding for graduate education because he felt businesses already provided these funds, while the other respondent declined to answer for the company as a whole. From the mixed positive responses, many companies felt that graduate education funding should not be separate from undergraduate education funding.

10. What has, or could, the State of Alabama do to help the university community? Help your business? (Grow and prosper)

The majority of responses, seventeen out of twenty-seven, related to funding issues. These issues included increasing funding for grants, scholarships, computer labs, and instructor salaries. Several companies felt attracting great university faculty, and thus increasing faculty salaries, was crucial to improve the quality of education in Alabama. One business felt a government loan or tax break would assist businesses in their efforts to pay employees to go back to school. The other important factor mentioned by businesses was communication. Six of the respondents felt that improving the communication between businesses, the legislature, and universities was important for better understanding and cooperation.

11. Would you like to make additional comments?

The majority of comments reinforce the importance of higher education. As one respondent stated, "The work force is shrinking so we need people who are qualified." Two respondents mentioned a similar educational problem, duplication in services. These respondents indicate too that too many programs are trying to do the same thing, so new ideas are being lost in the process. Likewise, several areas have little-to-no services aimed towards them while other areas are drowning in the multitude of services provided. One recommendation was to fund a smaller number of quality programs rather than numerous mediocre programs.

Appendix C: Protocol for Broad- Based Business Survey

Introduction

1. Does (company name) hire people with Master's or PhD degrees?
Yes
No

2. Are you interested in, or planning on, hiring Master's or PhD degree holders in the future?
Yes
No
Not Sure/ Don't Know

3. Are you currently or have you recently hired Master's level or PhD degree holders from universities in Alabama?
Yes
No
Not Sure/ Don't Know

4. How difficult has it been getting applicants with Master's or PhD degree from universities in Alabama?
Extremely difficult
Slightly difficult
No Difficulty
Not Sure/ Don't Know

5. When hiring, do you prefer to hire Master's and PhD graduates from universities in Alabama or from universities in other states?
Alabama
Other States
No Difference
No Opinion
Not Sure/ Don't Know

6. I am going to read a list of graduate majors. Please respond "yes" or "no" to the degree field where _____ is likely to hire employees with a Masters or PhD degree?
Engineering
Accounting
MBA
Information Technology & Computer Science
Natural or Physical Science
Liberal Arts
Education

Other

7. Please respond "yes" or "no" to the following types of contacts _____ utilizes in working with university graduate programs in Alabama.
- No reply
 - Job Fairs
 - Campus Interviews
 - Co-op Training Programs
 - University Web Pages
 - Research Projects
 - Guest Lectures
 - Faculty Consultants
 - On-campus training
 - Joint Training Programs
 - Joint Contract Bidding
 - Other
8. Does (company name) participate in a graduate internship program with a university in Alabama?
- Yes
 - No
 - Not Sure/ Don't Know
9. Are graduate students never, sometimes, or usually hired as regular employees after completing your internship program?
- Never
 - Sometimes
 - Usually
 - Not Sure/ Don't Know
10. Does (company name) offer any incentives for employees to go back to school for a Masters or PhD degree?
- Yes
 - No
 - Not Sure/ Don't Know
11. Through your organization's assisted program, how many employees receive assistance each year in obtaining a Masters or PhD degree?
- under 10
 - 10- 20
 - 20- 30
 - over 30
 - Not Sure/ Don't Know

12. Of these employees, approximately how many graduated with a Masters or PhD degree last year?

- 0
- 1 - 2
- 3 - 5
- 6 - 10
- over 10
- Not Sure/ Don't Know

13. Would prefer that more of your employees obtain an advanced degree?

- Yes
- No
- Not Sure/ Don't Know

14. Currently, how satisfied are you with the level of cooperation between any of Alabama university's graduate programs and your organization?

- Very Satisfied
- Satisfied
- Maybe
- Dissatisfied
- Very Dissatisfied
- Not Sure/ Don't Know

15. Would (company name) consider increasing the amount of support to employees interested in pursuing a Masters or PhD degree?

- Definitely Yes
- Probably Yes
- Maybe
- Probably Not
- Definitely Not
- Not Sure/ Don't Know

16. Would (company name) like to see an increase in the number of Alabama students able to get support from the State of Alabama to pursue a graduate degree?

- Definitely Yes
- Probably Yes
- Maybe
- Probably Not
- Definitely Not
- Not Sure/ Don't Know

17. Should the State of Alabama increase its support for graduate programs?

Definitely Yes

Probably Yes

Maybe

Probably Not

Definitely Not

Not Sure/ Don't Know

18. Do you have any additional comments?

Thank you for your time. Your responses are very helpful for improving cooperation with university graduate schools in Alabama.

**Appendix D:
Frequency Distributions for Broad-Based Business Survey**

Does your organization hire people with graduate degrees?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	4	1.6	1.6	1.6
	Yes	251	98.4	98.4	100.0
	Total	255	100.0	100.0	

Is your company interested in or planning on hiring graduate degree holders in the future?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	3	1.2	100.0	100.0
Missing	Do not know	1	.4		
	System	251	98.4		
	Total	252	98.8		
Total		255	100.0		

Are you currently or have you recently hired graduate degree holders from Alabama universities?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	73	28.6	34.0	34.0
	Yes	142	55.7	66.0	100.0
	Total	215	84.3	100.0	
Missing	Do not know	40	15.7		
Total		255	100.0		

How difficult has it been getting graduate degree applicants from universities in Alabama?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No Difficulty	118	46.3	74.2	74.2
	Slightly Difficult	33	12.9	20.8	95.0
	Extremely Difficult	8	3.1	5.0	100.0
	Total	159	62.4	100.0	
Missing	Not Sure/ Do not know	21	8.2		
	System	75	29.4		
	Total	96	37.6		
Total		255	100.0		

**Appendix D:
Frequency Distributions for Broad-Based Business Survey**

Do you prefer graduate students from universities in Alabama or from other states?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Other States' graduates	21	8.2	8.9	8.9
	Alabama graduates	60	23.5	25.5	34.5
	No Difference	154	60.4	65.5	100.0
	Total	235	92.2	100.0	
Missing	No Opinion	14	5.5		
	Not Sure/ Do not know	3	1.2		
	System	3	1.2		
	Total	20	7.8		
Total		255	100.0		

Company is likely to hire a graduate engineering student

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	126	49.4	50.6	50.6
	Yes	123	48.2	49.4	100.0
	Total	249	97.6	100.0	
Missing	System	6	2.4		
Total		255	100.0		

Company is likely to hire a graduate accounting student

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	106	41.6	42.6	42.6
	Yes	143	56.1	57.4	100.0
	Total	249	97.6	100.0	
Missing	System	6	2.4		
Total		255	100.0		

Company is likely to hire a MBA student

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	81	31.8	32.5	32.5
	Yes	168	65.9	67.5	100.0
	Total	249	97.6	100.0	
Missing	System	6	2.4		
Total		255	100.0		

**Appendix D:
Frequency Distributions for Broad-Based Business Survey**

Company is likely to hire a graduate IT or computer science student

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	97	38.0	39.0	39.0
	Yes	152	59.6	61.0	100.0
	Total	249	97.6	100.0	
Missing	System	6	2.4		
Total		255	100.0		

Company is likely to hire a graduate natural or physical science student

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	185	72.5	74.3	74.3
	Yes	64	25.1	25.7	100.0
	Total	249	97.6	100.0	
Missing	System	6	2.4		
Total		255	100.0		

Company is likely to hire a graduate liberal arts student

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	166	65.1	66.7	66.7
	Yes	83	32.5	33.3	100.0
	Total	249	97.6	100.0	
Missing	System	6	2.4		
Total		255	100.0		

Company is likely to hire a graduate education student

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	175	68.6	70.3	70.3
	Yes	74	29.0	29.7	100.0
	Total	249	97.6	100.0	
Missing	System	6	2.4		
Total		255	100.0		

**Appendix D:
Frequency Distributions for Broad-Based Business Survey**

Company is likely to hire other types of graduate students

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	188	73.7	75.5	75.5
	Yes	61	23.9	24.5	100.0
	Total	249	97.6	100.0	
Missing	System	6	2.4		
Total		255	100.0		

Type of university contact utilized by company: Job Fairs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	66	25.9	26.6	26.6
	Yes	182	71.4	73.4	100.0
	Total	248	97.3	100.0	
Missing	System	7	2.7		
Total		255	100.0		

Type of university contact utilized by company: Campus Interviews

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	50	19.6	20.2	20.2
	Yes	198	77.6	79.8	100.0
	Total	248	97.3	100.0	
Missing	System	7	2.7		
Total		255	100.0		

Type of university contact utilized by company: Co-op Training Programs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	132	51.8	53.2	53.2
	Yes	116	45.5	46.8	100.0
	Total	248	97.3	100.0	
Missing	System	7	2.7		
Total		255	100.0		

**Appendix D:
Frequency Distributions for Broad-Based Business Survey**

Type of university contact utilized by company: University Web Pages

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	121	47.5	48.8	48.8
	Yes	127	49.8	51.2	100.0
	Total	248	97.3	100.0	
Missing	System	7	2.7		
Total		255	100.0		

Type of university contact utilized by company: Research Projects

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	189	74.1	76.2	76.2
	Yes	59	23.1	23.8	100.0
	Total	248	97.3	100.0	
Missing	System	7	2.7		
Total		255	100.0		

Type of university contact utilized by company: Guest Lectures

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	147	57.6	59.3	59.3
	Yes	101	39.6	40.7	100.0
	Total	248	97.3	100.0	
Missing	System	7	2.7		
Total		255	100.0		

Type of university contact utilized by company: Faculty Consultants

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	147	57.6	59.3	59.3
	Yes	101	39.6	40.7	100.0
	Total	248	97.3	100.0	
Missing	System	7	2.7		
Total		255	100.0		

**Appendix D:
Frequency Distributions for Broad-Based Business Survey**

Type of university contact utilized by company: On-campus Training

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	208	81.6	83.9	83.9
	Yes	40	15.7	16.1	100.0
	Total	248	97.3	100.0	
Missing	System	7	2.7		
Total		255	100.0		

Type of university contact utilized by company: Joint Training Programs

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	203	79.6	81.9	81.9
	Yes	45	17.6	18.1	100.0
	Total	248	97.3	100.0	
Missing	System	7	2.7		
Total		255	100.0		

Type of university contact utilized by company: Joint Contract Bidding

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	232	91.0	93.5	93.5
	Yes	16	6.3	6.5	100.0
	Total	248	97.3	100.0	
Missing	System	7	2.7		
Total		255	100.0		

Other types of university contact utilized by company

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	217	85.1	87.5	87.5
	Yes	31	12.2	12.5	100.0
	Total	248	97.3	100.0	
Missing	System	7	2.7		
Total		255	100.0		

**Appendix D:
Frequency Distributions for Broad-Based Business Survey**

Participation in graduate internship program with university in Alabama

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	136	53.3	59.6	59.6
	Yes	92	36.1	40.4	100.0
	Total	228	89.4	100.0	
Missing	Not Sure/ Do not know	20	7.8		
	System	7	2.7		
	Total	27	10.6		
Total		255	100.0		

Interns hired as regular employees

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Never	3	1.2	3.5	3.5
	Sometimes	50	19.6	58.1	61.6
	Usually	33	12.9	38.4	100.0
	Total	86	33.7	100.0	
Missing	Not Sure/ Do not know	6	2.4		
	System	163	63.9		
	Total	169	66.3		
Total		255	100.0		

Does your company offer incentives for employees to go back to school for a graduate degree?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	77	30.2	32.5	32.5
	Yes	160	62.7	67.5	100.0
	Total	237	92.9	100.0	
Missing	Not sure/ Do not know	10	3.9		
	System	8	3.1		
	Total	18	7.1		
Total		255	100.0		

**Appendix D:
Frequency Distributions for Broad-Based Business Survey**

How many employees receive assistance through your company's graduate assistance program?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Under 10	74	29.0	63.8	63.8
	10 -20	18	7.1	15.5	79.3
	20 -30	4	1.6	3.4	82.8
	over 30	20	7.8	17.2	100.0
	Total	116	45.5	100.0	
Missing	Not sure/ Do not know	44	17.3		
	System	95	37.3		
	Total	139	54.5		
Total		255	100.0		

How many employee receive graduate degrees through your company's graduate assistance programs each year?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1 -2	40	15.7	25.0	25.0
	3 -5	18	7.1	11.3	36.3
	6 -10	8	3.1	5.0	41.3
	Over 10	17	6.7	10.6	51.9
	0 or unsure	77	30.2	48.1	100.0
	Total	160	62.7	100.0	
Missing	System	95	37.3		
Total		255	100.0		

Would your company prefer to have more of your employees obtain advanced degree?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	63	24.7	28.9	28.9
	Yes	155	60.8	71.1	100.0
	Total	218	85.5	100.0	
Missing	Not sure/ Do not know	29	11.4		
	System	8	3.1		
Total		37	14.5		
Total		255	100.0		

**Appendix D:
Frequency Distributions for Broad-Based Business Survey**

Satisfaction with the level of cooperation between your company and the universities in Alabama

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Dissatisfied	2	.8	1.0	1.0
	Neutral	12	4.7	5.7	6.7
	Satisfied	79	31.0	37.6	44.3
	Very Satisfied	117	45.9	55.7	100.0
	Total	210	82.4	100.0	
Missing	Not sure/ Do not know	37	14.5		
	System	8	3.1		
	Total	45	17.6		
Total		255	100.0		

Would your company consider increasing the amount of support to employees who want to pursue a graduate degree?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Definitely Not	42	16.5	19.6	19.6
	Probably Not	52	20.4	24.3	43.9
	Maybe	28	11.0	13.1	57.0
	Probably Yes	52	20.4	24.3	81.3
	Definitely Yes	40	15.7	18.7	100.0
	Total	214	83.9	100.0	
Missing	Not sure/ Do not know	33	12.9		
	System	8	3.1		
	Total	41	16.1		
Total		255	100.0		

Would your company like to see an increase in the number of Alabama students able to get support for graduate degrees?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Definitely Not	9	3.5	4.2	4.2
	Probably Not	14	5.5	6.6	10.8
	Maybe	20	7.8	9.4	20.2
	Probably Yes	52	20.4	24.4	44.6
	Definitely Yes	118	46.3	55.4	100.0
	Total	213	83.5	100.0	
Missing	Not sure/ Do not know	34	13.3		
	System	8	3.1		
	Total	42	16.5		
Total		255	100.0		

**Appendix D:
Frequency Distributions for Broad-Based Business Survey**

Should the State of Alabama increase its support for graduate programs?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Definitely Not	5	2.0	2.4	2.4
	Probably Not	7	2.7	3.4	5.8
	Maybe	15	5.9	7.2	13.0
	Probably Yes	59	23.1	28.5	41.5
	Definitely Yes	121	47.5	58.5	100.0
	Total	207	81.2	100.0	
Missing	Not sure/ Do not know	40	15.7		
	System	8	3.1		
	Total	48	18.8		
Total		255	100.0		

College that referred company

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Alabama State	15	5.9	5.9	5.9
	Auburn University	108	42.4	42.4	48.2
	Samford University	3	1.2	1.2	49.4
	Troy State University	5	2.0	2.0	51.4
	Troy State University Dothan	14	5.5	5.5	56.9
	University of Alabama	72	28.2	28.2	85.1
	University of Alabama Birmingham	1	.4	.4	85.5
	University of Mobile	7	2.7	2.7	88.2
	University of Montevallo	14	5.5	5.5	93.7
	University of North Alabama	1	.4	.4	94.1
	University of South Alabama	5	2.0	2.0	96.1
	University of West Alabama	10	3.9	3.9	100.0
	Total	255	100.0	100.0	

Appendix E: Alumni Survey Instrument

Introduction

1. Are you currently employed in a professional field where you are utilizing your graduate degree?
Yes
No
Partly
Not employed

2. I will read a list of possible reasons why you attended graduate school in Alabama. Please respond "yes" or "no" to each that applies.
Tuition or fees
Employment opportunities
Accessibility or location
Quality of faculty
Flexible hours
Wanted to live in Alabama
Significant other or spouse was living in Alabama
Employed in Alabama at the time
Other
No Reply

3. When accepting professional employment, what aspects are important to you? Please respond "yes" or "no" to all that apply.
Salaries
Job incentives
Potential for job advancement
Type of work
Standard of living
Location
School system for children
Cultural opportunities
Other
No Reply

4. Since completing your graduate work, have you ever been professionally employed in Alabama?
Yes
No

5. Are you currently professionally employed in Alabama?
Yes
No

6. Given the opportunity, would you consider employment in Alabama?
Yes
No

I am going to read a list of topic areas. Please respond to how Alabama institutions rate in comparison to other institutions in the southeast.

7. Compared to other institutions in the southeast is graduate tuition at Alabama's institutions...

Much better
Better
Equal to
Worse
Much worse
No opinion

8. Financial support for graduate students is...

Much better
Better
Equal to
Worse
Much worse
No opinion

9. Job placement services for graduate students are...

Much better
Better
Equal to
Worse
Much worse
No opinion

10. Health care for graduate students is...

Much better
Better
Equal to
Worse
Much worse
No opinion

11. Housing for graduate students is...

Much better
Better
Equal to
Worse
Much worse
No opinion

12. Library and Laboratory resources for graduate students are...

- Much better
- Better
- Equal to
- Worse
- Much worse
- No opinion

13. Are opportunities for graduate students to attend guest lectures, and conferences...

- Much better
- Better
- Equal to
- Worse
- Much worse
- No opinion

14. Is the flexibility of class schedules and class hours for graduate students...

- Much better
- Better
- Equal to
- Worse
- Much worse
- No opinion

15. Is graduate faculty...

- Much better
- Better
- Equal to
- Worse
- Much worse
- No opinion

16. What is your opinion about the level and quality of support the State of Alabama provides for graduate programs?

- Very favorable
- Favorable
- Neutral
- Poor
- Very Poor
- No Opinion

17. I am going to read a list of topic areas. Please respond "yes" or "no" to the areas that are in need of more funding from the State?

- Tuition /fees
- Job placement services
- Health insurance/ health services
- Housing
- Library / Laboratory Resources
- Faculty
- GTA, GRA, etc jobs
- None

18. Have you had any graduate courses in a state other than Alabama?

- Yes
- No

19. In which state did you complete other graduate work?

20. How would you rate that experience in relation to your experience in Alabama?

- Alabama experience was significantly better
- Alabama experience was better
- Both experiences were equal
- Other experience was better than Alabama
- Other experience was significantly better than Alabama
- Don't know/No opinion

That completes the formal part of our survey. I just have a few more questions to help classify your answers.

1. In which of the following age groups do you classify yourself?

- Under 25
- 25- 34
- 35- 44
- 45- 54
- 55 +
- No Answer

2. What is your highest educational degree?

- Masters degree
- Specialist degree
- Doctoral degree
- Professional degree (law, medicine, etc)
- No Answer

3. Which category best describes your annual income?
- less than \$20,000
 - \$20- 39,000
 - \$40- 74,000
 - \$75- 99,000
 - \$100,000 and over
 - No Answer

That completes our survey. Thank you for your time. Your responses are very helpful to graduate education in Alabama

**Appendix F:
Frequency Distribution for Graduate Program
Alumni Survey**

Are you currently employed in your field?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	61	17.1	17.1	17.1
	Yes	263	73.7	73.7	90.8
	Partly	21	5.9	5.9	96.6
	Not employed	12	3.4	3.4	100.0
	Total	357	100.0	100.0	

Matriculated due to tuition or fees

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	180	50.4	51.3	51.3
	Yes	171	47.9	48.7	100.0
	Total	351	98.3	100.0	
Missing	System	6	1.7		
Total		357	100.0		

Matriculated due to employment opportunities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	160	44.8	45.6	45.6
	Yes	191	53.5	54.4	100.0
	Total	351	98.3	100.0	
Missing	System	6	1.7		
Total		357	100.0		

Matriculated due to accessibility or location

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	68	19.0	19.4	19.4
	Yes	283	79.3	80.6	100.0
	Total	351	98.3	100.0	
Missing	System	6	1.7		
Total		357	100.0		

**Appendix F:
Frequency Distribution for Graduate Program
Alumni Survey**

Matriculated due to quality of faculty

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	114	31.9	32.5	32.5
	Yes	237	66.4	67.5	100.0
	Total	351	98.3	100.0	
Missing	System	6	1.7		
Total		357	100.0		

Matriculated due to flexible hours

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	136	38.1	38.7	38.7
	Yes	215	60.2	61.3	100.0
	Total	351	98.3	100.0	
Missing	System	6	1.7		
Total		357	100.0		

Matriculated because he/she wanted to live in Alabama

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	132	37.0	37.6	37.6
	Yes	219	61.3	62.4	100.0
	Total	351	98.3	100.0	
Missing	System	6	1.7		
Total		357	100.0		

Matriculated due to spouse or significant other living in Alabama

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	164	45.9	46.7	46.7
	Yes	187	52.4	53.3	100.0
	Total	351	98.3	100.0	
Missing	System	6	1.7		
Total		357	100.0		

**Appendix F:
Frequency Distribution for Graduate Program
Alumni Survey**

Matriculated because he/she was employed in Alabama at the time

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	143	40.1	40.7	40.7
	Yes	208	58.3	59.3	100.0
	Total	351	98.3	100.0	
Missing	System	6	1.7		
Total		357	100.0		

Other reasons for matriculation

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	322	90.2	91.7	91.7
	Yes	29	8.1	8.3	100.0
	Total	351	98.3	100.0	
Missing	System	6	1.7		
Total		357	100.0		

No reply to reason for matriculation

		Frequency	Percent
Missing	No	349	97.8
	Yes	2	.6
	System	6	1.7
	Total	357	100.0

Importance of salaries to professional employment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	21	5.9	6.0	6.0
	Yes	330	92.4	94.0	100.0
	Total	351	98.3	100.0	
Missing	System	6	1.7		
Total		357	100.0		

**Appendix F:
Frequency Distribution for Graduate Program
Alumni Survey**

Importance of job incentives to professional employment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	63	17.6	17.9	17.9
	Yes	288	80.7	82.1	100.0
	Total	351	98.3	100.0	
Missing	System	6	1.7		
Total		357	100.0		

Importance of potential for job advancement to professional employment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	52	14.6	14.8	14.8
	Yes	299	83.8	85.2	100.0
	Total	351	98.3	100.0	
Missing	System	6	1.7		
Total		357	100.0		

Importance of type of work to professional employment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	15	4.2	4.3	4.3
	Yes	336	94.1	95.7	100.0
	Total	351	98.3	100.0	
Missing	System	6	1.7		
Total		357	100.0		

Importance of standard of living to professional employment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	57	16.0	16.2	16.2
	Yes	294	82.4	83.8	100.0
	Total	351	98.3	100.0	
Missing	System	6	1.7		
Total		357	100.0		

**Appendix F:
Frequency Distribution for Graduate Program
Alumni Survey**

Importance of location to professional employment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	39	10.9	11.1	11.1
	Yes	312	87.4	88.9	100.0
	Total	351	98.3	100.0	
Missing	System	6	1.7		
Total		357	100.0		

Importance of school system for children to professional employment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	128	35.9	36.5	36.5
	Yes	223	62.5	63.5	100.0
	Total	351	98.3	100.0	
Missing	System	6	1.7		
Total		357	100.0		

Importance of cultural opportunities to professional employment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	136	38.1	38.7	38.7
	Yes	215	60.2	61.3	100.0
	Total	351	98.3	100.0	
Missing	System	6	1.7		
Total		357	100.0		

Other important factors to professional employment

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	338	94.7	96.3	96.3
	Yes	13	3.6	3.7	100.0
	Total	351	98.3	100.0	
Missing	System	6	1.7		
Total		357	100.0		

**Appendix F:
Frequency Distribution for Graduate Program
Alumni Survey**

**No reply to important factors to professional
employment**

		Frequency	Percent
Missing	No	349	97.8
	Yes	2	.6
	System	6	1.7
	Total	357	100.0

Have you ever been professionally employed in Alabama?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	70	19.6	19.9	19.9
	Yes	281	78.7	80.1	100.0
	Total	351	98.3	100.0	
Missing	System	6	1.7		
Total		357	100.0		

Are you currently employed in Alabama?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	35	9.8	12.5	12.5
	Yes	246	68.9	87.5	100.0
	Total	281	78.7	100.0	
Missing	System	76	21.3		
Total		357	100.0		

Given the opportunity, would you consider employment in Alabama?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	29	8.1	8.3	8.3
	Yes	322	90.2	91.7	100.0
	Total	351	98.3	100.0	
Missing	System	6	1.7		
Total		357	100.0		

**Appendix F:
Frequency Distribution for Graduate Program
Alumni Survey**

Alabama graduate program's tuition compared to other Southeast universities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Worse	5	1.4	2.4	2.4
	Equal to	96	26.9	46.6	49.0
	Better	79	22.1	38.3	87.4
	Much better	26	7.3	12.6	100.0
	Total	206	57.7	100.0	
Missing	No opinion	144	40.3		
	System	7	2.0		
	Total	151	42.3		
Total		357	100.0		

Alabama graduate program's financial support compared to Southeast universities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Much worse	7	2.0	4.1	4.1
	Worse	35	9.8	20.7	24.9
	Equal to	87	24.4	51.5	76.3
	Better	33	9.2	19.5	95.9
	Much better	7	2.0	4.1	100.0
	Total	169	47.3	100.0	
Missing	No opinion	181	50.7		
	System	7	2.0		
	Total	188	52.7		
Total		357	100.0		

Alabama graduate program's job placement services compared to other Southeast universities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Much worse	10	2.8	7.3	7.3
	Worse	26	7.3	19.0	26.3
	Equal to	71	19.9	51.8	78.1
	Better	25	7.0	18.2	96.4
	Much better	5	1.4	3.6	100.0
	Total	137	38.4	100.0	
Missing	No opinion	213	59.7		
	System	7	2.0		
	Total	220	61.6		
Total		357	100.0		

**Appendix F:
Frequency Distribution for Graduate Program
Alumni Survey**

Alabama graduate program's health care compared to other Southeast universities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Much worse	3	.8	2.1	2.1
	Worse	27	7.6	19.3	21.4
	Equal to	80	22.4	57.1	78.6
	Better	22	6.2	15.7	94.3
	Much better	8	2.2	5.7	100.0
	Total	140	39.2	100.0	
Missing	No opinion	210	58.8		
	System	7	2.0		
	Total	217	60.8		
Total		357	100.0		

Alabama graduate program's housing compared to other Southeast universities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Much worse	3	.8	2.4	2.4
	Worse	23	6.4	18.7	21.1
	Equal to	72	20.2	58.5	79.7
	Better	20	5.6	16.3	95.9
	Much better	5	1.4	4.1	100.0
	Total	123	34.5	100.0	
Missing	No opinion	227	63.6		
	System	7	2.0		
	Total	234	65.5		
Total		357	100.0		

Alabama graduate program's library and laboratory resources compared to other Southeast universities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Much worse	6	1.7	3.0	3.0
	Worse	22	6.2	11.2	14.2
	Equal to	95	26.6	48.2	62.4
	Better	56	15.7	28.4	90.9
	Much better	18	5.0	9.1	100.0
	Total	197	55.2	100.0	
Missing	No opinion	153	42.9		
	System	7	2.0		
	Total	160	44.8		
Total		357	100.0		

Appendix F: Frequency Distribution for Graduate Program Alumni Survey

Alabama graduate program's lectures and conferences compared to other Southeast universities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Much worse	5	1.4	2.6	2.6
	Worse	19	5.3	9.9	12.6
	Equal to	105	29.4	55.0	67.5
	Better	45	12.6	23.6	91.1
	Much better	17	4.8	8.9	100.0
	Total	191	53.5	100.0	
Missing	No opinion	159	44.5		
	System	7	2.0		
	Total	166	46.5		
Total		357	100.0		

Alabama graduate program's flexibility of class schedule and class hours compared to other Southeast universities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Much worse	3	.8	1.6	1.6
	Worse	13	3.6	7.0	8.6
	Equal to	92	25.8	49.5	58.1
	Better	62	17.4	33.3	91.4
	Much better	16	4.5	8.6	100.0
	Total	186	52.1	100.0	
Missing	No opinion	164	45.9		
	System	7	2.0		
	Total	171	47.9		
Total		357	100.0		

Alabama graduate program's graduate faculty compared to other Southeast universities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Worse	7	2.0	3.5	3.5
	Equal to	104	29.1	52.3	55.8
	Better	65	18.2	32.7	88.4
	Much better	23	6.4	11.6	100.0
	Total	199	55.7	100.0	
Missing	No opinion	151	42.3		
	System	7	2.0		
	Total	158	44.3		
Total		357	100.0		

**Appendix F:
Frequency Distribution for Graduate Program
Alumni Survey**

The level & quality of support provide by the State of Alabama for graduate programs as compared to other Southeast universities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Much worse	37	10.4	11.7	11.7
	Worse	78	21.8	24.7	36.4
	Neutral	81	22.7	25.6	62.0
	Favorable	96	26.9	30.4	92.4
	Very favorable	24	6.7	7.6	100.0
	Total	316	88.5	100.0	
Missing	No opinion	33	9.2		
	System	8	2.2		
	Total	41	11.5		
Total		357	100.0		

Alabama graduate programs need more funding for tuition and fees

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	96	26.9	27.7	27.7
	Yes	251	70.3	72.3	100.0
	Total	347	97.2	100.0	
Missing	System	10	2.8		
Total		357	100.0		

Alabama graduate programs need more funding for job placement services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	131	36.7	37.8	37.8
	Yes	216	60.5	62.2	100.0
	Total	347	97.2	100.0	
Missing	System	10	2.8		
Total		357	100.0		

Alabama graduate programs need more funding for health insurance & health services

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	134	37.5	38.6	38.6
	Yes	213	59.7	61.4	100.0
	Total	347	97.2	100.0	
Missing	System	10	2.8		
Total		357	100.0		

**Appendix F:
Frequency Distribution for Graduate Program
Alumni Survey**

Alabama graduate programs need more funding for housing

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	213	59.7	61.4	61.4
	Yes	134	37.5	38.6	100.0
	Total	347	97.2	100.0	
Missing	System	10	2.8		
Total		357	100.0		

Alabama graduate programs need more funding for library & laboratory resources

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	81	22.7	23.3	23.3
	Yes	266	74.5	76.7	100.0
	Total	347	97.2	100.0	
Missing	System	10	2.8		
Total		357	100.0		

Alabama graduate programs need more funding for faculty

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	82	23.0	23.6	23.6
	Yes	265	74.2	76.4	100.0
	Total	347	97.2	100.0	
Missing	System	10	2.8		
Total		357	100.0		

Alabama graduate programs need more funding for GTA, GRA, etc. positions

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	140	39.2	40.3	40.3
	Yes	207	58.0	59.7	100.0
	Total	347	97.2	100.0	
Missing	System	10	2.8		
Total		357	100.0		

**Appendix F:
Frequency Distribution for Graduate Program
Alumni Survey**

Alabama graduate programs do not need any more funding

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	335	93.8	96.5	96.5
	Yes	12	3.4	3.5	100.0
	Total	347	97.2	100.0	
Missing	System	10	2.8		
Total		357	100.0		

Have you had any graduate courses in another state?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No	269	75.4	77.5	77.5
	Yes	78	21.8	22.5	100.0
	Total	347	97.2	100.0	
Missing	System	10	2.8		
Total		357	100.0		

Appendix F:
Frequency Distribution for Graduate Program
Alumni Survey

Other state where graduate education was experienced

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Arizona	1	.3	1.3	1.3
	Arkansas	1	.3	1.3	2.6
	California	4	1.1	5.1	7.7
	Connecticut	1	.3	1.3	9.0
	Deleware	1	.3	1.3	10.3
	Florida	10	2.8	12.8	23.1
	Georgia	11	3.1	14.1	37.2
	Illinois	1	.3	1.3	38.5
	Indiana	2	.6	2.6	41.0
	Iowa	1	.3	1.3	42.3
	Kentucky	5	1.4	6.4	48.7
	Louisiana	6	1.7	7.7	56.4
	Massachusetts	1	.3	1.3	57.7
	Mississippi	2	.6	2.6	60.3
	Missouri	1	.3	1.3	61.5
	New York	5	1.4	6.4	67.9
	Oklahoma	1	.3	1.3	69.2
	Pennsylvania	2	.6	2.6	71.8
	Tennessee	7	2.0	9.0	80.8
	Texas	6	1.7	7.7	88.5
	Virginia	5	1.4	6.4	94.9
	Washington	1	.3	1.3	96.2
	Other	3	.8	3.8	100.0
Total		78	21.8	100.0	
Missing	System	279	78.2		
Total		357	100.0		

**Appendix F:
Frequency Distribution for Graduate Program
Alumni Survey**

How would you rate your other experience in relation to your experience in Alabama?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Other experience was significantly better than Alabama	1	.3	1.3	1.3
	Other experience was better than Alabama	16	4.5	20.8	22.1
	Both experiences were equal	35	9.8	45.5	67.5
	Alabama experience was better	14	3.9	18.2	85.7
	Alabama experience was significantly better	11	3.1	14.3	100.0
	Total	77	21.6	100.0	
Missing	Don't know/ No opinion	1	.3		
	System	279	78.2		
	Total	280	78.4		
Total		357	100.0		

Age Group

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	55 +	32	9.0	9.2	9.2
	45- 54	77	21.6	22.3	31.5
	35- 44	83	23.2	24.0	55.5
	25-34	147	41.2	42.5	98.0
	Under 25	7	2.0	2.0	100.0
	Total	346	96.9	100.0	
Missing	No answer	1	.3		
	System	10	2.8		
	Total	11	3.1		
Total		357	100.0		

**Appendix F:
Frequency Distribution for Graduate Program
Alumni Survey**

Highest Educational Degree

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Professional Degree	22	6.2	6.4	6.4
	Doctoral degree	50	14.0	14.5	20.9
	Specialist degree	14	3.9	4.1	24.9
	Masters	259	72.5	75.1	100.0
	Total	345	96.6	100.0	
Missing	No answer	2	.6		
	System	10	2.8		
	Total	12	3.4		
Total		357	100.0		

Annual Income

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	less than \$20,00	35	9.8	10.8	10.8
	\$20- 39,000	110	30.8	34.1	44.9
	\$40- 74,000	136	38.1	42.1	87.0
	\$75- 99,000	21	5.9	6.5	93.5
	\$100,000 and over	21	5.9	6.5	100.0
	Total	323	90.5	100.0	
Missing	No answer	24	6.7		
	System	10	2.8		
	Total	34	9.5		
Total		357	100.0		

**Appendix F:
Frequency Distribution for Graduate Program
Alumni Survey**

COLLEGE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Alabama State University	23	6.4	6.4	6.4
	Auburn University	79	22.1	22.1	28.6
	Auburn University at Montgomery	15	4.2	4.2	32.8
	Samford University	14	3.9	3.9	36.7
	Troy State University	10	2.8	2.8	39.5
	Troy State University Dothan	28	7.8	7.8	47.3
	University of Alabama	56	15.7	15.7	63.0
	University of Alabama Birmingham	80	22.4	22.4	85.4
	University of Montevallo	21	5.9	5.9	91.3
	University of North Alabama	19	5.3	5.3	96.6
	University of South Alabama	4	1.1	1.1	97.8
	University of West Alabama	8	2.2	2.2	100.0
	Total	357	100.0	100.0	

DEGREE

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Bachelors	1	.3	.3	.3
	Doctorate	48	13.4	13.4	13.7
	E. Doctorate	7	2.0	2.0	15.7
	Masters	301	84.3	84.3	100.0
	Total	357	100.0	100.0	

**Appendix G:
Graduate Schools Contacted
by Carnegie Classification Code 2000**

Doctoral/ Research Extensive

Alabama:

University of Alabama
University of Alabama (Birmingham)
Auburn University

Responding comparison institutions:

University of South Florida
University of Georgia
University of Florida
Louisiana State University & A & M
Mississippi State University
University of North Carolina at Chapel Hill
Clemson University (SC)
University of Tennessee (Knoxville)

Non-responding comparison institutions:

University of Arkansas
Florida State University
Georgia State University
North Carolina State University (Raleigh)

Doctoral/ Research Intensive

Alabama:

Alabama A & M
University of Alabama at Huntsville
University of South Alabama

Responding comparison Institutions:

Jackson State University (MS)
East Tennessee State
University of Arkansas (Little Rock)
Florida Atlantic University
University of Central Florida
University of Louisiana (Lafayette)
Tennessee State University
Middle Tennessee State University

Non-responding comparison institutions:

South Carolina State University
Louisiana Tech University
University of North Carolina (Greensboro)

Master's (Comprehensive) Colleges & Universities I

Alabama:

Alabama State University
Auburn University (Montgomery)
Jacksonville State University
Troy State University
Troy State University (Dothan)
Troy State University (Montgomery)
University of Montevallo
University of North Alabama
University of West Alabama
University of Mobile
Tuskegee University

Responding comparison Institutions:

Florida A & M University
North Carolina A&T State University
Arkansas State University
Southern Arkansas University
University of North Florida
Georgia College & State University
Georgia Southern University
University of North Carolina (Wilmington)
University of Tennessee (Chattanooga)
Francis Marion University (SC)
Valdosta State University (GA)
Appalachian State University (NC)
Tennessee Tech. University (TN)
University of Louisiana (Monroe)

Non-responding comparison institutions:

Grambling State University (LA)
Augusta State University (GA)
Kennesaw State University (GA)
Louisiana State University
Alcorn State University (MS)
Albany State University (GA)
Southern Univ. & A & M College (LA)
Winthrop University (SC)
Delta State University (MS)

Appendix H: Summary of Comments from Peer Institutional Qualitative Comparisons

Appendix H consists of the comments made by 31 Graduate Deans in the Peer Institutional Qualitative survey. These comments are categorized by the Carnegie Classification Code (Research Extensive, Research Intensive, and Masters' Comprehensive) and by topic area. There are four topic areas: role of graduate education, recruitment of students, keys to success (collaboration with partners, collaboration within state, funding, recognizing the needs in the community and the State, and programs within the university), and unique ideas. The university name has not been linked to the comments at the request of the responding Deans.

Research Extensive: Comments from Graduate Deans

Role of Graduate Education

- The role is to emphasize the importance of graduate education to the citizenry and its contributions to society outside of economic factors such as culture and intellect.
- The strategic planning process is key to building national recognition as a leading research institution. This process includes identifying ways to benefit and impact the region as well as change faculty attitudes about their role in the success of graduate education

Recruitment of Students

- Departments which are extremely successful in recruiting outstanding students seem to have a very strong research faculty who serve as faculty mentors.
- To be successful, there must be active participation in recruitment from everyone at the university including faculty.

Keys to Success

Collaboration within state

- Educational institutions need to present a single comprehensive list of goals to the legislature on behalf of all graduate programs throughout the state; paid lobbyist in Washington.
- “K-16” is standard language used by all educators; emphasizes collaboration between K-12 and higher education. A unified message equals better support for all education.

Funding

- The ability to have access to unused money from grants once the grant has expired and the project is completed.
- Graduate school has its own budget and budget officer.
- Emphasizing students that stay within the State is the best way to influence the legislature for future funding. Instead of relying only on quantitative results, provide qualitative information such as case studies of successful alumni and their contribution to the State.
- Improve relationships by courting legislators that are graduate program alumni.
- Enhanced funding and graduate education is a reciprocal relationship. In order to get increased funding from grants, a university must have a large number of capable graduate students. Concurrently, to attract quality graduate students, a university must be able to offer fellowships and assistantships.
- Funding strength is the University’s Foundation, which has taken a real interest in graduate work that includes funding for facilities, faculty, fellowships and scholarships.

Recognizing need in the community/state

- Certificate programs that are linked to the needs of local industries begins the process of collaboration, which builds great relationships with businesses.
- A successful graduate program will acknowledge the ever changing characteristics of the graduate student. To address these changes, distant learning programs are developed. Our university president has challenged each college to develop 3 new distant learning degreed programs in the next year to include some graduate education programs.

Programs within the university

- Commitment to graduate education begins with the President and is strongly encouraged by the Dean. Every successful graduate program must have a strong Dean who supports graduate education.
- The University President has made graduate education one of his primary focuses.

Unique Ideas

- *“Catfish & Grits”* is a collaborative effort with the Vice President of Public Service. During the event, graduate students present research through poster presentations; emphasizing the economic impact on the State; held during the legislative session to give legislators a break and free food. It provides personal interactions between graduate students and key stakeholders
- *Nissan Plant (2003)*: Graduate faculty have been involved in every aspect of recruitment of the plant including developing important liaisons for further collaborative research projects and job placement of students.
- *Incubators*: Professors, Chamber of Commerce, companies, attorneys, and MBA’s team up to provide resources to help start new organizations fueled by research conducted by university faculty. In the beginning, the company is part of the university but slowly breaks off as it develops. Initially, the company heavily utilizes graduate students and is typically inspired by graduate students. During later stages the company employs graduates as well as provides economic growth. (E.g.: A new peanut was invented that has lower in cholesterol. The inventing professor had no knowledge of patent laws, marketing, or business practices. The incubator helped provide the professor with these resources).
- Strong commitment to graduate education: In order to demonstrate their commitment to graduate education, the University agreed to do a 100% match with the state legislature in which the State would provide the university with \$30 million over 5 years as long as the University raises an additional \$30 million. The University anticipates accomplishing this goal by streamlining administrative costs, obtaining external contracts, and increasing fundraising efforts.

Research Intensive: Comments from Graduate Deans

Role of Graduate Education

- Graduate schools must provide the latest technology. We provide an on-campus program designed to teach instructors how to get their courses to be more web-based and interactive.

Recruitment of Students

- Try to avoid the bureaucracy of graduate education and allow students easy access to the services they desire.
- We hired a Director of Graduate and Enrollment Manager to assist predominately with recruitment.
- Reputation consistently brings in quality science majors.
- Collect, analyze, and store data on graduate student statistics. Data increase that financial support is the biggest priority. As a result, assistantship's salaries have been raised each year for the last 3 years.
- Heavy investment in the Graduate School home page, which serve as an informational and marketing tool.

Keys to Success

Collaboration with Partners

- Business partners can be the best resource a university has because a business can provide donations and facilities.
- Each school is responsible for creating linkages/partnerships with outside businesses of which 75-100 exist today.

Funding

- All Mississippi schools petition the "Board of Trustees Institution for Higher Learning" for funding as a single entity.
- Most funds come from capital campaign fundraisers, where donations are made directly to the graduate school.
- All graduate schools approach the state legislature as a single entity.

Recognizing need in the community and State

- We provide cohort programs which provide a special training to an individual community for a short duration of time
- We developed a distance-learning program geared towards specific industries, which began with an MBA program for Nissan. After this need diminished, we switched the focus of the program towards executives who wish to take classes at night and on the weekends.
- To meet the needs of our business partners, we provide a wide variety of night classes, web-based classes, and distance learning programs. Operation management courses are taught on-site for some companies in Arkansas, Florida, Mississippi, and Louisiana.

Programs within the University

- Interdisciplinary majors: artificial boundaries are not necessary in graduate education. Combining programs to offer unique degrees is the wave of the future. Examples include Molecular Biology, Micro-Electronics, and Public Administration.
- We offer many interdisciplinary degrees (Bimolecular science) and combined degree programs with other institutions, particularly with international schools.

Masters' Comprehensive: Comment from Graduate Deans

Role of Graduate Education

- Research is the key to a successful graduate education program. This includes funding to conduct research, resources to encourage research, and avenues for promoting research.
- Graduate education can provide high visibility in the community, as well as revitalize faculty to do their best work.
- The purpose of graduate education is to generate intellectual capital and expand the knowledge base.
- Legislators are not in tune with graduate education; it is the graduate Dean's responsibility to take action to change this by providing them with information about programs and services of graduate education.

Recruitment of Students

- Recruitment with significant financial incentives is extremely important to African-American students interested in sciences. This is due to the fact that they have typically acquired large debts in undergraduate school and can make good money to repay the debt by accepting a paid position rather than attending graduate school.
- Increased financial support for research assistants has helped with recruitment and retention of graduate students.
- The Dean and the President of the University visit other colleges to recruit graduate students
- We heavily rely on our website to provide current and prospective students with valuable information about our graduate programs.
- Heavy emphasis on local recruitment typically leads to alumni staying in the area and contributing back to the University.
- In the 21st century, web-based recruiting is essential if a university wants to compete for the top graduate students.
- Recruiting at local businesses on a yearly basis provides recruitment, marketing, and funding opportunities.

Keys to Success

Collaboration with Partners

- Collaboration with professionals is very important, especially with education, counseling, and business professionals. Although some of these programs are not University programs, they act as a marketing tool and keep faculty involved in real life issues.
- The MBA program and Nursing Masters are coordinated with an advisory group of local professionals who assist with curriculum development, retention, and job placement of students.
- Local school systems report having financial resources to increase the training of their teachers. The University works with the school systems to develop both degree and certificate programs that meet the training needs

- of teachers and administrators through night and weekend classes. These classes can typically be taught using the resources available in the current curriculum, which means limited additional expense to the University.
- Centers for excellence were established to stimulate research and increase graduate education. The Centers are located on campus and act like a department, but receive their funding directly from the State. There are three Centers: Center for Electric Power; Center for Management Utilization and Protection of Water Resources; and Center for Manufacturing.

Collaboration within State

- North Carolina has one voice, one representative for all graduate schools. This is very effective because most legislators have a child at one of the universities in the State for which the legislators hold loyalty.

Funding

- The Provost and President must make graduate education a priority and back this commitment financially.
- A vital contributor to the success of a graduate program is having a lobbyist.
- If a graduate program can identify ways to hold onto excessive funds from grants once a project is completed, they can improve efficiency as well as secure their financial future.
- The alumni association and Foundation provide significant funding for faculty enhancement, which employs graduate students and develops mentoring relationships.

Recognizing need in the community and State

- The key to success is flexibility to the changing world of graduate education
- A large demand for teachers and school officials allows the University to closely collaborate with 19 different school districts. This and other programs create a cyclical relationship in which community interaction leads to student internships, which leads to student job placement, which leads to new students becoming interested in the programs, which increases community interactions.
- Responding to the needs in the community, the University has developed a “High Tech University” which will act as a new college within the University providing graduate training in informational technology. The legislature provided an additional \$35 million outside the regular education budget for this program.
- A community advisory committee assisted with completing a needs assessment and identifying and prioritizing the needs of the community, which resulted in the development of a physical therapy program.

- The best way to have successful graduate programs is to provide services that are not currently offered in your community or State.

Programs within the University

- Mentoring programs that team undergraduates, graduates, and faculty are vital to success. Graduates get the opportunity to mentor while being mentored as well. This establishes links and communication between different levels, resulting in faculty inspiration and student retention.
- Faculty appreciation week allows graduate students and faculty to bond while providing faculty positive feedback for their work with students. During this week, an informal banquet is held in which a video of the honoree is presented.
- Retention programs that link graduate students to first year freshmen are essential to both graduate and undergraduate education. This mentoring program provides participants with a sense of belonging and commitment to academic pursuits.
- Mentoring of new graduate faculty is key to the success of graduate education. In addition, new faculty are provided with a “startup fund” which allows them to purchase new laboratory materials, apply for grant proposals, and/or attend major conferences.
- The wave of the future is certificate programs, which provide specific training within a field (Gerontology or Hispanic studies).

Unique Ideas

- *Research Days:* The University conducts a research fair in which graduate students display their research. Mayors, local officials, state legislators, national senators, business representatives, etc. are mailed a packet of information and an invitation. This mass mailing consists of a summary of the students’ work, a biography on each student, including where they are from and their aspirations, and a highlight on how their research is affecting the State, the United States, and the world. Although attendance is not necessarily high, the mass mailing works as a marketing tool, demonstrating the effects of graduate education.
- *Job Fair Reception:* The career development office provides a reception to every job fair in which graduate students and key employers are the only participants. The recruiters have the opportunity to have direct contact with graduate students in an informal setting. The University has noted positive reports from employers and an increase in job placement at local companies.
- www.NCGRAD.org: This unique website provides graduate students throughout North Carolina equal access to valuable information affecting them and their studies. The links provide access to professional development opportunities throughout the State, which reduces duplication of services, and encourages collaboration.

- *Graduate Faculty Status:* All faculty are re-evaluated every 5 years (even tenured faculty) to evaluate their graduate faculty status. This evaluation is completed by a committee of graduate faculty who examine their peers based on three criteria, in this order: 1.) Student and supervisor ratings/evaluation; 2.) Community service including participation on thesis committees and work with students; and 3.) Publications. This regular evaluation keeps committed staff on the graduate faculty, as well as encourages faculty to make a strong commitment to graduate students.
- *CD-ROM graduate bulletin:* In effort to cut costs, the University provides graduate students with the option to obtain a paper copy or a CD-ROM copy. The CD-ROM copy costs \$.53 whereas the paper copy cost \$2.97. Furthermore, students report enjoying the CD-ROM version better as evident in a 3 to 1 request for CD's over paper bulletins.