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SUCCESS OF ON-CAMPUS RECRUITING:

ESTABLISHING AN ACCOUNTABILITY MEASURE FOR A CAREER SERVICE ACTIVITY

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EXECUTIVE SUMMARY

This study examined the success of students who participated in employer interviews at Michigan State University's Career Services and Placement office in obtaining a job through these efforts. From information collected from Career Services and Placement records and gathered through surveys of recent graduates, these were the primary findings.

- 1. In 1991-92 academic year, the university awarded 7,697 baccalaureate degrees; 2,685 (35%) requested interviews for employers visiting campus. Approximately 9% did not receive any on-campus interviews (n = 227).
- 2. Of the 37,500 interviews requested, 37% were honored. Requests averaged 14 per student, ranging from 27 for Engineering students to three for students from Arts and Letters. Engineers led in the number of interviews received, 12, which was double the overall student average of five (5).
- 3. Sixty-three percent (63%) of the students received second interviews or plant visits. Business students reported a slightly higher level of success, 69%, compared to other majors.
- 4. Forty-four percent (44%) of the students who interviewed on campus received a job offer. Forty percent (40%) of students who attempted to interview -- includes those who did not receive an interview -- received job offers.
- 5. Based on the entire graduating class, 32% received on-campus interviews, 20% received second interviews, and 14% received job offers. Accounting for students who indicated they would be continuing their education, 16% of the class received job offers through Career Services and Placement.
- Business majors were more successful in obtaining job offers than other majors: 49% compared to 42% for Engineering graduates, 34% for graduates from Communication, and 40% for all other majors.
- 7. It took four on-campus interviews to obtain a second interview or plant visit. Similarly, it took two plant visits/second interviews to obtain a job offer. Thus, eight on-campus interviews are needed to obtain a job offer.
- 8. Invited on-campus interviews reduced the effort to obtain jobs by nearly half. Accounting majors were particularly successful using invited on-campus interviews to obtain a job offer.
- 9. Students who were invited by companies to interview were more likely to be women and have higher grade points than those who were not invited.
- 10. Students who did not receive job offers through Career Services and Placement used two job search methods to find employment: mailing resumes to and contacting employers and responding to newspaper classified. Students who had received job offers augmented

- their on-campus interviewing by contacting employers they had interned, co-oped, or worked part-time and participating in student organizations/job clubs.
- 11. Newspaper classified and mailing resumes were rated as "not very helpful" in finding employment opportunities. Methods identified as most helpful included networking through contacts provided by family and friends and contacting employers that students had previously worked for.

Accountability currently demands the attention of career services staff. Whether through total quality management, strategic planning or budgetary appropriations, the key question being asked is, "Are we doing what we say we are doing?" or "What are we contributing that adds value to the students' stay at our institution?" The questions are hard to answer because most staff perform multiple programs/functions for their students. The impact of many of these activities can not be easily measured.

To facilitate the process of accounting for a program's impact, the first step would be to separate activities into those which have a direct, active impact on a desired outcome and those that are indirect or passive. Take the outcome, job placement: the securing of employment prior to or shortly after graduation. A direct activity is on-campus recruiting where the career staff actively engages in the activity of bringing student and employer together. A passive activity oriented toward the same outcome would be resume critiquing: an activity that has an indirect bearing on the hiring process. The impact of direct/active program/function is much easier to measure; the measurement of indirect, passive activities can be problematic at best.

This report presents the results of one attempt to measure the success of on-campus interviewing by documenting outcomes from various steps in the interviewing process. Attention is also given to those students who failed to find a job through on-campus interviewing by examining their job search strategies.

Success of On-Campus Interviewing

The earliest study on college placement offices' impact on those who use their services was captured in the 1972 Survey of Households, Current Population Study, conducted by the Department of Labor. In that study 3% of those surveyed had used their college placement office; 25% of those respondents obtained a job through this job seeking method. On-campus interviewing, however, was not singled out as the specific method, but rather assumed to be the method. Subsequent current population studies have not produced separate statistics for college placement offices (combining with "other methods"). Beginning in 1994, the Department of Labor was again going to separate selected methods, including college placement offices, from the "other methods" category. Currently 1994 data containing this information have not been released.

In the mid-1980's the Maryland State Board of Higher Education surveyed a sample of the state's 1984 graduates. Bowman (1987) reported that only 10% (one in ten) obtained their job through the placement office. These students tended to be in engineering and business disciplines which paid higher salaries and whose jobs were more related to their academic major than those who found work via other means.

A recent study by NACE (1995) estimated the success of placement through data supplied by employer members of the organization. Recruiters reported extending job offers to approximately 24% of the candidates they interviewed. This figure has remained relatively constant over three iterations of this survey. Recruiters also report an average acceptance rate of 69% or 2/3's of the offers extended are accepted.

These studies provide some benchmarks for comparisons though only the study by NACE infers that the placement success is directly attributable to on-campus interviewing.

Table 1. Benchmarks on Placement Success for On-Campus Recruiting

Department of Labor:	25% of those using college placement offices received jobs through this service
Maryland State Board of Higher Education:	10% of all 1984 graduates obtained job through placement office
NACE:	24% of all students interviewed in 1994 were extended a job offer

Approach

In the 1991-92 academic year, the university awarded 7,697 baccalaureate degrees. Of this population, 2,685 requested at least one on-campus interview (35%); 227 did not receive an interview (8.5% of those requesting). From the 2,458 graduates who received an on-campus interview, a weighted (by major) random sample of 1,000 graduates was drawn to be surveyed.

A survey was mailed approximately six to twelve months after graduation, depending on the semester the student graduated. Postcard reminders were sent one week prior to the requested due date. The instrument requested information on the success of their on-campus interviews (number of second interviews obtained and number of job offers received), other tactics used to identify employment opportunities, and strategies to find employment.

Level of Interviewing Activity

Approximately 35% of the senior class participated in the on-campus interviewing process. Participation varied widely by academic program from a high of 73% among business, 51% in engineering, and 49% among agriculture majors to a low of 6% for education and 13% in both arts and letters and natural science students. The low rate for education reflects few on-campus interviewing opportunities; most education students pursue employment directly with school districts or through the annual education employment fairs. The participation rate for the remaining programs hovered around 25% (Table 2).

Students requested over 37,500 interviews, receiving approximately 37% of their requests. Slightly over 8% of the students requesting interviews were shut-out -- receiving no on-campus interview invitations. The highest concentration of students unable to obtain interviews was among Social Science (27%), Arts and Letters, and James Madison, a residential college, (both 23%). Interviews requested averaged 14 per student, ranging from 27 for Engineering students to three for Arts and Letters majors. Engineers also led in the number of interviews received, 11.5, which was double the overall student average of 5.

TABLE 2. On-Campus Interviewing Activity by Academic College: Interviews Obtained (%, per student)

Awarded number Awarded number % n % n % Avg. 30 Avg. 30	College	Total BA Degrees	Total Grads	Number Requesting Interviews	Who Attemp. to Interv.	Of Total Req. Interv.	Did Not Receive Interv.	Not Rec. Interv.	Interv. Req.	Interv. Obtain.	Interv. Obtain.	Interv. Reques. Per	Interv. Obtain. Per
ets 10.3 390 49.1 14.5 20 5.1 3048 1631 53.5 7.8 ets 672 8.7 8.6 13.0 3.0 12. 22.6 289 105 30.1 3.4 tions 998 13.0 26.9 10.0 42 15.6 22.5 15.7 33.6 8.4 3.4 ion 340 4.4 20 5.9 1.0 42 15.6 25.4 75.7 33.6 8.4 35.7 41.9 7.7 iog 340 4.4 20 5.9 11.5 9 2.9 81.81 35.2 43.4 75.9 8.7 iog 393 5.1 92 11.5 9 16.4 438 174 39.7 5.5 17 iog 391 301 20.4 11.0 80 20.6 218 30.4 30.7 30.3 30.4 30.4 30.7 30.4		Awarded n	%	п	%	%	п	%	п	п	%	Stud. Avg.	Avg.
& Letters 672 8.7 86 13.0 3.0 12 22.6 28.9 105 3.4 3.4 ess 1481 19.2 1087 73.4 40.5 24 2.2 1830 6511 35.5 16.9 numications 998 13.0 26.9 10.0 42 15.6 2254 757 33.6 8.4 16.9 ution 340 4.4 20 5.9 1.0 2 10.0 54 41 75.9 8.4 16.9 ution 340 4.4 20 5.9 1.0 2 10.0 54 41 75.9 2.7 8.4 17 8.4 15.0 17 8.4 16.4 35.2 43.4 26.6 17 un Ecology 393 5.1 7.9 13.4 3.0 3.2 43.4 30.4 35.7 43.4 science 1478 19.2 30.1 20.4 12.0	Agriculture	795	10.3	390	49.1	14.5	20	5.1	3048	1631	53.5	7.8	4.2
ess 1481 19.2 1087 73.4 40.5 24 2.2 1833 6511 35.5 16.9 numications 998 13.0 26.9 10.0 42 15.6 2254 757 33.6 8.4 8.4 stion 34.0 4.4 20 5.9 1.0 2 4.1 75.9 2.7 8.4 7.7 8.4 8.6 8.3 8.4 8.6 8.3 8.4 8.6 8.3 8.4 8.6 8.3 8.4 8.6 8.3 8.4 8.6 8.3 8.4 8.6 8.3 8.4 8.6 8.3 8.4 8.3 8.4 8.3 8.4 8.4 8.4 8.4 8.4 8.4 8.4	Arts & Letters	672	8.7	98	13.0	3.0	12	22.6	289	105	30.1	3.4	1.2
unincations 998 13.0 26.9 10.0 42 15.6 2554 757 33.6 8.4 ution 340 4.4 20 5.9 1.0 2 10.0 54 41 75.9 2.7 7 certing 607 7.9 30.8 5.0 11.5 9 2.9 8181 3552 43.4 26.6 7 n Ecology 393 5.1 92 23.4 3.0 7 7.6 584 304 52.0 6.3 7 al Science 591 7.7 79 13.4 2.9 16.4 438 174 39.7 5.5 1 Science 1478 19.2 30.1 20.4 11.0 80 26.6 2198 693 31.5 7.3 7.3 Madison 219 268 37 22.0 27 8.5 3754 18.1 36.6 14.1	Business	1481	19.2	1087	73.4	40.5	24	2.2	18330	6511	35.5	16.9	6.0
titon 340 4.4 20 5.9 1.0 2 10.0 54 41 75.9 2.7 7.8 tecting 607 7.9 308 50.7 11.5 9 2.9 8181 3552 43.4 26.6 1 in Ecology 393 5.1 92 23.4 3.0 7 7.6 584 304 5.0 6.3 1 al Science 591 7.7 79 13.4 2.9 16.4 438 174 39.7 5.5 1 I Science 1478 19.2 20.4 11.0 80 26.6 2198 693 31.5 7.3 7.3 Madison 219 2.8 22.0 8.5 37754 13812 36.6 14.1 14.1 14.1 14.1 14.1 14.1 14.1 14.1 14.1 14.1 14.1 14.1 14.1 14.1 14.1 14.1 14.1 14.1 14.1	Communications	866	13.0	269	26.9	10.0	42	15.6	2254	757	33.6	8.4	2.8
tecting 607 7.9 308 50.7 11.5 9 2.9 8181 3552 43.4 26.6 1 m Ecology 393 5.1 92 23.4 3.0 7 7.6 584 304 52.0 6.3 6.3 al Science 591 7.7 79 13.4 2.9 13 16.4 438 174 39.7 5.5 7.3 Science 1478 19.2 301 20.4 11.0 80 26.6 2198 693 31.5 7.3 7.3 Madison 219 28 53 24.2 2.0 12 22.6 289 105 36.3 5.4 7 Madison 7697* 365 35 37 37 48 1312 36.6 14.1 14.1	Education	340	4.4	20	5.9	1.0	2	10.0	54	41	75.9	2.7	2.0
un Ecology 393 5.1 92 23.4 3.0 7 7.6 584 304 52.0 6.3 al Science 591 7.7 79 13.4 2.9 13.4 16.4 438 174 39.7 5.5 7.3 I Science 1478 19.2 301 20.4 11.0 80 26.6 2198 693 31.5 7.3 7.3 Madison 219 28 53 24.2 2.0 12 22.6 22.6 289 105 36.3 36.4 17.1 Madison 7697* 2685 35 35 37754 13812 36.6 14.1	Engineering	209	7.9	308	50.7	11.5	6	2.9	8181	3552	43.4	26.6	11.5
al Science 591 7.7 79 13.4 2.9 13 16.4 438 174 39.7 5.5 I Science 1478 19.2 301 20.4 11.0 80 26.6 2198 693 31.5 7.3 7.4 7.3 7.4 7.3 7.4 7.3 7.4	Human Ecology	393	5.1	92	23.4	3.0	7	7.6	584	304	52.0	6.3	3.3
Science 1478 19.2 30.1 20.4 11.0 80 26.6 2198 693 31.5 7.3 7.3 Madison 219 2.8 24.2 2.0 12 22.6 289 105 36.3 5.4 5.4 Madison 7697* 2685 35 35 36.6 14.1 14.1 14.1	Natural Science	591	7.7	79	13.4	2.9	13	16.4	438	174	39.7	5.5	2.2
Madison 219 2.8 53 24.2 2.0 12 22.6 289 105 36.3 5.4 5.4 7697*	Social Science	1478	19.2	301	20.4	11.0	80	26.6	2198	693	31.5	7.3	2.3
7697* 3685 35 8.5 37754 13812 36.6 14.1	James Madison	219	2.8	53	24.2	2.0	12	22.6	289	105	36.3	5.4	2.0
	Total	*1691		2685	35		227	8.5	37754	13812	36.6	14.1	5.1

* This number does not include graduates from the Colleges of Nursing and Veterinary Medicine (n=123) who were not included in this study.

Second Interviews and Job Offers

Information on student success in obtaining second interviews (company visits) and job offers was obtained from 445 graduates who responded to the survey (44.5% response rate). The following discussion will present results in two ways: (1) on a per student basis; and (2) on a per on-campus interview basis. The latter figures indicates the level of participation (number of on-campus interviews) required to obtain a job offer.

Among the respondents, 281 or 63% received second interviews and 193 or 43% reported receiving a job offer (Table 3). These rates differed by academic majors. Business majors reported that nearly 70% received second interviews and nearly 50% received job offers. Even though 64% of the Communications' majors received second interviews, only 34% received job offers. For Engineering graduates and majors who graduated from "all other" academic units, the percentage receiving jobs through on-campus interviews was 42% and 40%, respectively.

Table 3. Second Interviews and Job Offers from Survey Respondents

	All C	raduates	Bu	siness	Engi	ineering	Comr	munications	Al	l Other
	n	%	n	%	n	%	n	%	n	%
Total # graduates	445		208		74		44		111	
Obtained 2nd inter.	281	63	143	69	47	63	28	64	61	55
Obtained job offer	193	43	101	49	31	42	15	34	44	40
Accepted job offer	133	30 (69)1	67	32 (66) ¹	29	39 (93) ¹	5	11 (33)1	29	26 (65)1

¹ Percent of those who received offers

Adjusting for the success rate of obtaining a job offer by different academic majors, approximately 40% of the students who attempted to interview on-campus received job offers (2 out of 5). Among students who actually interviewed, the rate was slightly higher 44% or 2.2 students with offers out of every 5 students interviewing. Looking at only those who received second interviews, the job success rate was much higher -- 69% -- for every 5 students with a second interview, 3.5 received job offers. Finally, in regards to the entire graduation class: 32% received on-campus interviews, 20% second interviews, and 14% job offers. Adjusting for graduation class members who were continuing their education, 16% of the remaining baccalaureate graduates received a job offer through their efforts at the career center (Table 4).

Job offers do not necessarily mean job acceptances. Approximately 30% of the students who received a job offer turned them down; even if they had multiple offers, all were rejected in favor of another job. The rates varied among colleges. Nearly all the Engineering graduates, 93%, took the offer received through on-campus interviewing; 66% of the Business graduates did so; and 65% of "all other" majors. Among Communications majors, however, only 33% took the job offered them through their on-campus efforts. The primary reasons that job offers were rejected:

- Took a position with the organization in which the student had co-oped or interned. The on-campus interviewing process confirmed a) their preference for their experiential learning organization and b) their market value in terms of starting salary.
- 2. Accepted a position within the family business or the business of a relative or close family friend.
- 3. Desired to locate closer to family or partner and the organization extending the offer did not have positions in this location.
- 4. Did not care for the job and continued their job search.

How Much Effort was Expended to Receive a Job Offer?

While on-campus recruiting can be successful, this strategy is not for those who lack persistence. Based on the number of on-campus interviews, it took the student approximately four on-campus interviews to obtain a second interview. Students needed to obtain at least two second interviews to obtain a job offer. In other words, a student needed eight (8) on-campus interviews to secure a job offer (Table 5a).

These ratios differed by academic program. While all programs required four (4) on-campus interviews to receive a second interview, business students were slightly more successful. Communication majors had to be more persistent, especially in order to obtain second interviews. The ratio of on-campus interviews to job offers indicated that business majors needed approximately two fewer interviews to receive a job offer (8 compared to 10).

Table 4: Job Attainment Through On-Campus Interviewing

Number of Students 7697	Total Graduating Class	Percent Attempted	% Interv On-Campus	% Rec 2nd Interv	% Total Grad Class
2685	Attempted to Interview		S desired.	www.	35
227	Received no on-campus interviews	8	366		(55):
2458	Received on campus interviews	92	24H	Section 1	32
916	Received no 2nd interviews	34	37	30	
1542	Received 2nd interviews	57	63	25 72 3	20
480	Received no job offer	18	19	31	
1072	Received a job offer	40	44	69	14 ¹
835	Accepted job offer	31	34	54	11

¹ Adjusting the graduating class population for those continuing their education, 16% of the BA/BS graduates received a job offer through placement.

Reconciling Differences with Existing Benchmarks

The numbers that emerged from this study were higher in some respects than the benchmarks available in the general literature. Three potential sources of bias have been identified that would have influenced these figures: 1) response bias; 2) differences in definitions; and 3) invitational interviews.

Student response bias is common in mail surveys, particularly in post-graduation studies. Graduates that have been successful in obtaining a job or admitted to graduate school are more likely to respond. Grade point average has often been used as a proxy variable to examine this bias. The average grade point for those with job offers was 3.16 as compared to 3.07 for those who did not receive a job. This difference was statistically significant at the .01 level. These GPA figures are higher than the GPA of the entire class which was approximately 2.93. If the assumption is made that students with lower GPAs have more difficulty in obtaining interviews and securing jobs, then the sample used to generate these figures may cause the job attainment rate to be slightly higher.

Even though every effort was made to contact and collect a representative sample of graduates by their academic major, responses were skewed from what was expected. Accounting majors responded at a much higher rate than anticipated. The influence of a group like this can be significant. Data found in Table 5b illustrate this point. Accounting majors had

nearly twice the success in moving from on-campus interviews to job offers than other majors in the business program. Packaging majors (found in the "all other" group) had a similar impact.

Table 5a. Job Offers Based on the Number of Interviews Requested/Obtained (ratio)

	All	Business	Engineering	Communicati on	All Others
Second Interviews On-Campus Interviews	.211	.217	.193	.239	.216
	(1:4)	(1:4)	(1:4)	(1:5)	(1:4)
Job Offers	.488	.525	.472	.364	.477
Second Interviews	(1:2)	(1:2)	(1:2)	(1:3)	(1:2)
Job Offers	.115	.124	.097	.101	.106
On-Campus Interviews	(1:8)	(1:8)	(1:10)	(1:10)	(1:9)

Table 5b. College of Business: Job Offers Based on Number of Interviews Requested/Obtained

	Accounting	Finance	Marketing	Oper & Purch	Other
Second Interviews On-Campus	.242	.189	.214	.202	.216
	(1:4)	(1:5)	(1:5)	(1:5)	(1:5)
Job Offers	.571	.446	.479	.426	.429
Second Interviews	(1:1:7)	(1:2)	(1:2)	(1:2.4)	(1:2.3)
Job Offers	.190	.096	.094	.098	.083
On-Campus Interviews	(1:5)	(1:10)	(1:11)	(1:10)	(1:12)

Definitional problems also exist. In this analysis a very restrictive definition was employed: the student must have received an on-campus interview. Other definitions are more general, such as "used placement office" (BLS) or "through placement office." These latter definitions may imply on-campus interviewing, but includes other options such as career fairs, job referrals, and vacancy listings. A proxy for this level of activity would be the number of students registered at Career Services. Between 4100 to 4200 students were registered during this time frame. Using this as a base, the number of seniors receiving jobs through on-campus placement would be approximately 26%.

The final source of bias centers on the invited campus interviews where employers have the opportunity to prescreen candidates and select those they wish to interview. Within the sample population 42% (187) reported that they had obtained invited interviews. The highest concentration of invited schedules was among business graduates, especially accounting majors. As the figures in Tables 6a and 6b indicate, invitational interviewing leads to a high rate of job

offers, as well as a reduction by half the number of on-campus and second interviews needed to obtain a job. The exception to this rule was found among communication majors where the job offers ran at 6% or four to six times lower than other majors. For accounting majors, 85% who received a second interview from their on-campus invitation received job offers.

Table 6a. Job Offers from Invited Schedules Based on Number of Interviews/Second

	All	Business	Engineering	Communication	All Others
Second Interviews Invitation On-Campus	.422	.485	.338	.521	.341
	(1:2.4)	(1:2)	(1:3)	(1:2)	(1:3)
Job Offers	.599	.683	.575	.190	.589
Second Interviews	(1:1.7)	(1:1.5)	(1:1.7)	(1:5)	(1:1.6)
Job Offers	.282	.363	.244	.063	.213
Invitation On-Campus	(1:3.6)	(1:3)	(1:4)	(1:16)	(1:5)

Table 6b. College of Business: Job Offers from Invited Schedules

	Accounting	Finance	Marketing	Oper & Purch	Other
Second Interviews Invitation On-Campus	.375	.486	.561	.790	.512
	(1:2.6)	(1:2.1)	(1:1.8)	(1:1.3)	(1:1.9)
Job Offers	.846	.500	.775	.833	.625
Second Interviews	(1:1.2)	(1:2)	(1:1.3)	(1:1.2)	(1:1.6)
Job Interviews Invitation On-Campus	.333	.232	.467	.790	.345
	(1:3.0)	(1:4.3)	(1:2.1)	(1:1.3)	(1:2.9)

Comparing those who were invited to interview and those who were not, the invited group was comprised of more females (55% compared to 44%) and had earned a higher grade point average of 3.16 as opposed to 3.07. In addition to their invited opportunities, these students were also more active in seeking and obtaining on-campus interviews and they also used other on-campus sources, such as student organizations/job clubs and co-op/intern employers, much more aggressively than members of the non-invited group. As a result of their success through on-campus interviews, invited students offered a much more positive evaluation of the employers who visited campus and the opportunities these companies offered. In accepting

Table 7.

	No Invite	Invited
Gender	44%	55%
GPA	3.07	3.16
Race	92% white	89% white
Number invites obtained (avg)	6.38	9.18
Received second invites (%) Second invites (avg)	53%	77%
Job offers (avg)	.49	.97
Received no offers (%)	65 %	44%
Accept job offer - overall (%) Accept job offer - offers only (%)	25 % 56 %	53 <i>%</i> 78%
Accept job offer - offers offiny (%)	30 /6	7870
Evaluation of employers that came to campus (1 = very little, 5 = very great)		
Appropriate organization	2.67	3.07
Job opportunities desired	2.60	2.97
Job opportunities - major prepared	2.83	3.38
Viable candidate	2.90	3.31

Other Strategies	% Used	<u>Helpful</u>	% Used	<u>Helpful</u>
1	19	2.3	20	2.2
2	86	2.8	82	3.0
3	36	3.7	49	3.3
4	27	3.2	22	3.2
5	71	2.6	71	2.8
6	37	3.5	31	3.3
7	37	3.5	40	3.3
8	62	2.7	48	2.5*
9	41	2.6	42	2.8
10	19	2.7	22	2.6
11	10	2.9	23	3.3*

employment offers gained through on-campus recruiters, those with invited interviews accepted

at a much higher rate: 78% compared to 56%.

What Happened To Those Students Who Did Not Obtain Employment Through On-Campus Interviewing?

In addition to on-campus interviewing, information was sought on other sources and tactics that students used to identify employment opportunities. First, students were queried as to their involvement in various job search methods. This was followed by a question, for those that had used a particular approach, that sought a rating on the approach's usefulness in their job search (identifying employment opportunities). Table 8 provides responses listed in order from highest to lowest involvement. Further, comparisons were made between those who received job offers from on-campus interviews and those who did not.

Table 8.

Job Sources	All St	udents	On-Cam	pus Job Offer	No J	ob Offer
	% Yes	Useful	% Yes	Useful	% Yes	Useful
Mailing resumes to employers	84	2.87	75*	2.91	91	2.85
Contact employers don't know	71	2.69	61*	2.76	79	2.65
Newspapers	56	2.65	41*	2.49	67	2.73
Job listings office	42	2.70	37	3.12*	45	2.60
Intern/Co-op employers	41	3.51	41	3.47	41	3.54
Met employers through friends	38	3.40	31*	3.48	44	3.36
Met employers through family	34	3.43	26*	3.29	41	3.50
Part-time employers worked for	25	3.20	22	3.47	27	3.01
Announcements in prof. journals/bulletins	20	2.67	15*	2.77	25	2.60
Employment agency	19	2.24	14*	2.31	24	2.20
Job club/student organization	16	3.11	21*	3.58*	67	2.73

Two options engaged the vast majority of students: mailing resumes to employers (81%)

and contacting employers (not via mail) who they did not know (71%). The next most commonly used tactic was using newspaper classified (56%). Clustered between 20% and 45% were several options that involved contacting employers through specific channels: co-op or intern participation (41%); introduction via family member (34%) or friend (38%); and job listings posted at the placement center (42%). Options used by fewer than 25% of the respondents included contacting employers who they had worked part-time for (25%), employment announcements in professional journals or bulletins (20%), employment agency (19%), and campus job clubs or student organizations (16%).

An examination of the ratings paints a very different picture and suggests that student efforts may not be exerted on the most effective approaches. The most effective approaches for employment were contacting employers that already interviewed the student -- interns and co-op employers were particularly useful (mean 3.51) -- as were part-time employers (3.20). Employer contacted through help from family (3.43) and friends (3.40) were possibly the best sources. Those students who utilized student organizations and job clubs reported that this approach was fairly to very useful (3.11).

At the bottom of the useful list were these activities most heavily engaged in by students. If it was not for employment agencies, newspaper classifieds would have been the lowest rated option; closely followed by contacting employers (by whatever method) that they do not know. Job listings posted in the placement office and positions in professional journals received similar low ratings.

In comparing those with on-campus job offers and those without, several characteristics stood out. First, those with offers were not as deeply or widely engaged in these options as those without offers. In three areas which included contacting co-op/intern employers or employers where they had worked part-time, and using jobs posted at the placement office, the level of participation was similar. The one exception was the involvement of those with offers in job clubs and student organizations which was double the level of participation by those without offers. Second, the only significant differences in ratings appeared on approaches that pertained to on-campus activities: job listings and job clubs. In both cases, those with offers rated their usefulness higher. Lastly, students with offers appeared to be more focused in their job search strategies, taking particularly advantage of campus resources that could aid in their job search. Those without offers seemed to rely on a more "scatter-gunned" approach, trying a variety of tactics.

Focusing on those students who did not receive a job offer through on-campus interviewing or chose not to accept an offer, various job search strategies were utilized or are being used to find employment. For the 213 who were employed, the four most common methods for finding employment were through (1) intern, co-op, or previous employer; (2) direct contact with employers; (3) networks of family and friends; and (4) applying to classifieds.

For those who were not employed at the time of the survey, their job search strategies were primarily focused on responding to newspaper classified (49%) and sending resumes to employers (33%). Approximately 30% were involved in networking through families and friends. Approximately a quarter of the students were still utilizing on-campus resources, primarily the career center. A small group, 10%, were considering further education (graduate

or other) rather than stay in the job hunt.

Table 9. Methods of Finding a Job if No Offer Received or Offers Rejected from On-Campus Interviewing

	n	%
Those who have already found a job (n=213)		
 Through intern, co-op, previous work Submitted resume directly to employer Networking with friends and family On-campus interview Applied to classified ads 	45 43 43 40 35	18 17 17 16 14
Those still looking for a job (n=124)*		
 Newspaper classified Sending resumes directly to employers Networking through family/friends Using career/placement services Using employment agencies Decided to attend school (grad or other) 	61 41 36 28 14	49 33 29 23 11

^{*} Allowed two answers; do not total 100%

DISCUSSION

This study probed into the success of students engaged in on-campus interviewing, in obtaining employment through these efforts. To effectively interpret results, a comparison with existing benchmarks is insightful. Results are consistent with Bureau of Labor figures that show 25% of those who use their college placement office find a job through this method. Based on the total number of students registered at Michigan State's placement office, 26% received offers of employment -- very comparable figure.

When compared to University of Maryland, an institution with similar characteristics, Michigan State's figure of approximately 15% of the graduating class receiving jobs through placement slightly exceeds the 10% rate reported by Bowman. Probably the best benchmark to compare against is the employer reported figure that 25% of the students they interviewed oncampus are offered jobs. In this case, Michigan State students are doing much better -- by 15 to 20 percentage points. Even if all biases were accounted by weighting the sample, MSU students were more offered positions by 10% above the employer average.

In all comparisons, MSU exceeded the available benchmarks. The question now becomes one of whether this is good enough. Should, in fact, the performance standard be set higher? What would it take to achieve 50% of all students who interviewed receiving a job offer be realistic? One response would be to increase the number of employers interviewing on-campus. While more employers is good, it presents a conundrum in that having more interviews affects the math computations -- probably leaving one at the same. To increase the success rate, one needs to better utilize the opportunities already available. This can be done in two ways: one short-term and one long-term.

The short-term approach would be to increase the number of invitational schedules. Invitational schedules are a point of contention, however. The concern is not merely quality vs. quantity; but rather fairness -- all students having equal opportunity to obtain an interview. Invitational interviewing would probably be more acceptable if employers objectively prescreened candidates by weighting all resume information equally. Unfortunately, available research has shown and this project has confirmed, that many employers rely almost entirely on grade point average. Yet, grade point average exclusively is a poor indicator of performance in the workplace. The success of invitational interviewing, attributed to the met expectations of both employer and candidate, needs to be tempered to make the practice more inclusive.

Managing invitational interviews require some intuitive wisdom of statistics. Imagine you have a pool of potential candidates, two-thirds are red and one-third are green. If an interview was randomly selected, one could expect the same distribution of red candidates and green. However, invitational interviewing allows the green candidates an advantage through their GPA; thus, the invitational schedule would have many more greens than the random schedule; in fact, the schedule could be entirely green. The pool is always full — those selected for an invitational interview are immediately put back in the pool. This means that the reds will have increasingly smaller chances to interview. To protect some element of fairness, decision rules are required that eventually block a green or red who have been on invitational interviews from returning to the pool. The decision rule may be that a student can only have so many invited interviews per term; or, once a student receives a job offer from an invitational interview, the student can continue to interview (if not accepted) but can be placed on the invited list. All decision rules are fraught with problems and care taken in implementing. Of course, if fairness is not an issue, then no parameters have to be established for invitational interviewing.

In the long-term, the most effective method to increase job offers is through experiential learning -- co-ops and internships. Clearly, students with these experiences pursue a better job search. Even if a student does not receive job offer through on-campus interviewing, experiential experience leads quickly to employment. This observation reveals "nothing new" but rather confirms beliefs about the benefits of these types of programs. Targeting first year and sophomore students to the advantages of these experiences, will reap positive benefits when they engage in job seeking during their senior year.

This study also uncovered some distressing news in that many of the job search strategies employed by college seniors are ineffective. Again this is not a new concern. Wegmann complained, after reviewing how people sought employment, of the highly sporadic and ineffective methods used. Two thoughts emerged at this point. First, coaching students in effective job search strategies (outside of blanket resumes and newspaper classifieds) is essential

to their eventual success. For many students, engagement in useless methods occurs after graduation when they are more likely to attempt anything that is readily available. Servicing this population at this particular time is problematic; usually reserved for those who wander back or remain in the vicinity of campus. Second, parents/family play an important role. Career services staff may well find working with parents prior to graduation an effective way of assisting students find employment.

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