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Building the Capacity of the 21st Century Floriculture
Industry: Assessing Ways to Impact Student Career Choice
and Enhance Post Secondary Education

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The purpose of this study was to conduct research to determine the best approaches to recruit students into the floriculture industry, and to gain knowledge in an effort to develop an educational marketing campaign to address the industry needs of workforce development. The objectives of this research were to (1) use research to identify barriers and constraints toward choosing floriculture as a career among samples of students in environmental horticulture, the College of Agricultural and Life Sciences, and in a introductory plant class for non-majors. (2) determine effective educational messages and sources for these messages. (3) Assess how curriculum in post secondary floriculture programs can be enhanced to provide students with requisite skills and motivation and desire to enter the field.

To assess the first two objectives, two Focus groups were conducted on November 17, 2008, and one focus group was conducted on November 18, 2008. All were conducted at the University of Florida in Gainesville, Florida. Focus group research has long been prominent in marketing studies (Morgan, 1988), in part because market researchers seek to tap emotional and unconscious motivations not amenable to the structured questions of conventional survey research. Focus group research is based on facilitating an organized discussion with a group of individuals in an effort to listen and learn from them. This is a three part process which the researcher initiates by developing a protocol that includes questions on specific research objectives. The next part is the actual focus groups where a guided conversation takes place on the research topic areas. The process is video and audio recorded for later transcription. In the third phase of this process the focus groups are transcribed and analyzed for themes (Morgan 1998).

Methods

This study used a set of three focus groups comprised of representative members of the target audience. A market research firm was hired and used Computer Assisted Telephone Interviewing (CATI) telephone random digit dialing (RDD) sampling to qualify potential participants. Probability samples were generated using a predetermined

sampling frame based on demographic variables for groups one and two. The third group was a purposive sample recruited by researchers through the University of Florida's Environmental Horticulture Student Organization. The breakdown of the demographics of all three groups is as follows.

Demographics

Group 1 consisted of the following:
- Ten participants
- Seven females, three males
- All were students at the University of Florida, (Sophomore to Senior Classification)
- Nine were enrolled in an introductory plant class for non majors
- Zero were in the College of Agricultural & Life Sciences

Group 2 consisted of the following:
- Ten participants
- Seven females, three males
- All were students at the University of Florida, with 20-60 hours
- All were in the College of Agricultural & Life Sciences
- Zero were plant related majors

Group 3 consisted of the following:
- Eight participants
- Five females, three males
- All were students at the University of Florida, with varied classification
- All were in the College of Agricultural & Life Sciences
- Seven were environmental horticulture majors
- One was an environmental horticulture minor

Protocol

All participants were:
- Asked about how they chose their current major.
- Asked about their decisions related to career goals and ideal career characteristics.
- Asked what they knew previously about floriculture.
- Read a description of floriculture and were visually presented with this definition and careers within the floriculture industry.
- Asked about their perceptions and attitudes about floriculture.
- Asked how, where, and the sources they preferred to hear about job opportunities.

- Presented with some communication pieces to evaluate and discuss.

Group 1 participants were:
- Asked about why they chose to take the introductory plant class.
- Asked if this class changed their perceptions of the floriculture industry.

Key findings

- Participants in all three groups chose current major/career path primarily because of a passion for that career (experiences, love for this as a child, etc.).
- The second major influence to participants' career/major choice was personal contact with someone in that field.
- Additionally, family was a major influence on career/major choices.
- The job characteristics of most importance to students were job stability/security, happiness/loving what you are doing, and making a difference or leaving a mark.
- Money was of major importance to those outside the College of Agricultural and Natural Resources.
- Most, but not all, participants who took the introductory plant class for non-majors said they would considered getting a minor or major in a plant related field had they taken it earlier in their college career.
- Participants who did not take the introductory plant class had limited knowledge about floriculture prior to being given a description.
- After being given a definition of floriculture and a list of career choices, most participants, but not all, had positive reactions to the possibility of employment by the field.
- Participants perceived barriers to entering the field of floriculture were mixed, but included: perception that careers are not available, not enough money, not masculine enough.
- Participants felt that a degree specific to floriculture was not necessary to work in the field.
- Participants felt that the companies should market themselves directly to recruit students through a well developed brand.
- Messages that students felt would resonate with them in regard to a degree in floriculture were: low stress environment and make your hobby a career.
- Preferred sources of messages about careers were personal, high touch contact with people in the field, University programs and Web sites, and social group advertisements (specifically, Facebook).

Objective 1: Use research to identify barriers and constraints toward choosing floriculture as a career among samples of students in environmental horticulture, the College of Agricultural and Life Sciences, and in an introductory plant class for non-majors.

<u>Participants chose current major/career path primarily because of a passion for that career.</u>

- Most participants had a passion for the career path they had chosen based on a childhood experience, work experience, a hobby, or personal contact with someone in the field.

  – QUOTE: "I look at people that I admire or that have jobs that I think would be a lot of fun for me to do and I see they have passion for it and I feel like I have similar passions or interests."

  – QUOTE: "I grew up loving plants and I wanted to be a forester, my dad's a forester."

- A few participants landed on their major or career path by chance, or because they didn't have to take courses that they didn't like.

  – QUOTE: "I think I kind of picked that major by default because I had a lot of credit coming in that fulfilled it and I could pretty much graduate really soon or like take all the electives I wanted to."

<u>The job characteristics of most importance to students were job stability/security, happiness/loving what you are doing, and making a difference or leaving a mark. Money was of major importance to those outside the College of Agricultural and Natural Resources.</u>

- Participants in all groups had similar responses to what characteristics of a career were important to them. All groups were concerned with the stability of the job based on the current down economy.

  – QUOTE: "Job security. Something that will be there. That you know will it will be there."

- Participants in all groups had the desire to leave a mark or make a difference with their career.

- QUOTE: "I chose my career because I have a passion for it and it was what I saw was my opportunity to make a difference in the lives of young people."

- Participants in all groups were concerned with being happy and/or loving their job.
  - QUOTE: "What more could you ask for? Wake up every day and get paid to do something you want to do that you would take off to do if you were doing a different job."

- Participants diverged on the issue of money. The two groups that had participants from the College of Agricultural and Life Sciences placed a higher value on happiness than on money.

  - QUOTE: "I definitely think you have to weigh your happiness versus the salary. 'Cause like even if the salary's like really big, eventually you might hate it enough that it's not worth the money. Like you have to do something that makes you happy."

- Participants not in the College of Agricultural and Life Sciences put a higher value on money than on happiness.

  - QUOTE: "…if the job will pay you enough I don't care how boring it is, I'll do it."

Most, but not all, participants who took the introductory plant class for non-majors said they would considered getting a minor or major in a plant related field had they taken it earlier in their college career.

  - QUOTE: "I'm taking the class and I'm loving it and I actually wished I had taken it early before my senior year. Because I might have at least gotten a minor in horticulture."

  - QUOTE: "I wish I had known that that minor existed because I probably would have done it. It might have even been my major if I had taken it early enough."

Participants who did not take the introductory plant class had limited knowledge about floriculture prior to being given a description.

- The majority of participants just knew that floriculture had something to do with flowers.

- Those who had taken the introductory plant class were familiar with the types of careers available prior to being presented with the list of opportunities.

<u>After being given a definition of floriculture and a list of career choices, most participants, but not all, had positive reactions to the possibility of employment by the field.</u>

– QUOTE: "I think it sounds cool because it takes some creativity in like how you want to engineer them and use them, and then also it uses the sciences because you have to understand how the plants grow and things like that so it's kind of a well rounded deal."

- However, some participants were concerned for the security of a job in floriculture, because of the struggling economy.

<u>Participants perceived barriers to entering the field of floriculture were mixed, but included: bad job market, not enough money, not masculine enough.</u>
- When participants were asked what barriers, if any, they would see for entering the floriculture industry a few things were recurring with a bad job market, not enough money, and not masculine enough toping the list.

– QUOTE: "I'd consider it as a hobby, but it doesn't pay enough."

– QUOTE: "I mean I sort of have this preconceived notion that the job market isn't that good for Floriculture."

– QUOTE: "Very few men can actually say I sell flowers."

- Participants that were majoring in Environmental Horticulture had a perception that all of the jobs in floriculture were overseas.

<u>Participants felt that a degree specific to floriculture was not necessary to work in the field.</u>

- Degrees that participants thought would be good for a career in floriculture ranged from engineering to turf grass. Many participants thought a business degree would be valuable, but the overall consensus was that any degree would teach them the basics and the specialization could happen on the job or through a minor in floriculture.

– QUOTE: "I kind of look at it as the type of degree you'd need like higher education, higher than a bachelors degree, just to be a specialist, and I think you can either take the business route to it, which includes marketing and all that, or you could take

engineering and whatever, understanding the plants and how they work under certain conditions."

<u>Participants felt that the companies should market themselves directly to recruit students through a well developed brand.</u>

- Participants felt that with other industries they know exactly what type of company and specific names of companies they might work for when they are done. They know the names of the top engineering firms, or top accounting firms, but they don't know of any companies that would employee people in the floriculture industry. The students suggested partnerships to promote the companies at the same time as promoting the career options.

    – QUOTE: "Yeah, I mean I think the industry in general is just not that well known. I mean how many flower companies can you name? And how many engineering firms, how many financial firms, how many restaurants?   There's just not that much visibility compared to other markets and I think that the industry as a whole needs to promote that in general."

    – QUOTE: "Well I think that just the general point is that they need to brand themselves in the industry. "

    – QUOTE: "By not marketing themselves and putting it out there, like there are jobs for you to get, it kind of makes it sound to people like us that there really isn't much of a job industry, since you never hear about them asking for people to work for them."

Objective 2: Determine effective educational messages and sources for these messages.

<u>Messages that students felt would resonate with them in regard to a degree in floriculture were: low stress environment and make your hobby a career.</u>
- Participants felt that the best messages would include the idea of low stress and enjoyable, like making your hobby a career. The groups all thought promotion of careers in florciulture should take place in locations where people are already interested in plants and/or flowers as a hobby. Suggested locations were hobby magazines, flower shops, large retailers of plants.

    – QUOTE: "What if you had like a comparison, if you did like a commercial or something to that effect or an image where you had a person who's a business major or an engineering major and they were very, very stressed and their hair was all frazzled, and you know pencils or whatever, and then next to them you had a person who's

kind of sitting there in a field of flowers. Like you know, low stress, yes, we exist, decent job."

- QUOTE: "…do you want to make money in a low stress environment?"

Preferred sources of messages about careers were personal, high touch contact with people in the field, University programs and Web sites, and social group advertisements (specifically, Facebook).

- All groups felt that the source of career messages should be either personal, from someone in the field or a trusted well known company in the industry. Additionally, students looked to programs at their university like career resource center, job fairs, and in-class guest speakers, or the universities Web site. All groups mentioned that Facebook advertisements were a good source of connecting with each student directly.

- Students preferred initial contact through high touch communication, with a small postcard or flyer with a Web site to go to for more information.

  - QUOTE: "I mean if like 1-800-FLOWERS started a program talking more about the like engineering side of like floriculture and like, yeah, we sell flowers but you have no clue what goes on behind the scenes. You know, come check it out. I'd be like, ok, they make billions of dollars a year in flowers, something's got to be going on."

  - QUOTE: "I think what would be very cool is like maybe not just the agriculture department or horticulture department, but like if there was some kind of link on the main UFL.edu page that was like ever heard of this? Like really easy link to just click and then you get all this information about something that you've never heard of before and it could actually draw you in."

  - QUOTE: "…so looking for a summer internship, ever considered the floriculture industry? Click here. You know I mean, Face Book is really good about using what's on your profile to direct their marketing to your page so obviously they'd do it in an effective way where it would be people who are probably more likely to do it anyway."

Suggestions for other ways to market the industry to students

- Promote the introductory plant class for non-majors more.
- Don't use brochures
- Use a one-page flyer or small postcard to promote careers and then include a Web site to learn more.
- For those that are already interested a booklet with more information may be helpful (this wasn't agreed upon by all groups)
- Need a catchy one-liner (tag line) to get people to recognize the industry or to visit a Web site.
- Promotion with well known companies, like restaurants talking about who does their landscape. Signs in these places to go for more information.
- Online, interactive Websites with testimonials from people there age, podcasts, etc.
- Seminar classes
- Career fairs with "cool" giveaways
  - Plant or flower with information about the introduction plant class or careers
  - Canvass bags
  - Coffee mugs
  - Gift cards or coupons

Objective 3: Assess how curriculum in post secondary floriculture programs can be enhanced to provide students with requisite skills and motivation and desire to enter the field

In order to assess this objective, a 28 question survey was sent to 114 programs listed in the "Careers in Floriculture Catalog of Schools". The survey asked questions about current curriculum and recruitment efforts, students enrolled in programs of study, as well as future recruitment and strategic communication planning efforts. The survey was developed by the research team using input from the focus groups and in-depth interviews with faculty in the environmental horticulture department at the University of Florida. The instrument was reviewed by a panel of experts prior to being mailed to survey participants. The survey was administered using Taylor-Dilman Design Method, which recommends a reminder being sent after the initial mailing and a follow-up mailing being sent to non-responders. The results of the survey are reported below.

The programs surveyed varied in the numbers of students with a range of 0-250 in the program and the average number of students was 81.06. While the number of students varied, there was a consensus that all programs were in need of more students (100%). No programs reported that they were happy with the current number of students or that they were short faculty to teach the number of students they currently had. Thus, it is no surprise that the majority of the programs exported they had an active recruitment program (75%).

Of the survey respondents, 68.75% had programs in environmental horticulture, 31.25% had programs in floriculture, 50% had programs in horticulture, 37.5% had programs in floral design, and 18.75% had programs in another area (like turf, floral management, or landscape design). The average length of the programs ranged from 1-4 years with the average program length of 3.2.

Curriculum

The average number of courses offered in environmental horticulture per program that had offerings in this area was 4.27 while the average number of courses offered in ornamental horticulture was 15. The average number of courses in floriculture per program that had offerings in this area was 9 and the average number of programs in horticulture was 11.75. Finally, the average number of floral design courses offered in a program that offered a degree in this area was 10.

Of the responding programs, 43.75% required students to take a course in marketing, 68.75% required students to take a course in communication, and 43.75% required students to take a course in marketing. A majority of the programs required students to take a course in business (81.25%), and 68.75% required students to complete an internship.

One area of recruitment that was determined to be successful by focus group participants was information about careers in the industry during a plant course for non-majors. In environmental horticulture the average number of courses offered for non-majors by the programs surveyed was 0.36. The average number of courses for non-majors in ornamental horticulture was 2 and the average number of courses for non-majors in floriculture was 0.44. In horticulture, the average number of courses offered for non-majors was 2.25 and the average for floral design was 1.81. Following this question, participants were asked if they actively recruited students in these courses for non-majors. Eighteen point seventy-five percent of the courses for non-majors in environmental horticulture actively recruit in these classes, 25% in ornamental horticulture, 6.25% in floriculture, 37.5 in horticulture, and 25% in floral design.

Recruitment Materials

When asked how programs made decisions on what recruitment techniques they use, 93.75% of respondents said money was a deciding factor. Seventy-five percent of respondents said they chose techniques by available time, 68.75% made decisions based on convenience, and the same percentage made decisions based on tradition. Thirty-seven point five percent said they made decisions on other factors, like a survey of current students or the requirements of the college or university with regard to recruitment.

When survey participants were asked what barriers they experienced when implementing new recruitment techniques 75% said that time was barrier, 68.75% said training, and 75% said money.

The number one audience for recruitment materials among those surveyed was students, followed by high school counselors, and then community colleges, teachers, and lastly parents. While some of these audiences are clearly easier for programs to recruit to, it seems that with the majority of focus group participants saying they chose a career based on their parents' guidance, this is an audience that should not be ignored.

The majority of the programs are using traditional recruitment materials (see Table 1). The most used material reported by participants was brochures at 81.25%, which is interesting because students in the focus groups indicated that they did not want to receive information in brochures. The focus groups indicated a preference for one page flyer or a postcard with a Web site to go to for more information. The programs surveyed reported that they were using one page flyers at 56.25% and postcards at 37.5%, but these techniques could be utilized more. Giveaways were also preferred by students in the focus groups, which programs were using at 37.5%. This area could also be improved.

In the area of personal contact materials, programs were utilizing a number of techniques like phone calls, 56.25%, Personal e-mails, 50%, campus visits, 81.25%, Recruitment fairs, 75%, and guest speakers in classrooms, 56.25%. All of these personal contact recruitment techniques were considered desirable by the students in the focus groups, thus it is admirable that programs are utilizing these techniques. However, these techniques have limited reach.

The area that was most lacking in programs' recruitment materials was electronic materials. The majority of programs had a Web site (87.5%), although there is no way to know if these are interactive (as requested by the students in the focus groups). Some programs are using Face book (37.5%) and My Space (12.5%) groups. However, zero percent of programs were using Face book or My Space ads, which were specifically mentioned by all three sets of focus groups as an ideal way to recruit them to a program.

Table 1: Recruitment Materials Used by Programs

	Percentage of Programs Using Material
Printed	
Department or school brochures	81.25
College or university official brochure or view book	56.25
Newspaper Ads	18.75
Magazine Ads	12.5
Letters from faculty or administrators	43.75
One-page flyer	56.25
Postcard with Web site information	37.5
Giveaways (pens, shirts, mouse pads, etc.)	37.5
Personal	
Phone calls from faculty or administrators	56.25
Personal e-mails from faculty or administrators	50
Campus visits with personal time with faculty	81.25
Guest Speaker in classes	56.25
Booth at recruitment fairs	75
Presentations at high schools	62.5
Electronic	
Web site	87.5
Mass E-mail	31.25
Face book group	37.5
MySpace group	12.5
Face book ads	0
My space ads	0
Local TV ads	6.25
Local radio ads	12.5
Video	12.5
Video on Youtube	18.75
Video on Web site	25
CD with video	12.5
Text messages	6.25

Recommendations Based on Findings

This study looked at what students want from a recruitment program through focus groups and what programs are currently doing to recruit students through a survey; thus, there are a myriad of comparisons that can be made. Additionally, this study can offer recommendations to improve current recruitment techniques, while identifying gaps in the existing curriculum.

During the focus group portion of the study, participants were given a list of careers in floriculture and job responsibilities associated with these jobs. Participants were asked what type of courses they felt would be valuable for them to take in order to be prepared to enter the workforce in this field. The main areas the students thought they would need courses in to be successful (outside of plant related courses) were business, marketing, and communication. The majority of programs required courses in business (81.25%). However, fewer programs required marketing (43.75%) or communication (68.75%) courses for their students. Curriculum based recommendations include requiring students to take courses in marketing and communication.

One focus group consisted of members in a plant class for non majors at the University of Florida, where careers in floriculture are discussed and promoted. The students in this focus group all indicated that if they had taken this course earlier in their university program, they would have considered switching to a major/career in the area of floriculture. However, the number of courses offered for non majors at the programs surveyed was low, with the average number of courses offered in environmental horticulture, ornamental horticulture, floriculture, horticulture, and floral design for non majors at 1.37. Additionally, when participants were asked if they actively recruited students in these courses for non-majors, and 18.5% in environmental horticulture actively recruit in these classes, 25% in ornamental horticulture, 6.25% in floriculture, 37.5 in horticulture, and 25% in floral design. Thus, it is recommended that programs incorporate courses for non majors in their curriculum and develop an active recruitment program in these courses. Moreover, it is recommended that these courses be advertised

to non majors early in their university career so they have time to make a major change without penalty.

One critical comparison is between what students want in recruitment materials and what is being offered by programs. The majority of programs offer brochures (81.25%), which the students said they don't want. Instead the students prefer a postcard or flyer with brief information and a Web site address where they can find more information. Many programs offered flyers (56.25%) and a few postcards (37.5%). Thus, it is recommended that the money being spent on purchasing expensive brochures be redirected to developing and printing flyers or postcards, and to improving the information and interactive ability of Web sites.

While the students desired personal contact with faculty, administrators, and industry professionals, these efforts have limited reach and are time consuming and expensive. Thus, it is recommended that programs focus on new media recruitment tools. Students in all three focus groups said they would respond to a Facebook advertisement that was well designed and offered a unique experience. However, none of the programs surveyed were using Facebook advertisements. Some programs were using Facebook groups (37.5%), but groups are limited in their reach and targeting capabilities. Additionally, some programs were using videos on Youtube (18.75%), which can be useful if they are well developed, targeted, and tagged correctly to reach the appropriate audience. It is recommended that more time and effort be spent on developing recruitment materials in these new media environments.

Because survey participants indicated that training (68.75%) was a barrier in their use of new recruitment techniques, it is recommended that training programs be developed and distributed in electronic format or presented at professional development conferences. Participants also indicated that money (75%) was a barrier; however, many of these new techniques are relatively inexpensive. Thus, it is recommended that programs be educated on the effective use, cost, and availability of new media recruitment techniques.

Overall, the current needs of students and the offerings of programs in floriculture, ornamental horticulture, horticulture, and floral design are mismatched. However, having identified the inconsistencies between the needs of these two groups, it is possible to develop a recruitment and marketing program that matches the needs of students while managing the concerns of current programs and curriculum.