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## The Comparison of Effectiveness between Print Media & Electronic Media in terms of Promotion and Recruitment

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# The Comparison of Effectiveness between Print Media and Electronic Media in terms of Promotion and Recruitment

2016 Lee Honors College Thesis  
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## Abstract

This research project's objective was to determine whether print media such as brochures and booklets are more or less effective than electronic media such as e-mails and webpage advertisements in attracting consumers. A special interest was taken in higher education recruitment and the research was completed by advertising to high school students who are in the process of choosing a school for their higher education experience. The research featured an advertising campaign launched through both print and electronic platforms, directing the consumers to an online survey they were able to take to provide feedback about the experience. This project led to quantifiable data that gave insight as to which channel is more effective at attracting consumers; most specifically Millennials during their college search. Another survey of current college students was also completed to ascertain more in-depth knowledge of what types of advertising was most appealing to a slightly older age set and what affected their college decision a few years ago.

## Introduction

When comparing print to electronic media, it is easy to assume that electronic is always better in today's society. It is expected for electronic communications to grow 15.9% annually until 2018, while print is only growing 2.8% each year (Stabel, 2015). Electronic media are faster, cheaper, wider reaching, and appeal to more people as being current and cutting edge technology. But just because electronic advertising might be more efficient does not mean that it is more effective. People generally think of print as being more sincere and eliciting a more emotional response than a digital advertisement. While electronic ads can be found scattered everywhere, print media seems more intentional. From streaming music and videos to social media, people are always being bombarded with corporate ads that can become irritating and tiresome. While print can sometimes be viewed as a dated form of advertising, it is still a very strong force in terms of meaningful interactions, which more and more consumers are searching for.

In order for print to remain relevant and exciting, it does need to recognize the changes in the industry and consumers and be willing to innovate. A new generation, the Millennials, are in the process of growing up and making important decisions, like college choices (Fry, 2015). Industries need to be able to keep up with the expectations of Millennials, who hold a considerable stake in society. Some new techniques include printed quick-response (QR) codes that direct consumers to websites or a personalization component that excites the receiver and makes them feel special. On the other hand, in order for digital media to keep up their successful momentum, they need to recognize that customers are looking for something more than e-mail blasts or Facebook ads. Consumers want to feel special and that their business matters. Personalization and connection are ways to reach out to people and make them feel like they are

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not just another e-mail address. In either case, it would be unwise to underestimate print or technology as inherently inferior to the other. Both have advantages and disadvantages that must be overcome.

A truly successful advertising campaign should incorporate both print and digital promotion and use each other as supplements to harness the strengths of both. Technology excels at being fast and cheap while print succeeds in building meaningful connections. The merging of these two components seems to be the best way to combine new and exciting technology with time-tested success. However, an in-depth look at the individual effectiveness of the two media is necessary to gain a larger picture of the current state of the industry.

The purpose of this project was to ascertain whether the meaningfulness of print is proving to be more effective than far-reaching but not always significant electronic advertising. While digital media have the advantage in terms of excitement and innovation, their weaknesses are things that print finds strength in. Print advertisements are by no means a dying or ineffective form of communication. In 2013, direct mail was the preferred marketing channel for the 18-34 age group (*Act Now! A Better Response to Direct Mail*, 2013). 75% of Millennials in that survey (ages 16-26) said that they believed information is less trustworthy when in a digital format. This directly relates to advertising and that type of response is too large to ignore or rule out automatically. At that time, direct mail represented 55.5% of the mail volume that passed through the United States Postal Service.

It is important to note, however, that the tug-of-war between the two media is constantly changing as technology develops, tastes change, and innovations are forged. Ideas in the digital and print industries are changing so fast that common held beliefs from even a year or two ago are now irrelevant. Through this research, differences between the opinions of current college



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students and high school students were found when it comes to choosing between print and digital. However, higher education institutions spend millions of dollars in advertising each year and a better understanding of what potential students want can end up being worth its weight in gold, even if it is only relevant for a short amount of time, like one recruiting year. Constantly tailoring a university's marketing approach for the changing times is necessary to appear current and up-to-date to the potential students.

## Literature Review and Analysis

While looking into information regarding this subject, a plethora of articles and studies could be found to supplement the findings of this project. In the advertising world, the argument between print and digital is constant and demanding and much has been written about it. People are always questioning the best way to navigate that argument and many writers have ideas or opinions on what can be done.

Several articles have been published questioning if web advertising really works and how it can be better. One particular source comes from a trade journal, *Journalism & Mass Communication Quarterly* and writes about a study measuring how well people remember printed and digital information (Sundar, Narayan, Obregon, & Uppal, 1998). It focuses on how effective online advertising is, now that it is gaining a lot of momentum and becoming very popular. The main scope of the article questioned whether or not online advertising is as effective as print. A study was completed and analyzed where half of the subjects saw an ad in a newspaper and the other half saw the ad online with the same content. The results went on to show that the people who viewed the printed ad remembered significantly more than their online counterparts. This experiment was interesting because it delved a little deeper into the concrete effects of electronic advertising. To have data that back up the fact that people don't remember digital information as well as printed information is important.

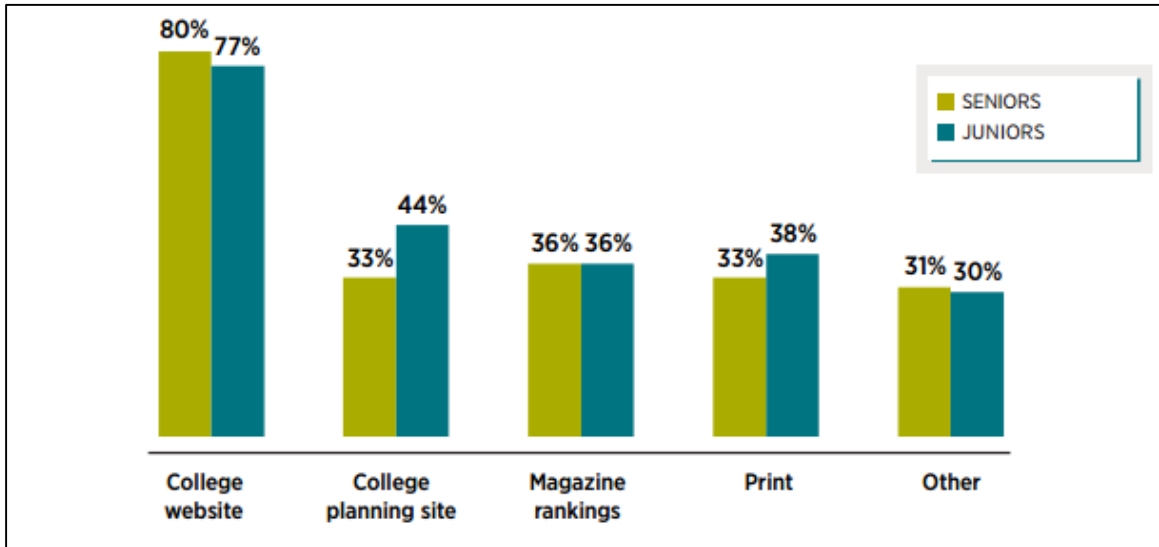
Another article, published in the *Journal of Promotion Management*, addressed the fact that digital advertisements bring new advantages and complexities that companies might not even think about (Thornton & Lin, 2003). Technological aspects such as compatibility are things that advertisers have not had to think about until the advent of the digital age. Does an ad display the same on Internet Explorer as Google Chrome? An iPhone and an Android browser?

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Having an advertisement not be compatible with your device wastes the money it took to send it to you, which is a huge consideration. Overall, there are fewer data about the effectiveness of digital communication and for this reason, it is riskier to invest money in it. When pouring a significant amount of money into advertising, does it make more sense to invest in something concrete or in a new channel that is not proven to always work? Companies must be more mindful when going into the electronic advertisement market than when choosing the “tried and true” printing methods where there are fewer surprises.

One study that was very useful was the E-Expectations Report released in collaboration with several college recruitment companies last year (Ruffalo Noel Levitz, OmniUpdate, CollegeWeekLive, & NRCCUA, 2015). This report compared data collected from the past decade with 3,000 students surveyed last year and 1,000 students in 2005. The information showed that students are overwhelming more interested in online engagement now than ten years ago. According to this study, 80% of students rely on a campus website to influence their opinion about the college and 70% of students have looked up information about a college on a mobile device. According to Figure 1, when researching colleges, about half as many students get information through print as students who get information from the websites.

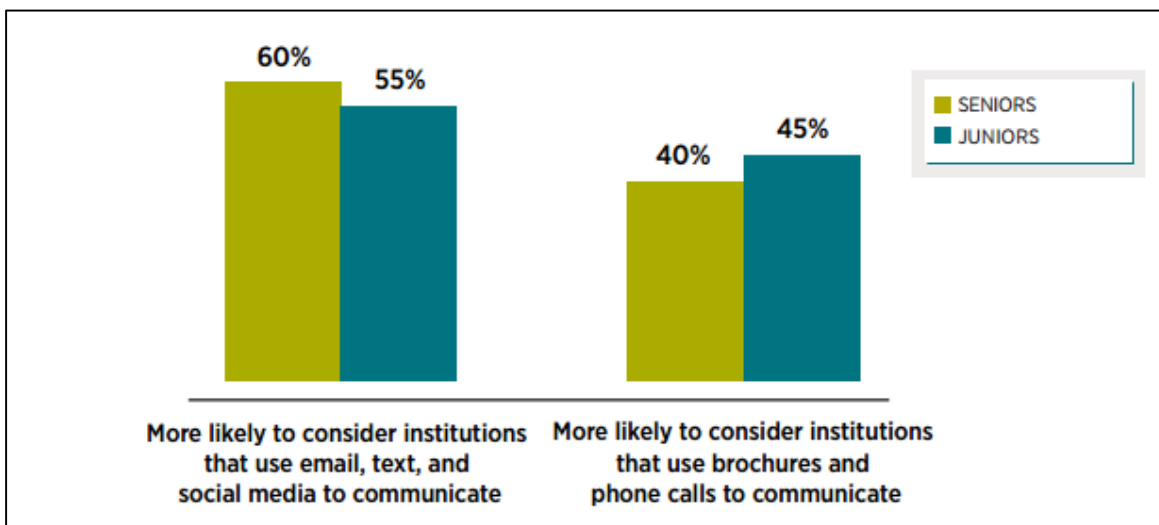
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**Figure 1. How Influenced are High School Students by Various Media**

(Courtesy of Ruffalo Noel Levitz, OmniUpdate, CollegeWeekLive, & NRCCUA E-Expectations Report, 2015)

Through these numbers, one can easily tell that students are most likely to turn to the web while they are looking for information about higher education institutions. But, this only applies to when students are seeking out information, not necessarily when they are being marketed to. According to Figure 2, students are still affected positively by printed brochures and the percentage gap between electronic and print is much smaller.



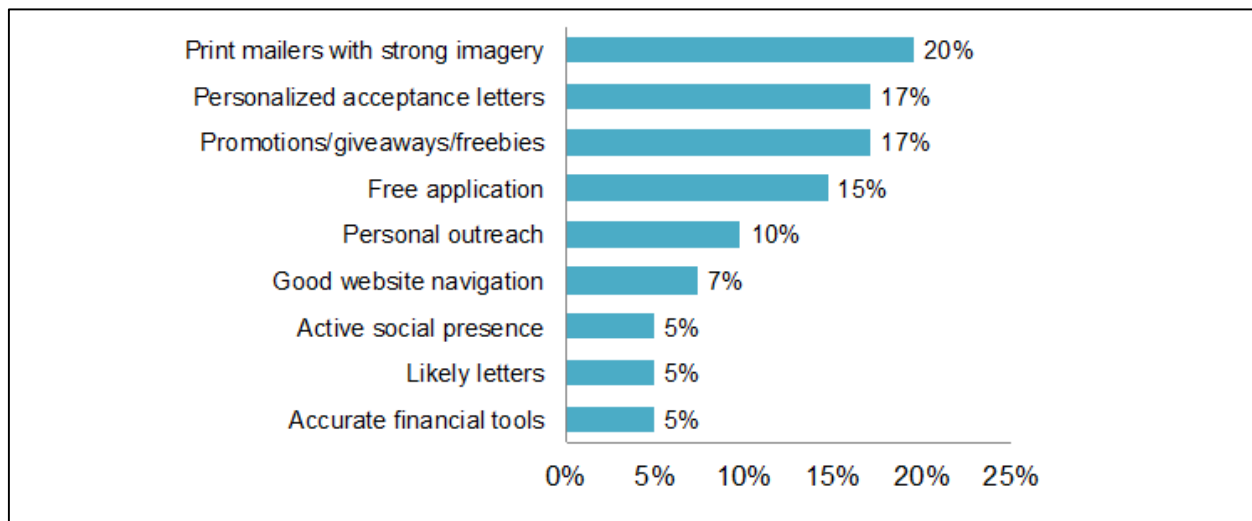
**Figure 2. Influence of Various Promotional Media in a Students' College Decision**

(Courtesy of Ruffalo Noel Levitz, OmniUpdate, CollegeWeekLive, & NRCCUA E-Expectations Report, 2015)

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The data in Figure 2 show that while more students are considering schools who advertise digitally, a large percentage of students are still interested in being advertised to through print. The margin is smaller than one might think originally, even though it does show that digital advertising is still leading.

Another poll that showed direct data pertaining to the subject of this research was the Hobsons College Confidential Poll on College Communications (2015). A main point of interest from this poll is the fact that the most positive feedback about college communications featured printed mailers and also personalized content. The data in Figure 3 show that students still have a positive reaction when receiving mailed communication, most likely because it is a form of outreach that is very personal and intentional. A recruitment e-mail might get sent straight to the junk folder but a piece of paper mail is something that elicits a reaction when the consumer holds it in their hands. It is harder to ignore something that is concrete than something that is digital.



**Figure 3. Most Positive Feedback About College Communications**  
(Courtesy of the Hobsons College Confidential Poll on College, 2015)

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In terms of literature that is available on this topic, there is substantial information for both industry professionals and the general public. Trade magazines and journals have delved into this topic, but the shift from print to electronic is something that is of interest to the general public, as well. The existing literature that has been presented gives a lot of great information about how to best market to students or about current industry shifts.

## Goals and Objectives

The goal of this project was to compare the effect of print and electronic media when recruiting students for higher education institutions. In general, the goal was to end the project with a clearer picture of which medium is most effective and yields the most meaningful interactions with students. It is important to note that what was being analyzed was the efficacy, not the efficiency, of these media.

Specifically, the goal for the advertising campaign was to reach enough students and have enough survey responses that the data presented were accurate and not skewed. The goal for the current student survey was to gain information from students who have already gone through the college selection process to hear about their past experiences and also receive information about what is helping them make future higher education decisions.

Another component to this project was being able to support the Graphic and Printing Science program at Western Michigan University in outreach and recruitment. An effect of sending out this advertising campaign is that hopefully, students become interested in the Graphic and Printing Science (GPS) program and come to WMU for it. An indirect projected outcome of the project was to help support the university and one of its programs while still conducting research and collecting data.

With the information gained through the two different methods of data-gathering, a small snapshot about the general feeling in terms of print and electronic advertising for this target audience was gained. This information could be used in future communications to better recruit students and support more meaningful interactions. When so much money is spent on recruitment and promotion, it makes sense to put that money into what is most effective and successful.

## Experimental Procedures

This project consisted of two different surveys to find which method of advertisement is most effective. The first response gathering method involved a large advertising campaign being sent out to around one hundred potential students that incorporated both digital and print media. The students were then asked directly if they liked the print or digital format better. The second method consisted of current Western Michigan University students being surveyed in a more general manner about their feelings and opinions on the different types of ads. These two methods occurred during the month of March 2016, concurrently. The first method was a longer process and had a lengthier data collection time period. The second method was completed within a few days, since there was no advertising campaign or mail time to add extra waiting.

The advertising campaign was targeted towards current high school students from schools where the Graphic and Printing Science program currently recruits. Students from Royal Oak High School (Royal Oak, MI), the Calhoun Area Career Center (Battle Creek, MI), Saline High School (Saline, MI), Jackson Career Center (Jackson, MI), and several others were contacted. A database of names, addresses, and e-mail addresses had been compiled through various recruitment trips within the year and that list was used to target students who were potentially interested in studying Graphic and Printing Science at Western Michigan University after being exposed to graphic arts in high school. A paper brochure was mailed to the students and an e-mail of the exact same design was also sent to the students within three days of the brochure being mailed out so that their deliveries occurred within a few days of each other.

This advertisement was a promotional piece designed to detail all of the advantages and services that the Graphic and Printing Science program has to offer students. The printed brochure had two sides (Appendix A) and the email design had just one side (Appendix B). It



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included information about the substantial scholarship opportunities, the different paid internships the students can interview for, and the various job positions one is qualified for with a Graphic and Printing Science degree. Both the email and printed piece had a QR code featured on it that lead the reader to the Graphic and Printing Science program's scholarship webpage. The QR code was an attempt to incorporate recent technology that would resonate with a younger generation.

It was decided that the design for the brochure should incorporate a postcard layout, to save money on envelopes and to help give the piece a more dynamic effect. The receiver of the brochure didn't have to open an envelope or unfold a letter when they got it in the mail, the information was presented right in front of their eyes with little effort on their part. The brochure design was made in accordance with WMU's University Relations Visual Identity guidelines and the brochure was approved by the department's interim chair, Dr. William Rantz. The printing for the brochure was done on a Konica Minolta C754 PS digital printer and copier. The substrate used was a 10 point, coated 2 sides (C2S) 144 pound Strathmore stock. The paper needed to be sturdy enough to go through the postal service without an envelope and a heavier stock gives an impression of quality and trustworthiness.

The brochures were printed on 8.5 by 11 inch sheets of paper and around 250 pieces were created. The extra will be used for future recruitment for the program. The printed pieces were then trimmed by the industrial cutter located in the printing laboratory. From there, address labels were printed for the different students and stamps were applied. The brochures were shipped through the United States Postal Service in accordance with their specifications.

The e-mail featured a link at the bottom of the page which brought the reader to a survey. The print advertisement had the survey URL printed on it with a small paragraph asking the

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reader to take the survey. The survey had several questions about the students' opinions on the different types of media and which they preferred (Appendix C). Those questions also asked if personalization or QR codes affect their reception to advertisements, if they thought QR codes positively affected a publication, if they thought the web or print version of the ad was more visually appealing, and if they thought print or digital media are more effective. The graphic arts teachers of these students were also contacted and sent the brochure. They were asked to have their students take the survey in class, to better the chances of getting a decent survey participation rate. At the end of the survey, the students were asked to leave their email address if they wanted to be entered for a chance to win a \$50 Amazon gift card. This provided incentive for the students to take the survey, which helped obtain a larger sample size.

To conduct the current student survey, different groups of Western Michigan University students were asked to voluntarily partake in the project. The sample was intended to have a mix of gender, age, ethnicity, and major, which is why several groups were approached. The survey link was disseminated to Lee Honors College students, Student Ambassadors, Fall Welcome Ambassadors and Graphic and Printing Science students. They were asked to fill out a survey that would ask them questions about both types of advertisements, if one appealed more than the other, how they would prefer to receive ads both now and when they were in high school, and if a school's digital advertising affected their college decision (Appendix D).

Since both tiers of this research involved human subjects, a Human Subjects Institutional Review Board (HSIRB) protocol was submitted to the Western Michigan University Office for the Vice President of Research. This report included a project description and explanations of project benefits, subject recruitment methods, risks to subjects, and confidentiality of data. Collaborative Institutional Training Initiative (CITI) training modules were also completed.

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Once the HSIRB protocol was submitted, the review board deemed that the surveys constituted as market research, which did not put the subjects at risk and thus did not need to be evaluated for HSIRB approval (Appendix E).

This project was funded through several different avenues. The largest cost came from the printing of the brochures and paying for postage to send them. The mass e-mail had zero cost associated with it. The surveys were created through the website SurveyMonkey, which requires a premium subscription to be purchased if the survey responses totaled more than 100 submissions, which occurred. The print lab at the Parkview campus was able to provide paper for the printed brochure at no charge. The printing was paid for by the Printing Class Fees account through the Department of Chemical and Paper Engineering. The Printing Industries of Michigan sponsored the project with \$500, which covered the cost of postage, address labels, the survey incentive gift card, and the SurveyMonkey subscription

## Data Collection

This project yielded two different sets of data, from the prospective and current student surveys. The printed brochure was sent to 111 prospective students and the emailed brochure was sent out to 106 prospective students and 12 of their teachers. In total, the number of individuals who got either the printed piece, the email, or both numbered to be 130. Leading up to the project, 500 was my target number of potential students to contact. From those 500, I projected that anywhere from a 5% to 50% survey return rate could be expected. A 30% success rate was my target number in order to gather enough data to be viable, but I was prepared to get a lot less, given the unpopularity of surveys. Table 1 describes the different options of response rates and number of survey responses that could have provided the data for this project.

**Table 1.** Projected Survey Success Yield

<b>Survey Success Yield</b>		
<b>No. of Pieces Sent</b>	<b>% Success Return</b>	<b>No. of Responses</b>
500	5%	25
500	10%	50
500	30%	150
500	50%	250

While I was not able to contact as many students as desired, the survey response rate was higher than targeted. The number of survey responses received was 64 between February 29, 2016 and March 31, 2016. Table 2 illustrates that with 130 people contacted and 64 responses collected, the response rate was 49%.

**Table 2.** Actual Survey Success Yield

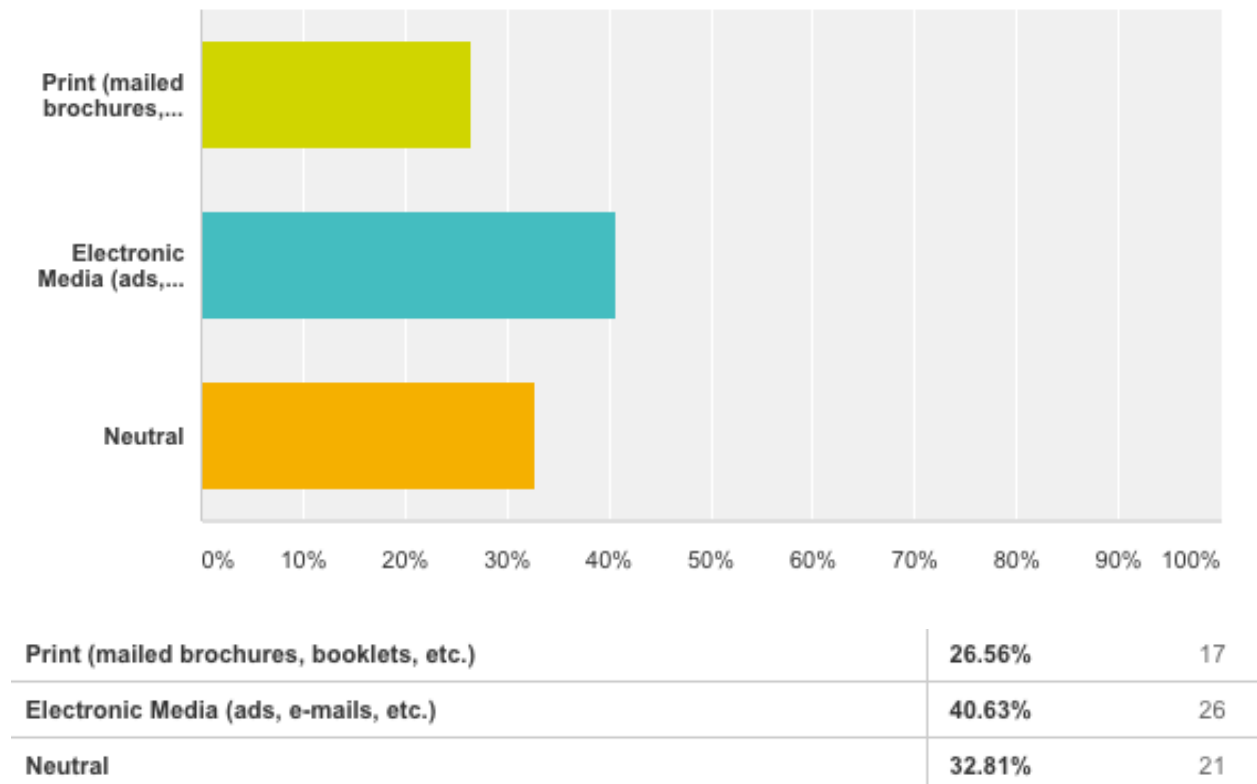
<b>Actual Survey Success Yield</b>		
<b>No. of Pieces Sent</b>	<b>% Success Return</b>	<b>No. of Responses</b>
130	49%	64

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For the current student surveys, 220 responses were collected between February 29, 2016 and March 15, 2016. This was a higher volume than expected and can be attributed to the different groups that were targeted and the high campus involvement level that these groups participate in. From the responses received from both surveys, some conclusions can be drawn about the overall feelings toward print and digital advertising.

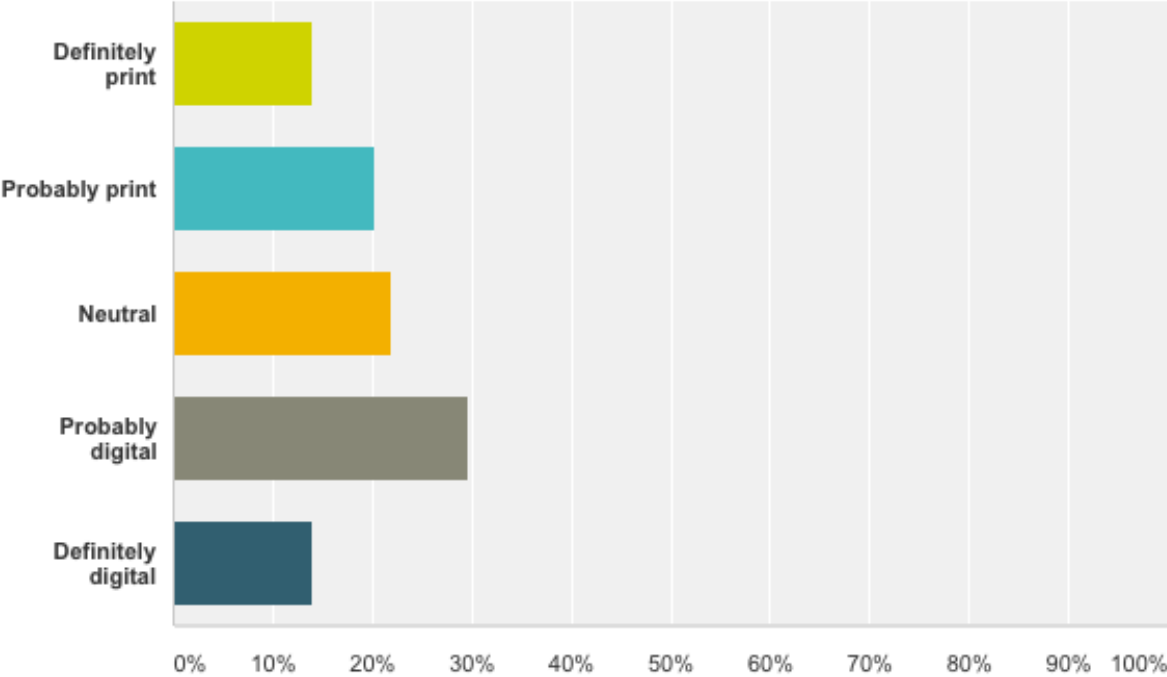
## Data Analysis

For the potential student survey, four questions were asked: Do you prefer to be contacted through print or electronic media from potential schools?; In general, do you think print or digital media are more effective?; Did you think the WMU advertisement was more visually appealing in print or in e-mail?; and Do you feel quick-response (QR) codes or personalization affect a brochure positively? The following figures show the responses for each question.



**Figure 4. Do you prefer to be contacted through print or electronic media from potential schools?**  
 (Courtesy of the SurveyMonkey, Inc., Palo Alto, California, USA, 2016)

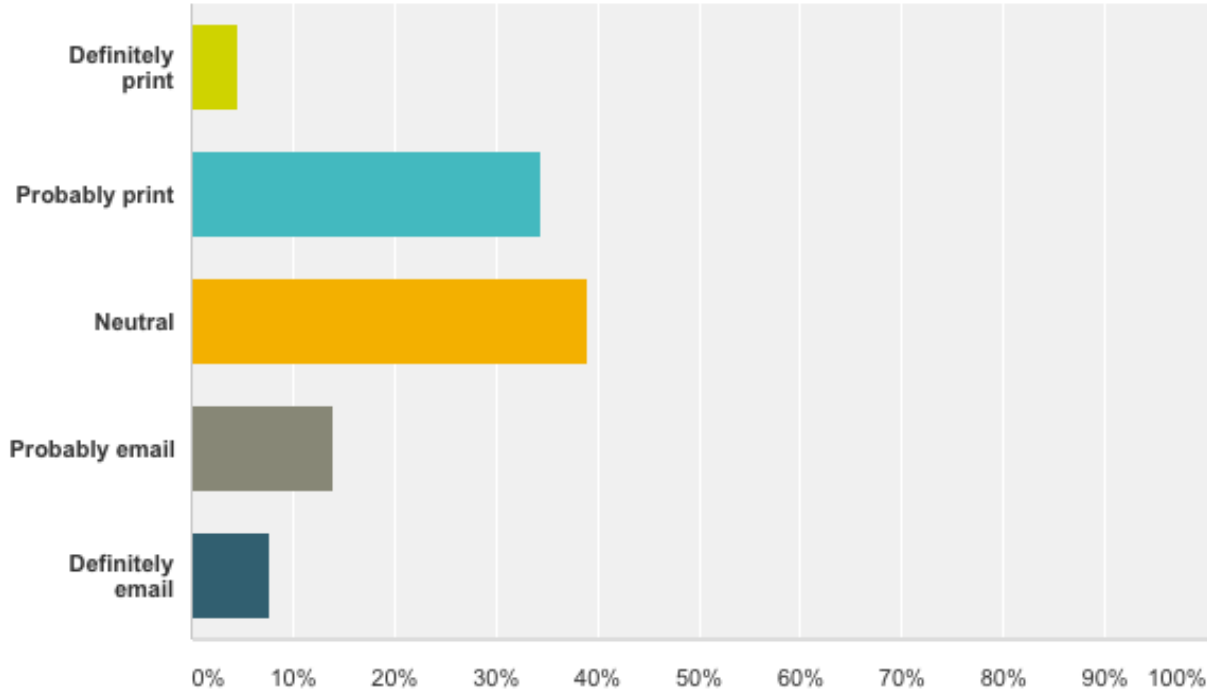
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<b>Definitely print</b>	<b>14.06%</b>	<b>9</b>
<b>Probably print</b>	<b>20.31%</b>	<b>13</b>
<b>Neutral</b>	<b>21.88%</b>	<b>14</b>
<b>Probably digital</b>	<b>29.69%</b>	<b>19</b>
<b>Definitely digital</b>	<b>14.06%</b>	<b>9</b>

**Figure 5. In general, do you think print or digital media are more effective?**  
 (Courtesy of the SurveyMonkey, Inc., Palo Alto, California, USA, 2016)

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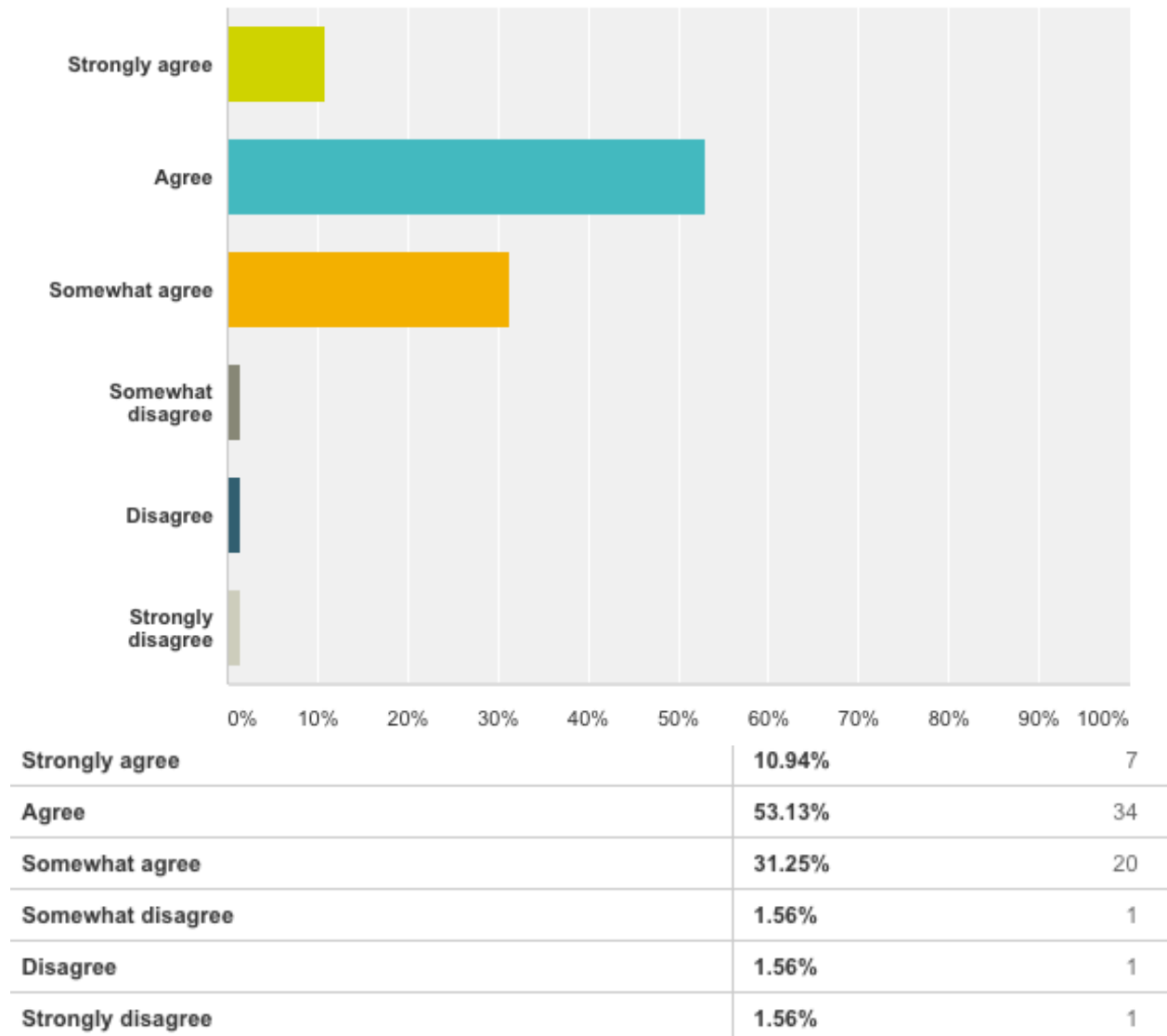


<b>Definitely print</b>	<b>4.69%</b>	<b>3</b>
<b>Probably print</b>	<b>34.38%</b>	<b>22</b>
<b>Neutral</b>	<b>39.06%</b>	<b>25</b>
<b>Probably email</b>	<b>14.06%</b>	<b>9</b>
<b>Definitely email</b>	<b>7.81%</b>	<b>5</b>

**Figure 6. Do you think the WMU advertisement was more visually appealing in print or e-mail?**  
 (Courtesy of the SurveyMonkey, Inc., Palo Alto, California, USA, 2016)



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**Figure 7. Do you feel quick-response (QR) codes or personalization affect a brochure positively?**  
 (Courtesy of the SurveyMonkey, Inc., Palo Alto, California, USA, 2016)

Based off of the data collected from the current high school students, it can be observed that this age group is more drawn to digital media than print media. For instance, in the first question asking which medium they prefer to be contacted through by schools, electronic media came in first, followed by neutral, and lastly, print. However, the difference between electronic and print was only 15%, which isn't a huge margin when there are only three choices.

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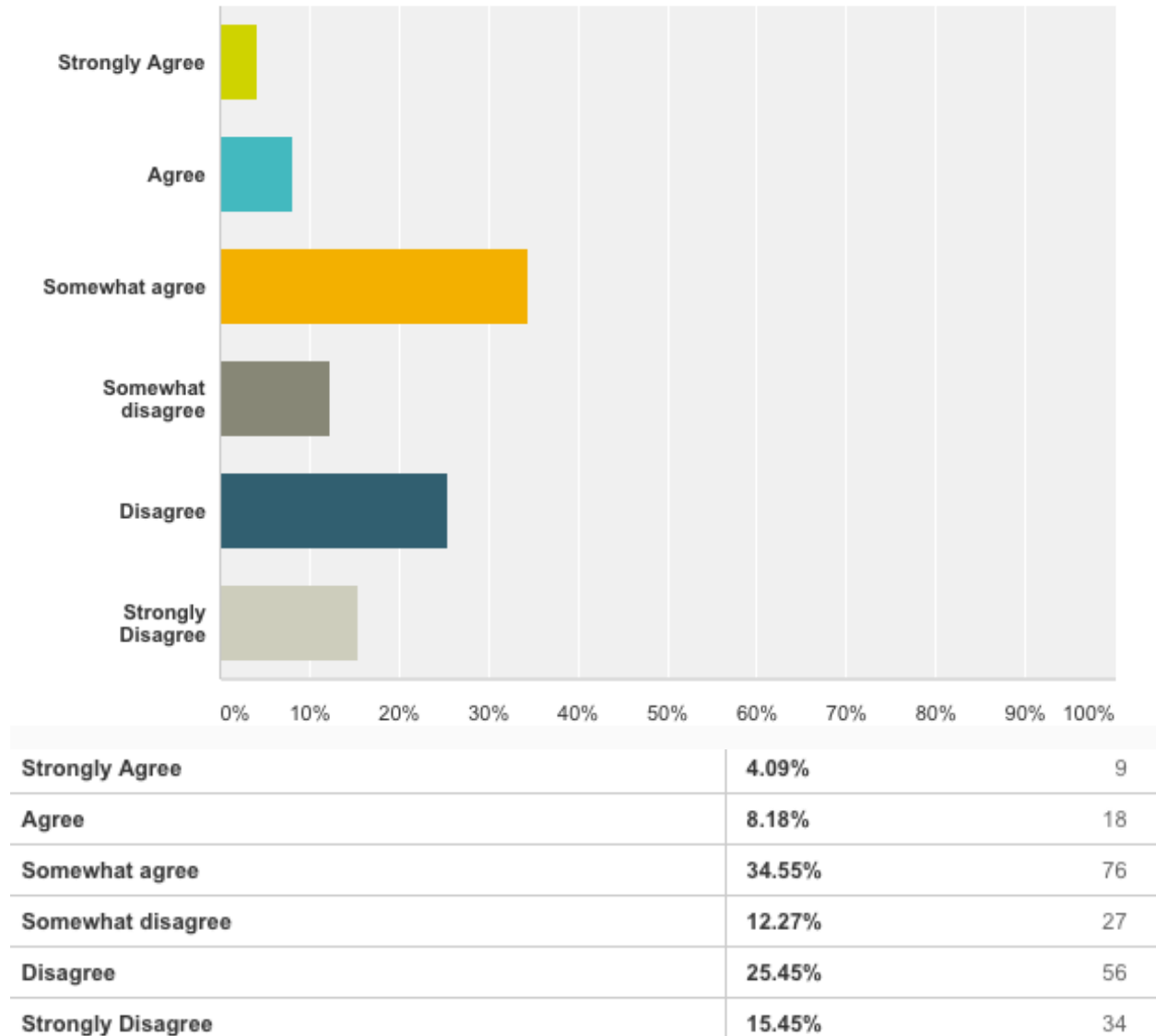
When asked which channel was more effective, about 45% gave an electronic-positive answer while about 35% gave a print-positive answer. Electronic media still had the best results but again, not by a huge margin. When asked whether the WMU ad was more appealing in print or electronic form, the overwhelming answer was neutral, which shows that these students may not care which form they receive the ad in, they are more concerned about the content. However, the second highest answer after neutral was “probably print”, which at least shows that 34% of the students did like receiving the print brochure and thought it displayed better. The last question was about whether or not QR codes and personalization help an advertisement or hurt it and the results were positive by a large margin. Less than 5% of the students said that those elements had a negative impact, which follows the results of the previous research done on the subject.

Overall, it seems that based on the responses, this age group is partial to digital advertisements, but not by much. This makes sense, since these students were born from around 1998 to 2001, when the electronic age was really taking off and computers were becoming much more popular. These students grew up with cell phones, laptops, and tablets being much more accessible to them than other age groups. However, they were also still exposed to a lot of print media, which explains why the results are split with small margins in between the two preferences.

For the current college student survey, seven questions were asked: Did the advertisements I received from WMU affect my decision to go there?; I was most affected by the following communications from WMU; In general, do you think print or digital media are most effective?; Do you think advertisements are more visually appealing in print or e-mail?; Do you think quick-response (QR) codes or personalization affect a brochure positively?; Are you going

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to graduate school?; Through which medium do graduate schools best promote to you? The following figures show the responses for each question.



**Figure 8. Did the advertisements I received from WMU affect my decision to go there?**  
 (Courtesy of the SurveyMonkey, Inc., Palo Alto, California, USA, 2016)

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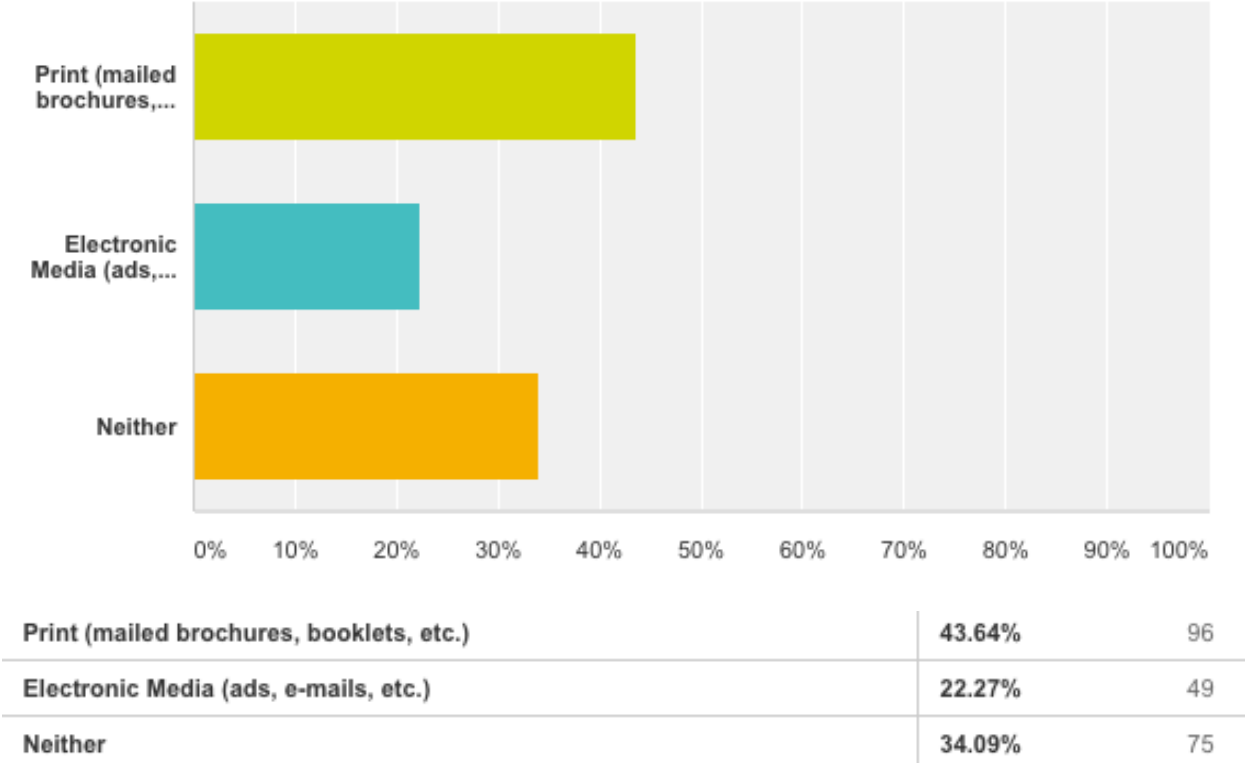
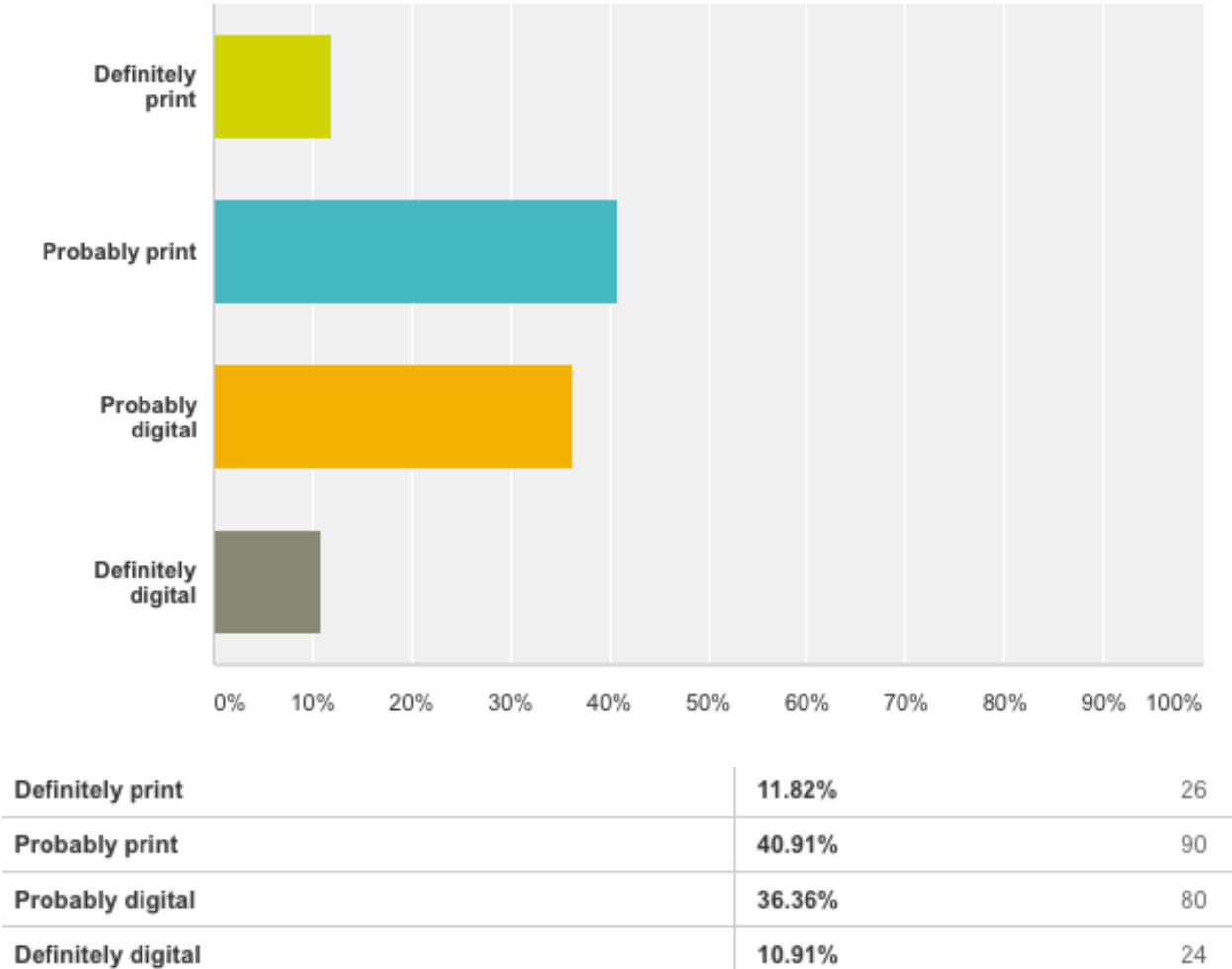


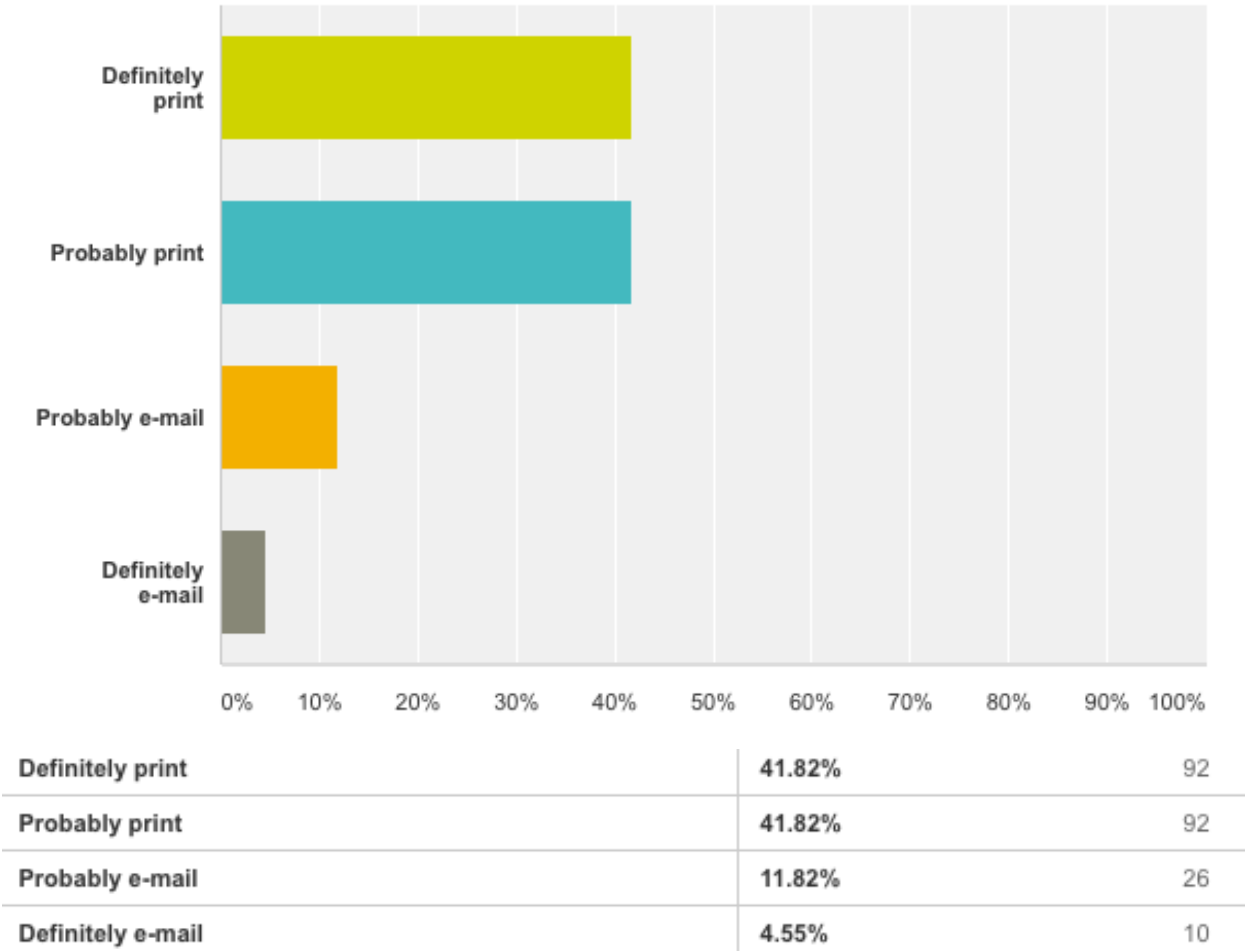
Figure 9. I was most affected by the following communications from WMU:  
 (Courtesy of the SurveyMonkey, Inc., Palo Alto, California, USA, 2016)

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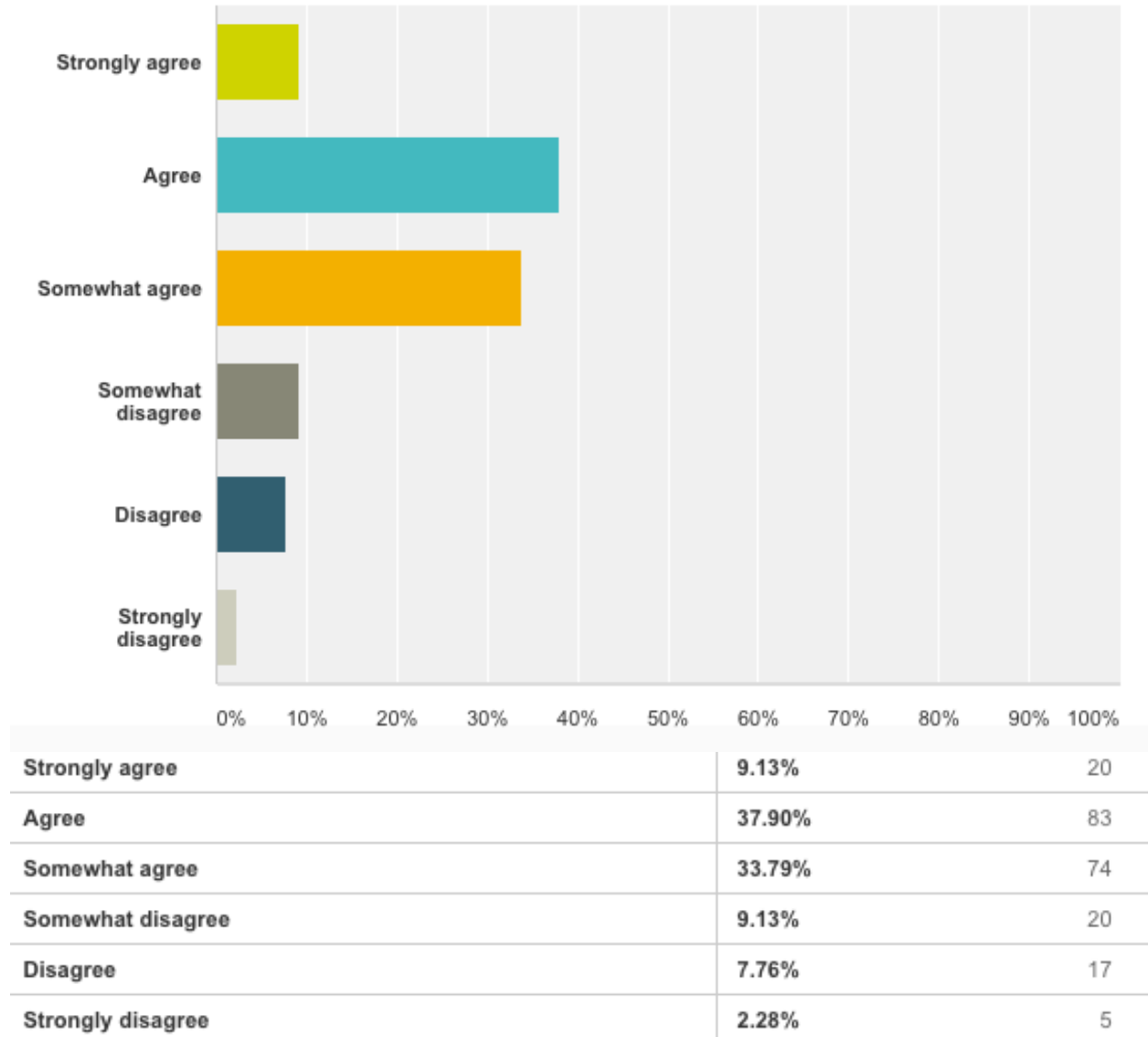
**Figure 10. In general, do you think print or digital media are most effective?**  
 (Courtesy of the SurveyMonkey, Inc., Palo Alto, California, USA, 2016)

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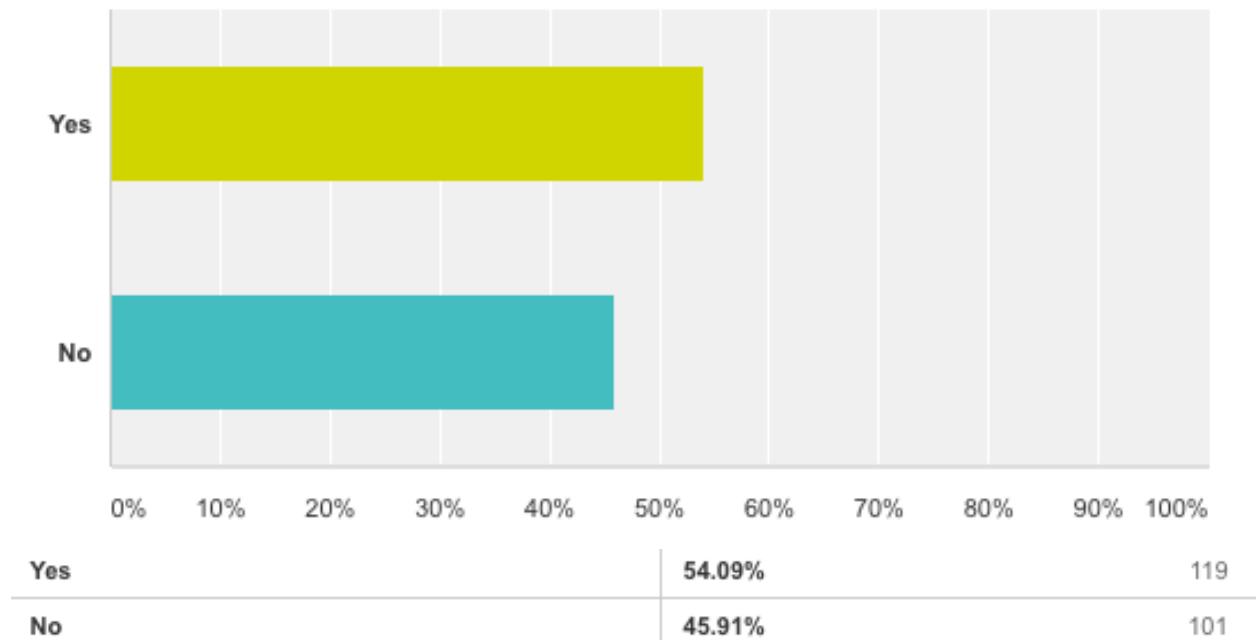
**Figure 11. Do you think advertisements are more visually appealing in print or e-mail?**  
 (Courtesy of the SurveyMonkey, Inc., Palo Alto, California, USA, 2016)

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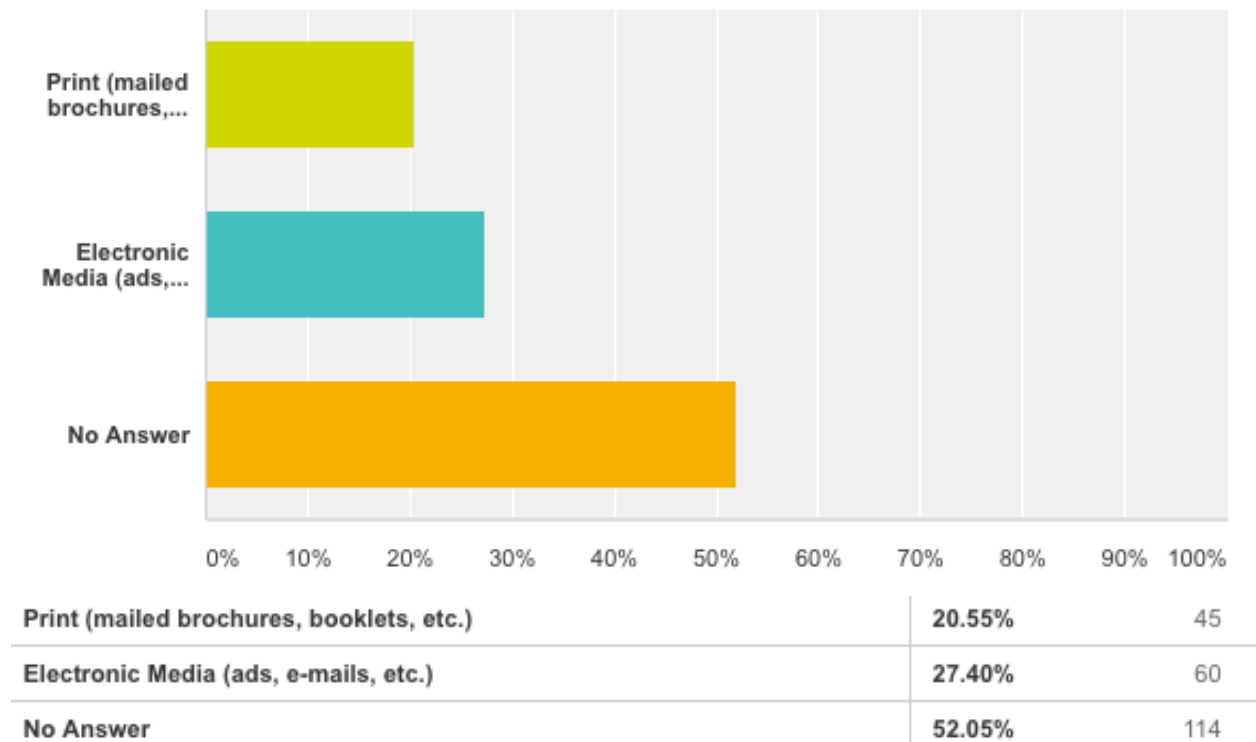


**Figure 12. Do you think quick-response (QR) codes or personalization affect a brochure positively?**  
 (Courtesy of the SurveyMonkey, Inc., Palo Alto, California, USA, 2016)

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**Figure 13. Are you going to graduate school?**  
 (Courtesy of the SurveyMonkey, Inc., Palo Alto, California, USA, 2016)



**Figure 14. Through which medium do graduate schools best promote to you?**  
 (Courtesy of the SurveyMonkey, Inc., Palo Alto, California, USA, 2016)



## THE COMPARISON OF EFFECTIVENESS BETWEEN PRINT AND ELECTRONIC MEDIA

After comparing the two sets of data, it is interesting to see that these two age groups have fairly different opinions, even though there is only a few years' difference in between them. When asked if advertisements from WMU affected the student's decision to go here, the highest answer was "somewhat agree". However, the second highest answer was "disagree", which shows that there are still many other factors that convince a student to choose a college besides their advertising strategy. When asked which type of communication affected the student the most, print came in first with about 42%. The "neither" option came in second and electronic came in last with 22%.

The third question asked what channel the student thought was most effective. 53% chose print while 47% chose electronic. This margin is very small as well, showing that the students have mixed feelings and the decision could go either way. The highest scoring answer on this question was "probably print" but was closely followed by "probably digital", further illustrating how close the two choices were. The next question's results were much less divided. When asked if ads were more visually appealing in print or e-mail, 84% chose a print-positive answer, illustrating that the students were certainly not conflicted when it comes to choosing which channel looks better visually.

When asked whether QR codes and personalization affected ads positively, the majority of the students agreed that they do, just like the high school students. Finally, the last two questions had to do with whether or not the survey participants were going to graduate school. 119 of them responded yes and when asked which channel better promoted graduate schools to them, 21% chose print and 27% chose digital.

## Conclusions

When comparing the different sets of data, one can find both similarities and differences between the two of them. For both surveys, the differences between print-positive and digital-positive answers were normally fairly small. Both age sets seem to have respondents who have a particular preference for one over the other and they were normally divided fairly close to half and half. The current high school students tended to lean towards favoring digital, while the college students tended to choose print more.

This close divide could be a result of the climate that the two groups grew up in. The recent digital communication revolution occurred right in the middle of all of the participants' upbringings. This revolution occurred incredibly quickly and completely changed the way we communicate with each other today. Millennials are currently caught between liking the familiarity of print and being excited by the constant stream of new technology. The older group slightly favored print, while the younger group slightly favored digital, which shows the gradual trend of the industry to tend towards electronic media over print as of late. However, it is difficult to say for certain that one channel is definitely more effective than the other. As stated in the introduction, a hybrid of the two channels seems to be the best way to effectively advertise.

## Recommendations

The results from these surveys are by no means exact and several things could be done to change them in order to record more accurate data. The fact that one survey group had more than three times more respondents than the other is a major problem. Due to the nature of the project, it could not really be avoided in this situation but in a more controlled experiment, having the same number of participants for each survey would be ideal. This could drastically change the results of the data and the conclusion of this project.

The high school students were enticed by the gift card possibility to take the survey, but this also could have skewed the results. It's possible that the students did not think very hard about the questions in order to get through the survey with as little work as possible, which would skew the accuracy of the data. Likewise, the college students could have completed the survey without choosing answers that completely described their feelings in an effort to finish quickly.

To see if this experiment actually affected enrollment rates, the number of students entering the program next fall should be monitored to detect any increases. Potentially, a survey of the new students could be taken to see if their decision was at all affected by this advertising campaign. The Graphic and Printing Science program should take note of any increases and use that information to tailor the way they recruit to potential students in high school.

## Acknowledgements

The Printing Industries of Michigan played a large part in the success of this project, as their sponsorship was the only source of outside funding for the project. Lois Lemon, Master Faculty Specialist at Western Michigan University served as the advisor of this project and her support and insight was very helpful while designing this research opportunity. This work was designed for the GPS 4850 class, as a Research Design project under the advisement of Dr. Andrew Klein from the Chemical Engineering program. The Chemical and Paper Engineering Department allowed the funding for the printing for the brochures, which was extremely beneficial for the project's limited budget. The facilities at the WMU Parkview campus such as the printing laboratory were utilized extensively and the project would not have been able to be completed without them.

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## Appendix

### Appendix A. Printed Brochure Design

**Discover**  
**Graphic and Printing Science**

Department of Chemical and Paper Engineering  
College of Engineering and Applied Sciences

**W**

**A comprehensive major or minor program preparing students for a career in the graphic communications industry**

**Scholarships**  
Thousands of scholarship dollars are offered to Graphic and Printing Science students each year, both from the department and through industry sponsors.

Check out our scholarship opportunities here!

[wmich.edu/chemical-paper/graphicprintsscholarship](http://wmich.edu/chemical-paper/graphicprintsscholarship)

**Careers**  
Students studying GPS can find jobs as:

- Account Executives
- Color Management Specialists
- Corporate Purchasers
- Creative Directors
- Customer Service Representatives
- Graphic Designers
- Plant Managers
- Packaging Engineers
- Production Supervisors
- Publishers
- Sales Representatives
- Research Engineers
- Web Designers

and many more!

**Quick Facts**

- Starting salaries of \$45,000-\$60,000
- Close to 100% job placement
- Paid internships available in Chicago, New York City, Saint Louis, & more!

Contact us for more information!

Advisor: Katie Fox  
269-276-3270  
katherine.fox@wmich.edu  
E-102 Floyd Hall, Mail Stop 5317

**Discover**  
**Graphic and Printing Science**  
at Western Michigan University!

A comprehensive major or minor program preparing students for a career in the graphic communications industry

Check out our scholarship opportunities here!


**Was this brochure helpful?**  
Go to [surveymonkey.com/r/5tr8ysm](http://surveymonkey.com/r/5tr8ysm) to tell us what you think. You could win a \$50 Amazon giftcard!

A-217 Floyd Hall  
4601 Campus Drive  
Kalamazoo, MI 49008-5462

Appendix B. Email Brochure Design

# Discover Graphic and Printing Science


Department of Chemical and Paper Engineering  
College of Engineering and Applied Sciences



**A comprehensive major or minor program preparing students for a career in the graphic communications industry**

### Scholarships

Thousands of scholarship dollars are offered to Graphic and Printing Science students each year, both from the department and through industry sponsors.



Check out our scholarship opportunities here!

[wmich.edu/chemical-paper/graphicprintsscholarship](http://wmich.edu/chemical-paper/graphicprintsscholarship)

### Careers

Students studying GPS can find jobs as:

- Account Executives
- Color Management Specialists
- Corporate Purchasers
- Creative Directors
- Customer Service Representatives
- Graphic Designers
- Plant Managers
- Packaging Engineers
- Production Supervisors
- Publishers
- Sales Representatives
- Research Engineers
- Web Designers

and many more!

### Quick Facts

- Starting salaries of \$45,000-\$60,000
- Close to 100% job placement
- Paid internships available in Chicago, New York City, Saint Louis, & more!

### Contact us for more information!

Advisor: Katie Fox  
269-276-3270  
katherine.fox@wmich.edu  
E-102 Floyd Hall, Mail Stop 5317

**Was this brochure helpful?** Go to [surveymonkey.com/r/5tr8ysm](https://surveymonkey.com/r/5tr8ysm) to tell us what you think. You could win a \$50 Amazon giftcard!



# THE COMPARISON OF EFFECTIVENESS BETWEEN PRINT AND ELECTRONIC MEDIA

## Appendix C. Potential Student Survey

- 1. Do you prefer to be contacted through print or electronic media from potential schools?**
  - Print (mailed brochures, booklets, etc.)
  - Electronic Media (ads, e-mails, etc.)
  - Neutral
- 2. In general, do you think print or digital media is more effective?**
  - Definitely Print
  - Probably Print
  - Neutral
  - Probably Digital
  - Definitely Digital
- 3. Did you think the WMU advertisement was more visually appealing in print or in e-mail?**
  - Definitely Print
  - Probably Print
  - Neutral
  - Probably Digital
  - Definitely Digital
- 4. Do you feel quick-response (QR) codes or personalization affect a brochure positively?**
  - Strongly Agree
  - Agree
  - Somewhat Agree
  - Somewhat Disagree
  - Disagree
  - Strongly Disagree

# THE COMPARISON OF EFFECTIVENESS BETWEEN PRINT AND ELECTRONIC MEDIA

## Appendix D. Current Student Survey

- 1. The advertisements I received from WMU affected my decision to go here**
  - Strongly Agree
  - Agree
  - Somewhat Agree
  - Somewhat Disagree
  - Disagree
  - Strongly Disagree
- 2. I was most affected by the following communications from WMU**
  - Print (mailed brochures, booklets, etc.)
  - Electronic Media (ads, e-mails, etc.)
- 3. In general, do you think print or digital media is more effective?**
  - Definitely Print
  - Probably Print
  - Neutral
  - Probably Digital
  - Definitely Digital
- 4. Did you think the WMU advertisement was more visually appealing in print or in e-mail?**
  - Definitely Print
  - Probably Print
  - Neutral
  - Probably Digital
  - Definitely Digital
- 5. Do you feel quick-response (QR) codes or personalization affect a brochure positively?**
  - Strongly Agree
  - Agree
  - Somewhat Agree
  - Somewhat Disagree
  - Disagree
  - Strongly Disagree
- 6. Are you going to graduate school?**
  - Yes
  - No
- 7. Through which medium do graduate schools best promote to you?**
  - Print (mailed brochures, booklets, etc.)
  - Electronic Media (ads, e-mails, etc.)

# THE COMPARISON OF EFFECTIVENESS BETWEEN PRINT AND ELECTRONIC MEDIA

## Appendix E. HSIRB Decision- Approval Not Needed

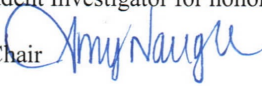
WESTERN MICHIGAN UNIVERSITY



Human Subjects Institutional Review Board

Date: January 13, 2016

To: Lois Lemon, Principal Investigator  
Katherine Dayton, Student Investigator for honors thesis

From: Amy Naugle, Ph.D., Chair 

Re: Approval not needed for HSIRB Project Number 16-01-11

This letter will serve as confirmation that your project titled “The Comparison of Effectiveness between Print Media and Electronic Media in terms of Promotion and Recruitment” has been reviewed by the Human Subjects Institutional Review Board (HSIRB). Based on that review, the HSIRB has determined that approval is not required for you to conduct this project because you are conducting marketing research and not collecting personal identifiable (private) information about an individual.

Thank you for your concerns about protecting the rights and welfare of human subjects.

A copy of your protocol and a copy of this letter will be maintained in the HSIRB files.

1903 W. Michigan Ave., Kalamazoo, MI 49008-5456  
PHONE: (269) 387-8293 FAX: (269) 387-8276  
CAMPUS SITE: 251 W. Walwood Hall