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A study of college student attitudes and behaviors related to recycling

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A STUDY OF COLLEGE STUDENT ATTITUDES AND BEHAVIORS RELATED TO RECYCLING

An Abstract of a Dissertation

Submitted

in Partial Fulfillment

of the Requirements for the Degree

Doctor of Industrial Technology

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ABSTRACT

There is an abundance of research on environmental attitudes and recycling; specifically however college students are very under represented. This population is one that is very important as these individuals will be the ones making decisions, privately and politically, with regards to recycling programs in their communities. By understanding their attitudes and behaviors in college, those designing recycling programs can develop and modify programs to suit their needs, and education programs can be prepared to better inform these individuals.

The purpose of this study was to study the attitudes and behaviors of college students related to recycling. To accomplish this, students from three Midwestern United States post-secondary institutions (a two year public community college, a four year private college and a four year public university) were administered an online survey using Surveymonkey.com. The survey was made available to all students at the three institutions for a period of 4 weeks with multiple participation reminders. At the conclusion of the four weeks the data were tabulated and evaluated to address the principal question of what are the attitudes and behaviors of college students relative to recycling as well as to make comparisons between institutions and categories within the institutions.

With a population of over 19,000 the 626 responses is impressive, but introduces challenges to statistical analysis. Due to the very low response rate there were not statistically significant results. However, Minitab statistical software was used in limited scope to examine the relationship between gender and questions about influence of

participation or lack thereof in recycling, only one of which showed a small but significant connection. The rest of the data does give a picture of college student attitudes which overall are positive.

This study is an excellent starting point for future studies of college student attitudes about recycling. It provides a framework on which more in depth examinations of factors influencing positive behaviors and attitudes can build.

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DEDICATION

This dissertation is dedicated to all of my students; past, present, and future (including my son Emmett).

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I first need to acknowledge my loving wife who continually encouraged me to complete my dissertation. I also need to recognize my parents who instilled in me a love of education and nurtured my thirst for knowledge.

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TABLE OF CONTENTS

PAGE

LIST OF TABLES viii

CHAPTER 1. INTRODUCTION 1

Statement of Purpose 1

Statement of Need 1

Overview of Institutions 1

Hawkeye Community College (HCC) 2

Demographics 2

Recycling program 2

University of Northern Iowa (UNI) 3

Demographics 3

Recycling program 3

Other pertinent environmental programs 4

Wartburg College 5

Demographics 5

Recycling program 5

Sustainability program 6

Research Questions 6

Overview of the Survey 7

Assumptions 8

Limitations 8

Data Analysis 9

Definitions 9

CHAPTER 2. REVIEW OF LITERATURE 11

Introduction 11

Recycling Studies 11

Recycling Behavior Studies 13

Recycling Attitude Studies 19

Other Related Studies 28

Summary 33

CHAPTER 3. METHODOLOGY 36

Introduction 36

Research Questions 36

Population Selection 37

Survey Design 37

Pilot Study 39

Data Collection Process 39

Methods of Analysis 40

CHAPTER 4. DATA PRESENTATION AND INTERPRETATION 41

Introduction 41

Wartburg College 41

Response Rate 41

Demographics 41

Research Question Data 46
Recycling habits 46
Recycling attitudes 48
Wartburg Summary Comments 55
University of Northern Iowa 55
Response Rate 55
Demographics 55
Research Question Data 60
Recycling habits 60
Recycling attitudes 62
UNI Summary Comments 71
Hawkeye Community College 72
Response Rate 72
Demographics 72
Research Question Data 77
Recycling habits 78
Recycling attitudes 79
HCC Summary Comments 88
Entire Population Data 89
Response Rate 89
Demographics 89
Research Question Data 94

Recycling habits....94

Recycling attitudes....96

CHAPTER 5. SUMMARY OF FINDINGS, RECOMMENDATIONS AND CONCLUSIONS....104

Introduction....104

Findings and Discussion....104

Recommendations....108

Institutional....108

Future Research....108

Conclusions....110

REFERENCES....112

APPENDIX A: LETTERS....115

APPENDIX B: SURVEY....117

APPENDIX C: WARTBURG EXPANDED RESPONSES....124

APPENDIX D: UNI EXPANDED RESPONSES....125

APPENDIX E: HCC EXPANDED RESPONSES....138

APPENDIX F: MINITAB RESULTS....157

APPENDIX G: WARTBURG FULL SURVEY RESULTS....159

APPENDIX H: UNI FULL SURVEY RESULTS....185

APPENDIX I: HCC FULL SURVEY RESULTS....216

APPENDIX J: FULL SURVEY RESULTS....250

LIST OF TABLES

TABLE PAGE

1 Gender Distribution of Wartburg Respondents 42

2 Age Distribution of Wartburg Respondents 42

3 Ethnicity Distribution of Wartburg Respondents 43

4 Major Distribution of Wartburg Respondents 44

5 Classification of Wartburg Respondents 44

6 Wartburg Respondents Number of Years in College 45

7 Approximate Family Income of Wartburg Respondents 46

8 Curbside Recycling Rate for Wartburg Respondents 47

9 Wartburg Respondent Commodities Recycled Regularly 47

10 Wartburg Respondent Rate of Redemption 48

11 On-Campus Wartburg Respondent Recycling Habits 48

12 Off-Campus Wartburg Respondent Recycling Habits 49

13 Wartburg Respondent Ranking of Reasons for Recycling 50

14 Potential Changes in Redemption Habits Due to Higher Redemption of Wartburg Respondents 51

15 Distribution of Responses to What Respondents Learned in School Being Most Influential on Recycling Participation or Lack Thereof of Wartburg Respondents 52

16 Distribution of Responses to Respondents Family Being Most Influential on Recycling Participation or Lack Thereof of Wartburg Respondents 52

17 Distribution of Responses to Respondents Peers Being Most Influential on Recycling Participation or Lack Thereof of Wartburg Respondents 53

18 Wartburg Respondents Level of Concern with the Current State of the Environment 53

19 Approximate Number of Classes Where Recycling Was a Topic 54

20 Approximate Number of Outside Class Recycling Learning Opportunities 54

21 Gender Distribution of UNI Respondents....56

22 Age Distribution of UNI Respondents....57

23 Ethnicity Distribution of UNI Respondents....57

24 Major Distribution of UNI Respondents....58

25 Classification of UNI Respondents....59

26 UNI Respondents Number of Years in College....59

27 Approximate Family Income of UNI Respondents 60

28 Curbside Recycling Rate for UNI Respondents 61

29 UNI Respondent Commodities Recycled Regularly 62

30 UNI Respondent Rate of Redemption 62

31 UNI Respondents Willingness to Pay a Small Fee for Curbside Recycling....63

32 On-Campus UNI Respondent Recycling Habits....63

33 Off-Campus UNI Respondent Recycling Habits....64

34 UNI Respondent Reasons for Not Recycling 64

35 UNI Respondent Ranking of Reasons for Recycling 65

36 UNI Respondent Reasons for Not Using On-Campus Recycling 66

37 Potential Changes in Redemption Habits Due to Higher Redemption of UNI Respondents 67

38 Distribution of Responses to What Respondents Learned in School Being Most Influential on Recycling Participation or Lack Thereof of UNI Respondents....68

39 Distribution of Responses to Respondents Family Being Most Influential on Recycling Participation or Lack Thereof of UNI Respondents....68

40 Distribution of Responses to Respondents Peers Being Most Influential on Recycling Participation or Lack Thereof of UNI Respondents....69

41 UNI Respondents Level of Concern with the Current State of the Environment....69

42 Approximate Number of Classes Where Recycling Was a Topic....70

43 Approximate Number of Outside Class Recycling Learning Opportunities....71

44 Gender Distribution of HCC Respondents....72

45 Age Distribution of HCC Respondents....73

46 Ethnicity Distribution of HCC Respondents....74

47 Major Distribution of HCC Respondents....75

48 Classification of HCC Respondents....75

49 HCC Respondents Number of Years in College....76

50 Approximate Family Income of HCC Respondents....77

51 Curbside Recycling Rate for HCC Respondents....78

52 HCC Respondent Commodities Recycled Regularly....79

53 HCC Respondent Rate of Redemption....79

54 HCC Respondents Willingness to Pay a Small Fee for Curbside Recycling....80

55 On-Campus HCC Respondent Recycling Habits....80

56 Off-Campus HCC Respondent Recycling Habits....81

57 HCC Respondent Reasons for Not Recycling 82

58 HCC Respondent Reasons for Not Using On-Campus Recycling 83

59 HCC Respondent Ranking of Reasons for Recycling 84

60 Potential Changes in Redemption Habits Due to Higher Redemption of CC Respondents 84

61 Distribution of Responses to What Respondents Learned in School Being Most Influential on Recycling Participation or Lack Thereof of HCC Respondents 85

62 Distribution of Responses to Respondents Family Being Most Influential on Recycling Participation or Lack Thereof of CC Respondents 86

63 Distribution of Responses to Respondents Peers Being Most Influential on Recycling Participation or Lack Thereof of HCC Respondents 86

64 HCC Respondents Level of Concern with the Current State of the Environment 87

65 Approximate Number of Classes Where Recycling Was a Topic 87

66 Approximate Number of Outside Class Recycling Learning Opportunities 88

67 Gender Distribution of Respondents 89

68 Age Distribution of Respondents 90

69 Ethnicity Distribution of Respondents 91

70 Major Distribution of Respondents 92

71 Classification of Respondents 92

72 UNI Respondents Number of Years in College 93

73 Approximate Family Income 94

74 Curbside Recycling Rate 95

75 Respondent Commodities Recycled Regularly 95

76 Respondent Rate of Redemption 96

77 Respondents Willingness to Pay a Small Fee for Curbside Recycling.....96

78 On-Campus UNI Respondent Recycling Habits.....97

79 Off-Campus UNI Respondent Recycling Habits.....97

80 UNI Respondent Reasons for Not Recycling 98

81 UNI Respondent Reasons for Not Using On-Campus Recycling 98

82 UNI Respondent Ranking of Reasons for Recycling 99

83 Potential Changes in Redemption Habits Due to Higher Redemption.....100

84 Distribution of Responses to What Respondents Learned in School Being Most Influential on Recycling Participation or Lack Thereof..101

85 Distribution of Responses to Respondents Family Being Most Influential on Recycling Participation or Lack Thereof 101

86 Distribution of Responses to Respondents Peers Being Most Influential on Recycling Participation or Lack Thereof 102

87 Respondents Level of Concern with the Current State of the Environment.....102

88 Approximate Number of Classes Where Recycling Was a Topic.....103

89 Approximate Number of Outside Class Recycling Learning Opportunities 103

CHAPTER 1

INTRODUCTION

Statement of Purpose

The purpose of this study was to assess the attitudes and behaviors regarding recycling of Midwestern United States post-secondary students, specifically those students at a two year community college, a four year public university, and a four year private college. This study was completed with the use of an online survey delivered to the students at each of the three institutions.

Statement of Need

There is an abundance of research on environmental attitudes, including recycling specifically. However, as pointed out by Robertson and Walkington (2009), college students are an often over-looked population. This is somewhat disconcerting as this future generation will be facing many environmental issues directly related to recycling; including but not limited to: resource depletion, energy conservation, and resource recovery.

Overview of Institutions

Three particular institutions were chosen for multiple reasons. The first reason is the proximity of the three institutions to the researcher. The second is the diverse population make-up. These institutions have students from all across the nation and around the world. The third reason for choosing these institutions is their particular focus on environmental responsibility, which is evidenced by their recycling programs.

Hawkeye Community College (HCC)

Demographics. This institution is a two year public community college with 5,942 students enrolled as of the fall 2012 semester (Records & Registration Department, 2012). This population is 43% male and 57% female, and 56% of the population is classified as full-time students and 44% as part-time students. Approximately 56% of the students are enrolled in Transfer Programs, which will enable them to transfer to a four year college or university program. The remaining 44% of the student population is enrolled in Pre-Technical or Technical programs such as Automotive Technology, Truck Driving, CNC Machining and Tool Tech, etc. (Records & Registration Department, 2012).

Recycling program. HCC provides office paper and cardboard recycling in all campus buildings. According to Lindsey Nissen (personal communication, January 22, 2013) there is a co-mingled recycling program in the Brock Student Center for the collection of recyclables which includes the following:

- Office Paper
- Plastic Coffee Containers
- Margarine and Yogurt containers
- Milk Cartons
- Juice Boxes
- Aluminum Cans
- Metal Cans
- Glass – Brown, Green, Clear (no window glass or ceramics)
- Newspapers and Inserts/Magazines and Catalogs
- Telephone Books
- Post-It Notes
- Junk Mail (unopened OK)
- Paperback Books
- Soft Cover Manuals
- Hard Cover Books
- File Folders
- White/Pastel Packing Paper (NO tissue paper)
- White Boxboard or Card Stock
- Soft Drink or Beer Cartons

- Cereal Boxes – remove inner packaging
- Paper Bags or Other Brown Paper
- Gray Paperboard, Boxboard, Egg Cartons
- Dark-Colored Accordion Files
- Plastic Bottles and Containers (#1 - #7)
- Plastic Lids and Tubs (#1 - #7)
- Plastic Water and Soda Bottles
- Envelopes

University of Northern Iowa (UNI)

Demographics. This institution is a four year public university with 12,273 students enrolled as of the fall 2012 semester (UNI Office of Institutional Research, 2012). Of these 12,273 students, 10,655 are undergraduate students and 1,618 are graduate students. This population is 43% male and 58% female and 87% of the students are classified as Full-time students. 48% of the student population lives in on campus housing. (UNI Office of Institutional Research, 2012).

Recycling program. The University's recycling program is quite diverse. The Department of Residence provides locations in all of the residential buildings on campus for students to recycling paper, plastics, cardboard and metals. Campus wide there are printer cartridge recycling containers as well as containers for the collection of plastic and aluminum beverage containers (UNI Facilities Services, 2012). Throughout all academic buildings there are paper recycling receptacles at most work stations and in classrooms resulting in the recycling of approximately 250,000-350,000 pounds of paper annually (UNI Facilities Services, 2012).

In 2011 UNI, in partnership with the City of Cedar Falls, recycled:

157.55 tons of paper (including 10+ tons of office paper)

115.08 tons of cardboard

50.78 tons of plastics

23.31 tons of glass

13.77 tons of tin

3.27 tons of plastic bags (UNI Facilities Services, 2012).

Other pertinent environmental programs. UNI is home to two very interesting environmental programs, the Iowa Waste Reduction Center (IWRC) and the Recycling and Reuse Technology Transfer Center (RRTTC). The IWRC was created in 1988 with the mission of providing area small businesses with free, non-regulatory environmental assistance (IWRC, 2013). In addition the IWRC is helping Iowa small businesses to show "a commendable respect for the environment and concern for the possible effects of the waste they generate" (IWRC, 2013).

"The Recycling and Reuse Technology Transfer Center (RRTTC) is an interdisciplinary research, education and outreach center serving Regent university researchers and students, Iowa citizens, business, and industry" (RRTTC, 2013a). The RRTTC was the driving force behind the Department of Residence recycling program beginning with the Rider Recycling Revolution (RRR) in Rider Hall in August 2009. Prior to the institution of this project, the residents of Rider Hall recycled an average of 40 pounds of material per week (RRTTC, 2013b). After the institution of this program residents recycled an average of 121 pounds of material per week (RRTTC, 2013b). The success of this program resulted in the Department of Residence installing recycling containers in the rest of the residence halls.

Wartburg College

Demographics. This institution is a four year private college with 1,747 students enrolled as of the fall 2012 semester (Wartburg College, 2012a). This population is 47% male and 53% female with 79% Full-time on campus students.

Recycling program. Wartburg's recycling program is a part of the college's much larger Sustainability Program. Next to each Residence Hall and in every academic building are recycling stations where recyclables can be deposited (Wartburg, 2012b). The following is a list of the materials that Wartburg recycles with the aid of the City of Waverly and City Carton Corporation (Wartburg, 2012b):

- White paper
- Colored paper
- Magazines
- Glossy paper
- Newspaper
- Cardboard
- Plastics (#1-7)
- Glass (clear)
- Tin cans
- Aluminum
- Redemption (Pop/alcohol bottles and cans)

City Carton Corporation is an Iowa based private recycling commodities company with a 45 year history.

Sustainability program. Wartburg College held sustainability forums over two days in October 2012 (Wartburg, 2012c). The purpose of these forums was to assess the progress of the sustainability initiative which began in 2007 (Wartburg, 2012b). Participants in the forums identified the topic of sustainability being addressed primarily in science courses, but also recognized sustainability in the action of classes going paperless.

It is obvious from the above discussion of the programs found at each of the three institutions, that environmental sustainability and recycling in particular are very important to the overall environment of the institution. It is also plainly clear that despite the importance these institutions are placing on recycling, there is still a need to assess the student attitudes regarding recycling.

Research Questions

The principal question of concern is; what are college student attitudes and behaviors related to recycling? The three distinct populations offer the opportunity to answer several other questions:

1. Is there a difference in the attitudes between the students of each institution?
    a. Why may that be?
2. Are there differences in attitudes across age ranges?
3. Are there differences between classification ranges?
4. Are there any differences in attitudes of students across 13 different majors at each institution?
5. Are there differences in attitudes in comparable majors across institutions?

6. What are the recycling habits of college students?

As stated earlier each of the three institutions has some form of recycling program in place, ranging from simple drop off containers for cans, bottles and papers to full spectrum recycling opportunities. The answers to the above questions, in addition to expanding the research base, will prove to be very valuable for the review and improvement of the institutions' recycling programs.

Overview of the Survey

The survey instrument consists of 16 topical and five demographic questions. The topical questions are a mixture of multiple-choice and Likert scale formats. The multiple choice questions focus on specific subjects such as recycling habits, living on-campus vs. off campus, and beliefs about recycling. Factors affecting respondents recycling participation or lack thereof are addressed using the Likert scale format. Demographic information is being collected for comparisons between institutions and within institutions.

Each of the student populations was contacted with a web link to the survey, the HCC were contacted directly with an email invitation, and the Wartburg students received their invitation through their weekly e-newsletter. Contacting the UNI students required providing the email invitation to all of the deans and department heads, requesting that they in turn pass on the invitation to their respective students. Two reminder notices were sent over the course of the study.

Assumptions

This study is being undertaken in view of the following assumptions:

1. All questions are answered objectively and truthfully.
2. The survey questionnaire has been adequately designed to elicit the responses necessary for research data analysis.
3. The survey and procedures for statistical analysis are adequate for measuring any perceived significance.
4. The data obtained from this research can be generalized to include student populations in similar higher education institutions, at least in the Midwest United States.

Limitations

This study is being undertaken in view of the following limitations:

1. The study depends upon self-reported information and subjective opinion.
2. The study is being limited to students at the three specific institutions.
3. The survey is to be administered within the first half of the fall 2013 semester and some students may not yet be aware of the recycling opportunities available to them.
4. Current year demographic data is not available at the time of this survey.
5. Data collected is limited to only willing participants.
6. Not all responses may be complete.
7. Directly emailing the students at Wartburg and UNI was not possible.

8. Not every student may have received an invitation.

Data Analysis

The techniques of data analysis to be applied include but are not limited to descriptive statistics, chi-squared, and Cramer's V where applicable.

Definitions

The following definitions are being provided to clarify their use in the context of this research study.

2-MEV: European developed Environmental Scale questionnaire used to measure the attitudes of adolescents and gauge the effectiveness of educational programs (Johnson & Manoli, 2011).

Recycling: the process of collecting materials (usually considered waste) for sorting and further processing making the material suitable for reuse.

Co-Mingled Recycling: recycling process by which all recycleable materials are collected in one container and transported to a sorting facility.

Source Separated Recycling: the recycling process where the materials are separated into multiple containers by categories (paper, cardboard, glass, plastics, metals) prior to collection.

Curbside Recycling: collection of recyclable materials at the curb of a home or residential unit similar to the collection of garbage and trash.

Drop-off Recycling: a program by which participants take materials to a specific location and sort materials into large labeled containers.

Community College: State government supported educational institution offering technical and/or two year associate degree programs.

Public University: State government supported educational institution that offers four year undergraduate/baccalaureate and advanced graduate degrees.

Private College: a four year educational institution that offers undergraduate/baccalaureate degrees supported by private funding rather than government funds.

Redemption Law: piece of legislation that requires a monetary deposit on certain beverage containers ranging from five to ten cents. (Also known as Bottle Bill and/or Deposit Law).

Residence Hall: student living quarters, also commonly called dorms or dormitories.

CHAPTER 2

REVIEW OF LITERATURE

Introduction

Research regarding environmental attitudes as well as recycling is relatively abundant in the current catalog of literature. It is, however, clear after a review of the material available that there is a gap when it comes to research relating to college students, specifically their attitudes towards recycling. Environmental attitudes and behaviors tend to be the focus of most researchers, and these studies focus on general populations with only a small number looking at the college student demographic.

Recycling Studies

Allen Gerlat (2012 a) examines a program in rural New York state that sought to bring recycling and composting to residents of mobile home communities. The program in Tompkins County New York set out to reach those residents in areas where recycling programs do not have the support found in the traditional residential neighborhood.

Kat McCarthy, waste reduction and recycling specialist with Tompkins County Solid Waste, and Chip Ray, president of Jim Ray Homes the owner of two of the pilot locations for the program, "agrees that the biggest challenge with the composting and recycling program has been educating the residents" (Gerlat, 2012a). The provision of free recycling bins to residents; as well as showing residents how they will save money by participating in the recycling program, have been key factors in the program's success. Ray also says of the program, "We wanted to make it as easy as possible so they'd use it" (Gerlat, 2012a, p. 28). The program revolves around what McCarthy calls 'the Four C's';

comfort, cleanliness, making a contribution and convenience. It is also pointed out by Gerlat that the use of tenant liaison at each site has been a positive reinforcement to participation. Residents feel that "It's nice to have a fellow resident that you can talk to. They might feel more comfortable complaining to that person or they understand where the person's coming from." (Gerlat, 2012a, p. 28). The success at the first two locations has been so encouraging that Tompkins County is looking to add several new locations.

Chaz Miller (2012) explains how much of the recycling data available today comes from 40 years of privately owned proprietary database information about the amounts of waste individuals in the United States generate, recycle and throw away. This data, which the EPA relies on, is based largely on estimates and a bit of hard data. "Almost half of the waste stream is estimated while the rest is based on yearly production and import-export data that is reported to the federal government" (Miller, 2012, p. 20). The alternative to the data the EPA uses comes from compilations of individual state recycling and waste disposal data. This second method consistently shows that Americans are generating a much higher amount of garbage with lower rates of recycling when compared to the former data set. The primary reason for this Miller says is that each state has its own definition of Municipal Solid Waste. This is also evident by the fact that neighboring states will have much different waste generation rates. "State data says that North Dakotans generate one third more waste per person than South Dakotans" (Miller, 2012, p. 20).

Miller points out that one of the constant statements heard at recycling conferences is "we need better data so we can plan better" (2012, p. 20). However, no

one has developed a uniform method of data collection or a means of assessing accuracy. The researcher believes that this article underlines the need for further recycling data research.

Recycling Behavior Studies

Robertson and Wallington (2009), in response to the decreasing landfill capacity in much of Europe and changing landfill regulations in the United Kingdom in particular, set out to examine the recycling behaviors of the transient student population in Oxford England. They point out that much of the recycling behavior research is centered on fixed populations and largely ignores the university demographic. "As a large but transient group, who contribute significantly in population terms to urban areas… the environmental attitudes and behaviors of university students need to be investigated further in order to understand how to maximize the success of recycling and waste minimization schemes" (Robertson & Wallington, 2009, p. 286).

An examination of the population of Oxford shows that students at the university make up to 26% of the total. Robertson and Wallington (2009) report average household recycling rate in England is 26.7% and the average rate in Oxford is much lower at 19.35%. The purpose of their study was to "outline the reported levels of recycling and waste minimization for this group," meaning the transient student population (Robertson & Wallington, 2009, p. 287).

The researchers developed an online survey that was distributed to the entire student body of Oxford's two universities. The survey link along with a brief explanation of the purpose was emailed to all the students with a 2 week period for responses. The

response rate was 5% which the researchers call poor and attribute to a lack of interest in the population. This low response rate did represent a significant number of students and, to date this "study is the largest known student survey on this issue" (Robertson & Wallington, 2009, p. 289).

The overall statistical analysis of their data, set out to determine what extent situational, demographic and psychological factors impacted the reported level of recycling and willingness to minimize waste. Their findings point to an increased willingness to reduce waste by females; there is no significant difference in willingness to minimize or recycling rate across education level (undergraduate, masters, PhD). The study also indicates that those students who reported higher recycling levels tend to be ones that are more willing to reduce the waste they generate.

Robertson and Wallington (2009) examined the living situations of students (halls of residence, shared houses and private/rental residences) and recycling levels. Students who lived in private or rental residences had higher reported recycling rates. Robertson and Wallington (2009) state that this is likely related to the easier accessibility of recycling and waste minimization programs off campus. Situational factors such as living arrangement, provision of recycling box, and awareness of the social norm to recycle are the influential factors on recycling behaviors of this population (Robertson & Wallington, 2009).

The researchers recommend further studies of the transient student population as a useful means of increasing recycling rates. The data gathered by such studies are "significant for local authorities that wish to implement recycling schemes and run

promotional campaigns for waste minimization as they provide information on relevant motivators that can lead to greater participation" (Robertson & Wallington, 2009, p. 286).

Carol Werner and Eeva Makela (1998) suggested that recycling researchers need to pay attention to attitudes towards recycling and the processes involved in recycling. Their research centered around several generalized ideas.

1. People will tend to discontinue tasks that are not inherently rewarding or pleasurable unless there is some other reason to continue with the task, and that this idea holds true for recycling.
2. If a task, such as recycling, is made more enjoyable or rewarding, participation will increase.
3. "…that for people to recycling on a regular basis they must hold positive recycling attitudes (reasons to persist) *and* they must have positive phenomenal experiences associated with recycling, whether these occur during recycling or as they reflect on their recycling behaviors" (Werner & Makela, 1998, p. 374).
4. If a task is not an inherently positive experience, people who have other reasons to continue with the task will then psychologically change the task to make it a positive experience.
5. Social pressures are a contributing influence on continuing recycling behaviors.

Werner and Makela (1998) undertook a study of 300 homes in a neighborhood in Salt Lake City, Utah. This neighborhood had a positive history of recycling behavior prior to the institution of a no cost curbside recycling program. The researchers set out to evaluate methods for improving the recycling rate. To achieve this goal, the researchers

used a series of questionnaires, separated by two years. The research was somewhat hampered by the closing of the business that provided the no cost curbside recycling service.

They determined that of the demographic variables they examined there was no significant association with recycling behavior or attitudes. However when looking at the question of "was anything interesting or fun in recycling," (Werner & Makela, 1998, p. 377), more than half of the people who participated in the study responded negatively; indicating to the researchers that recycling is routine and even boring or unpleasant (Werner & Makela, 1998). Respondents also indicated that recycling is too time consuming and messy and cited a lack of space and lack of convenience as problems with recycling.

This study looked at one small neighborhood in a relatively up and coming area of the City of Salt Lake. The authors suggest that this study would be a good model for other such studies and indicated a need for comparative studies in other diverse locations.

In their study of the effects of behavior and attitude on drop-off recycling, Sidique, Lupi and Joshi (2010) state that even though drop off recycling has been implemented across the state there is very little research related to it. "Research on curbside recycling and variable garbage pricing is more popular in the field of recycling and waste management" (Sidique et al., 2010, p. 163). To attempt to expand this area of research the authors set out to empirically test the following six hypotheses:

1. Longer distance to recycling sites from home reduces the number of recycling visits.

2. Increase in the number of different types of recyclables brought to a site increases the number of site visits.

3. Higher time required to sort recyclables reduces the number of site visits.

4. Access to curbside recycling reduces the number of site visits.

5. Demographic factors such as age, gender, marital status, education and employment status influences the number of site visits.

6. Affiliation with an environmental organization increases the number of site visits (Sidique et al., 2010).

The researchers developed a survey consisting of 18 Likert-scale items with the surveys being administered as face to face interviews at the drop-off sites around the Lansing area of Michigan. The surveys were conducted at each site, four times over a four-week period. In total 527 recyclers were approached at 356 interviews were completed for a very respectable 68% response rate.

Sidique et al. developed an analytical model to statistically examine the effect of demographics, environmental affiliation and attitude and knowledge variables, derived from the survey, on the number of trips taken to the drop-off site. The model was based on a Poisson regression since the dependent variable (number of trips) is a count variable that can only have discrete values. The results of the analysis indicate "that socioeconomic variables such as household size and income, which are likely highly correlated with household consumption (and hence waste generation), are good predictors of recycling behavior" (Sidique et al., 2010, p. 169). The study concludes that beliefs

about convenience of and familiarity with recycling as well as social pressure can be considered significant when it comes to driving recycling (Sidique et al., 2010).

Hansmann, Bernasconi, Smieszek, Loukopoulos, and Scholz (2006), explored justifications and self-organization as determinants of recycling behavior, but they looked only at recycling of used batteries. The authors point out that landfilling of waste is about more than disposal, it's about the loss of energy, resources and deterioration of the landscape (Hansmann et al., 2006). Their research points to a need for further studies. Hansmann et al. (2006) points out that despite all of the research attempting to identify socio-demographic factors related with participation in recycling programs, especially gender, age and income, the findings have been inconsistent. This study, though very limited in nature, to the recycling of one commodity, resulted in a psychological and behavioral model that indicates that recycling behavior is partially influenced by the self-organization of a household, at least with respect to one commodity recycling.

Dr. Brian Stanley, president of the Environmental Research and Education Foundation, wrote that "human behavior was one of the most important and also the most poorly understood, elements of recycling" (Stanley, 2012, p. 18). He addressed research that suggests that when the option to recycle is available, human behavior will result in increased consumption rather than the opposite. Dr. Stanley points out that one study showed this behavioral observation may only apply to no cost recycling situations. Dr. Stanley concludes by stating "more research is needed when it comes to human behavior in relation to recycling which will yield enhanced waste reduction and recycling strategies" (Stanley, 2012, p. 18).

Recycling Attitude Studies

Best and Kneip (2011) examined the impact of attitudes and behavioral costs on environmental behavior, specifically household waste recycling. They undertook this study to contribute to the state of research because recycling is important because of the great potential for energy and resource conservation, as well as reducing the amount of waste to be land-filled or incinerated (Best & Kneip, 2011). The authors set out to answer the question of how the implementation of a new recycling method may lead to changes in recycling rates, by surveying residents in Cologne, Germany.

Best and Kneip (2011) developed the following three hypotheses as the basis of their study.

1. The type of recycling scheme and environmental concern have additive effects on the likelihood of participation in recycling (rational choice hypothesis).
2. The effect of environmental concern should be stronger when a curbside scheme is installed (low-cost hypothesis).
3. The recycling scheme does not play a major role for persons with very strong environmental concern, but becomes more and more relevant when attitudes are weaker (dual-process hypothesis).

The survey was delivered via post to 4482 citizens randomly selected and evenly distributed over three districts in Cologne, in two waves. The first wave resulted in an 64% response rate and the second an impressive 83%, resulting in 1882 participants providing useful data in both waves (Best & Kneip, 2011). Their results support hypothesis 1, “that the implementation of a curbside scheme lowers behavioral cost and

increases the participation in recycling activities (rational choice hypothesis)" (Best & Kneip, 2011, p. 925). Based on the results of their statistical analysis of the survey responses both hypothesis 2 and 3 have to be rejected due to the statistical lack of significance (Best & Kneip, 2011).

Gareth Morton in his article *Rethinking attitudes towards rubbish* (2003) explains the significance of the Rethinking Rubbish program in the United Kingdom. "Waste, or rubbish, as the public prefers to call its individual contributions towards the 28 million tonnes of municipal waste produced each year, is a growing problem" (Morton, 2003, p. 12). Public awareness is a very important and often overlooked factor in the drive towards sustainability in the field of waste management (Morton, 2003). The Rethinking Rubbish program was carefully developed to raise public awareness. The program was launched in 2002 and met with almost immediate success. Surveys of the public showed that waste awareness rose 4% and the awareness for recycling, waste and litter rose more than 8% (Morton, 2003). The program lead to an 8% increase in the number of people who say "they 'try to take active environmental steps… but could probably do more'" (Morton, 2003, p. 12). Morton (2003) states that one of the programs goals is to strengthen and extend its partnerships and to reach more people with its universal appeal and identity.

Bolaane (2006) states that "public participation is considered the touchstone for the success of recycling schemes" (p.731). He points out that education about recycling tends to be the main driver for increasing participation but increased awareness of recycling alone may not increase participation. Some other factors that were found to

contribute to limited participation included limited direct economic incentives and absence of 'visible' recycling centers (Bolaane, 2006). Bolaane's study follows the case study format and was thus limited by design with regards to the ability to make generalizations from the results. He surveyed 284 households in Gaborone, Botswana, ranging across household incomes from low to high. In addition three senior waste management department officials were interviewed and the transcripts of the interviews were coded to the categories of the investigation.

The senior officials saw recycling as a means of reducing the quantity of waste to be disposed of but cited shortages of manpower and transport as the key reasons recycling was not more abundant. The officials also expressed a need for more publicity of recycling to increase the success of source separated recycling schemes (Bolaane, 2006).

Of the residents that responded to the survey 97.1% stated they were aware of recycling and of that 97.1% only 47% set materials aside for recycling (Bolaane, 2006). Over half (51%) of those that set materials aside, recycled glass bottles due to the deposit fee that they received up on returning them. This study once again supports the idea that a monetary incentive can greatly improve recycling rates of those commodities but hinder the recycling of those that do not carry a monetary incentive. Bolaane (2006) concludes that "even though municipal officials are aware of the potential benefits of recycling, their general attitudes is not to embrace waste management reforms such as recycling but to maintain the status quo of conventional waste collection and disposal, and leave waste recycling to private sector initiatives" (p. 739).

Knud S. Larsen of Oregon State University conducted one of the few studies of college student attitudes on recycling in 2001. Larsen developed a Likert-type scale to measure student attitudes toward recycling of a population of 452 undergraduate students (2001). The study was conducted in five phases. Phase 1 was administered to 49 male and 51 female undergraduate students and consisted of 81 statements, 40 of these were positive in nature and 41 were negative (Larsen, 2001). Phase 2 focused on attitudes about transportation of nuclear waste and "pro-environmental paradigms" (Larsen, 2001). This phase used the 20-item Attitudes Toward Recycling (ATR) Scale, and the 12-item Pro Environmental Scale developed by Dunlap and Van Liere in 1978, as well as 30 questions about the attitudes of students about nuclear waste transportation (Larsen, 2001). Phase 2 was administered to 50 male and 50 female students. Phase 3 examined recycling attitudes and attitudes about the preservation of river salmon. This phase was administered to 39 male and 41 female students. Phase 4 once again examined recycling attitudes but also looked at attitudes towards prisoner rights, and was administered to 18 male and 62 female students. Phase 5 mixed attitudes about birth control with recycling attitudes, and was administered to 43 male and 35 female students.

Larsen (2001) concludes that the ATR scale shows significant correlations to with other scales measuring environmental issues. Respondents favoring recycling tend to be against the transport of nuclear waste and held other pro-environmental attitudes. "Finally, the relationship between positive attitudes toward recycling, political participation, and prisoner' rights suggest that there is a connectedness between positive environmental attitudes, personal responsibility, and broader social concern" (Larsen, 2001, p. 87).

Iris Vermeir (2009) conducted an experiment to examine the relationship between strength of environmental attitudes and perceived social control. The study focused on the recycling of soda cans. A total of 284 students Ghent University in Belgium participated in the experiment. Students were given a soda and asked to complete a survey about attitudes toward recycling. The students were then asked to read a text on recycling behavior and then complete another survey which included questions indicating "their perceived level of control to engage in recycling behavior" (Vermier, 2009, p. 601). The students were then sent to another room to collect a reward, and on their way out were told to deposit their soda can in one of two containers with no peers around. Each can was coded to match respondent's survey. Approximately 45% (N= 119) of the participants deposited the can in the ordinary trash bin while 55% (N=141) used the recycling bin (Vermier, 2009, p. 601). According to Vermier (2009), social pressure and strength of attitude do influence attitude-behavior consistency. Those students who felt higher social pressure tended to act more on their positive attitudes related to recycling. In addition, students who felt more in control of their choice to recycle or not recycled more when they had stronger attitudes towards recycling. Overall the results of this study point to strong attitudes as a good indicator of behavior.

E. Bun Lee (2008) conducted a study to examine "the environmental attitudes of African American College Students by using the 15-item New Ecological Paradigm (NEP) Scale" (p. 29). In addition Lee attempted to determine everyday environmental behaviors such as recycling. The study was conducted to address the perceived gap in research examining the environmental behaviors and attitudes of minorities in the United

States (Lee, 2008). Lee focused on African American college students because this group has a high likelihood of becoming community leaders and opinion shapers in terms of the environment.

Lee's study looked at 292 African American students in Houston, Texas. The survey included a demographic section that included; "age, gender, major, martial and employment status and current residential type" (Lee, 2008, p. 32). Past research indicated that these demographic variables are important when looking at pro-environmental attitudes. Part two of the survey was focused on the 15-item NEP scale (Lee, 2008). Each of the items was measured on a five point Likert-type scale with a range of 1 (strongly agree) to 5 (strongly disagree). As Lee points out "the revised NEP scale has become the most widely used measure of environmental worldview… a number of studies outside of the United States have use the scale" (Lee, 2008, p. 32). In addition to the NEP portion Lee included 5 items on the self-reported recycling behaviors of participants with regards to "newspapers and magazines, glass bottles and jars, plastic bottles and jugs, cardboard boxes and e-waste" (Lee, 2008, p. 33). Student conservation behaviors were also measured using six items: "electricity conservation, water conservation, use of public transportation, decreased use of paper towels, use of high-efficiency laundry detergents, and carpooling" (Lee, 2008, p. 33).

The study shows that in general these students "took a modest degree of proenvironmental attitudes" (Lee, 2008, p. 40). The students surveyed tended to never or rarely recycle any of the commodities examined; however the conservation related behaviors tended to show significant pro conservation behaviors (Lee, 2008). Lee (2008)

concludes from this study that pro environmental attitudes tended to correlate to higher recycling rates.

"Recycling of household waste has become a very problematic area of British local government policy making in which central government has set ambitious targets" (Barr, Ford, & Gilg, 2003, p. 407). The authors of this study set out to gather quantitative and qualitative data to demonstrate how attitudes can impact recycling by using the survey format. Barr et al. surveyed residents in Exeter, Devon, in the United Kingdom. Only 9% of waste generated in Great Britain is recycled, which is nowhere near the rates of diversion required by the European Union Landfill Directive (Barr et al., 2003).

This research is guided by three contributing factor areas: environmental factors, situational factors, and psychological variables. With regards to environmental factors, "those who hold more ecocentric values (an intrinsic value of environment) tend to be more environmentally conscious" (Barr et al., 2003, p. 412). The situational factors taking into account by the researchers include: access to services, age, gender, education income, as well as knowledge of the environment in general. The psychological variables that were taken into consideration include: individual intrinsic motivation, social pressure, perception of environmental threat, and they believe that their actions can make a difference (Barr et al., 2003).

The Exeter survey involved 985 randomly selected households in the fall of 1999. The survey was delivered door to door and left with the respondent for two to three days then collected. Of the 985 households selected, 673 completed the surveys for a 69% response rate. Useful qualitative data were gathered from the back page of 47% of the

completed surveys. Results of the study indicate that "recycling can be characterized as a well-defined behaviour, structured around a local understating of recycling services, access to a kerbside collection, a positive perception of the convenience of recycling and an awareness and acceptance of recycling as normative behaviour" (Barr et al., 2003, p. 419). By understanding this behavior policy-makers can develop a more focused and detailed recycling policy.

Busteed, Palkhiwala, Roma and Shah conducted a study of recycling attitudes and behaviors of high school students in San Rafael de Heredia, Costa Rica. The high school chosen for this study was Carlos Pascua Zůñiga High School which at the time of the study was being considered for inclusion in a larger ecology preservation program in Costa Rica. San Rafael is one of a small number of communities in Costa Rica with an established recycling program (Busteed, Palkhiwala, Roma & Shah, 2009).

The goal of this project was "to assess environmental attitudes and behaviors of the students and to develop a guide to aid teacher in improving their environmental curriculum" (Busteed et al., 2009). In order to achieve this goal the researchers set out to assess the current state of the recycling program, examine the interests of students and their preferred methods of learning, identify student perceptions and behaviors, and assess the existing knowledge of the consequences of recycling. The researchers conducted 30 student interviews and 9 faculty interviews as well as gathering information from 100 completed surveys.

The findings of the project were put into the following three categories: Student attitudes and perceptions, administration goals, and administration challenges (Busteed et

al., 2009). In analyzing the results of the study the authors found "four factors that played a role in the students' overall attitude on the environment" (Busteed et al., 2009, p.v).

1. Students had knowledge of the consequences of not recycling.
2. Students perceive that they are not valued and respected community members.
3. Students do not possess a personal obligation to act on the consequences of not recycling.
4. Student apathetic attitudes towards recycling stem from the fact that they do not recycle at home.

The authors recommend increasing the resources available for the collection and promotion of recycling at the school. In addition, they developed a guide for teachers which sets out to promote a sense of ownership for the students to get more involved. Busteed et al. (2009) believe that an increase in recycling participation will happen if these concepts are incorporated into curricular activities.

Biswas, Licata, McKee, Pullig and Daughtridge published a study in 2000 that look at the relationship between consumer waste recycling and recycling shopping behaviors. They point out that much research has been done on recycling but ignores the other half of the recycling cycle, the purchase of recycled goods. The authors set out to "examine the relative influence of consumer attitudes toward recycling, the importance or strength of these attitudes, consumer affect regarding recycling, past recycling behaviors, and the subjective norm concept on the first part of the process: consumer recycling of waste" (Biswas et al., 2000, p. 93).

The study was conducted by interviewing 286 adult consumers who lived in a house that was located in a midsized Southern community that had an established curbside recycling program. The survey showed that 67.5% of the sampled individuals were recyclers, whereas 32.5% did not recycle. The general format of the survey followed a nine-point Likert scale with the low end being 'never,' 'strongly disagree,' etc. (Biswas et al., 2000). The dependent variables examined this way were waste recycling behavior and recycling shopping behavior. The independent variables examined followed the same Likert scale format and included affective items like 'when I recycle I feel good' and 'when I fail to recycle I feel guilty' (Biswas et al., 2000). Attitudes towards recycling were measured by having respondents characterize recycling on three nine-point scales that were anchored by phrases "foolish/wise, undesirable/desirable, and worthless/valuable" (Biswas et al., 2000, p. 97). To assess attitude strength, respondents were asked "recycling is an important issue and recycling is an important issue to me personally" (Biswas et al., 2000, p. 97).

Biswas et al. (2000) concluded from their findings that, "attitude had a significant effect on waste recycling behavior" (p. 102) the authors suggest that further research is needed to examine the effects of intrinsic vs. extrinsic motivators of recycling.

Other Related Sources

In Europe the Environmental (2-MEV) Scale questionnaire is used to measure the attitudes of adolescents and evaluate the effectiveness of educational programs (Johnson & Manoli, 2011). Over the course of a four year study Johnson and Manoli used a modified 2-MEV Scale to look at the environmental attitudes of 9-12 year olds in the

United States. The authors cite the lack of a common instrument for measuring environmental attitudes as a major reason for their study. “The 2-MEV Scale measures two higher-order factors: Preservation of Nature, the intent to preserve the environment and Utilization of Nature, the usage of the environment” (Johnson & Manoli, 2011, p. 84). With this scale being used as the predominant method of measurement of environmental attitudes, the authors felt it a logical starting point for modification to suit their needs.

Johnson and Manoli’s study examined 6,843 students from Pennsylvania, Louisiana and Arizona. The schools that participated in this study were from low to middle socioeconomic status. This study used the 2-MEV to compare the effectiveness of two different environmental education programs, Earthkeepers and Sunship Earth.

The modifications to the 2-MEV facilitate its use with the 9-12 year old American research group were primarily wording based. Wording of the survey was modified from European English to a more American format, with the replacement of some words and phrases with more kid friendly versions. The survey was administered both before and after the students participated in one of the two environmental programs. In the second year of the study the survey was modified further to add a sixth option to the Likert-scale, ‘Do not understand’ (Johnson & Manoli, 2011). The final two years of the study saw no further modification of the instrument.

The results of the study show statistically significant changes in environmental attitudes from pre-program to post program. In addition the results validate the modifications made to the 16-item revised 2-MEV scale for use with children aged 9-12 in the United States (Johnson & Manoli, 2011). The authors suggest that further

modification of the 2-MEV could allow for examination of the relationship between environmental attitude and behavior.

Sudeshna Lahiri (2011) explored the connection between environmental attitude among teachers and responsible environmental behavior in Calcutta, India. Lahiri set out with the following objectives:

- To find out the status of environmental attitude among pupil teachers
- To find out the status of responsible environmental behavior among pupil teachers
- To find out the relationship between environmental attitude and responsible environmental behavior of pupil teachers
- To investigate the environmental attitude of pupil teacher in relation to teaching experience
- To investigate the responsible environmental behavior of pupil teacher in relation to teaching experience
- To find out the effect of courses of study on environmental attitude of pupil teachers
- To examine the effect of courses of study on responsible environmental behavior of pupil teachers.
- To find out the relation between environmental attitude and responsible environmental behavior of pupil teachers when courses of study partial outs.
- To find out the relation between responsible environmental behavior and scientific attitude of pupil teachers (Lahiri, 2011)

Lahiri used a combination of survey tools adapted to meet the needs of the study including the Responsible Environmental Behavior (REB) scale, Scientific Attitude scale, Scientific Attitude Inventory II (SAI), and Environmental Attitude (EA) scale (Lahiri, 2011). These tools were administered to Bachelors of Education students from four randomly selected Teacher Training Colleges with ties to the University of Calcutta

(Lahiri, 2011). Lahiri randomly selected from this population 200 students with prior teaching experience and 100 students who had no teaching experience.

The majority of pupil teachers had high to very high environmental attitude and Responsible Environmental Behavior (Lahiri, 2011). The data shows a statistically significant difference in the Environmental attitude and Responsible Environmental Behavior between experienced teachers (higher levels) and those with no teaching experience, though both groups rate high or very high on both scales. In examining the relationship between course work and EA and REB, the data suggest a significant difference between those students belong to the science stream (higher scores) and other streams (Lahiri, 2011).

Lahiri suggests that modification to teacher education needs to be made to include increased emphasis on environmental protection equally across all disciplines. It is also suggested that the experiences of in service teachers needs to be more widely shared with pupil teachers.

Criner and Blackmer (2012) in 2011 conducted a study of residential waste in the state of Maine, examining the municipal waste programs in 12 of Maine's 16 counties. Eight of the municipalities had curbside collection of recyclables, either full or partial. The study consisted of the random collection of waste samples for a total 10 tons of waste collected.

The waste was sorted into nine major categories and over 60 sub categories. The major waste categories were: organics, paper, plastic, other waste, construction and demolition debris, metal, glass, household hazardous waste, and electronics. The largest

portion of the waste stream was classified as organic (43.28%; Criner & Blackmer, 2012). Over one quarter of the total waste was paper, with approximately 17% of that able to be recycled or composted.

The authors found that "only 0.36% of the waste stream was made up of plastic beverage containers redeemable under Maine's bottle bill legislation" (Criner & Blackmer, 2012, p. 51). This data supports other studies which indicate that in states without bottle bills, only 24% of those same containers are recycled, "while over two-thirds are recycled in states like Maine, where bottle bill legislation is long-established" (Criner & Blackmer, 2012, p. 51).

Criner and Blackmer (2012) conclude that over 60% of the waste generated in Maine could either be recycled (21.72%) or composted (38.41%). They state that better recycling programs will help to recover much of the material currently being discarded. Criner and Blackmer (2012) believe that continuing efforts to improve municipal recycling programs should include increasing awareness about composting and recycling as well.

In his article *Take Me Out of the Waste Stream*, Allan Gerlat (2012b) examines how professional and collegiate sports teams and their athletic facilities are improving sustainability. He points out that recycling has become a major part of professional sports facilities maintenance (Gerlat, 2012b). While collegiate teams are not keeping up with the professional teams they are following suit when it comes to recycling. The hurdle for collegiate teams is the fact that the university controls the sports facilities not the athletic department so the need for university support in recycling is very important to a

successful program. Gerlat quotes David Scott, president of the Stadium Managers Association saying "…there are opportunities because students and administrators understand the need to advance environmental stewardship" (Gerlat, 2012b, p. 37).

Summary

There is no shortage of research on environmental attitudes or recycling. However, "truly accurate waste and recycling data continues to elude us" (Miller, 2012, p. 20). It is not just data about the volumes and types of materials being recycled but also information about recycler behavior. Dr. Bryan Stanley noted that "human behavior was one of the most poorly understood elements of recycling" (Stanley, 2012, p.18). He also believes that to enhance waste reduction and recycling strategies, more research relating human behavior to recycling is needed (Stanley, 2012). Dr. Jenna Jambeck points out that "human behavior is especially relevant in the case of solid waste management where reducing, reusing and recycling of waste all encompass a personal decision" (Jambeck, Johnsen, & Mozo-Reyes, 2012, p. 43). Johnson and Manoli (2011, p. 84) state that "some researchers have argued that the most important determinant of behavior is attitude (Eagles & Demare, 1999; Lazarus et al., 1980; Newhouse, 1990)."

The sizeable amount of published research on attitudes towards recycling focuses on European countries (see Barr et al., 2003; Best & Kneip, 2011; Lahiri, 2011; Robertson & Walkington, 2009). The research in the European community tends to be driven by pressures on waste disposal options (Robertson & Walkington, 2009). It is the author's opinion that this is because in the United States the pressures on disposal options

are not as great as they are in Europe currently. That does not mean that there is not a need for recycling research in the United States.

The residents, businesses and other institutions in the United States produced about 254 million tons of municipal solid waste in 2010. More than 50% of that waste was deposited in landfills (USEPA, 2011). With the increase in population of the United States it can only be expected that the amount of municipal solid waste generated will increase as well. When it comes to the research on recycling in the United States, studies tend to either be extremely broad or extremely narrow or only touch on recycling as an aspect of environmental attitudes.

There are studies on drop-off recycling activities such as the one by Sidique et al. (2010). They point out in their study that, "research on curbside recycling and variable garbage pricing is more popular in the field of recycling and waste management" (Sidique et al. 2010, p. 163). One study by E. Bun Lee focused on the environmental attitudes of African American college students citing the lack "of research on the environmental attitudes and behaviors of minorities in the United States" (Lee, 2008, p. 30). Lee's study also found that students with pro environmental attitudes are more likely to recycle (2009). This is a good example of what much research to date as done, look at environmental attitudes; it does not address student attitudes specifically about recycling.

Werner and Makela (1998) suggest that positive attitudes towards recycling increase the likelihood of recycling. Along these same lines is the idea that social pressure can influence the behavior of recyclers. If you are around other people who

recycle you will be influenced to do so as well (Barr et al., 2003; Vermeir, 2009; Werner & Makela, 1998).

The literature has only a little to say about recycling/environmental attitudes and education. In addition to Lee's study focusing on African American college students (2008), Johnson and Manoli (2011) examined the ecological attitudes of 9-12 year old children in the United States. Their study focused on validating the European developed Environmental (2-MEV) Scale questionnaire for use with 9-12 year olds. This study supported expanded environmental education with this age group based on the results of the 2-MEV. Sudeshna Lahiri (2011) looked at the responsible environmental behavior of teachers and how they shape the attitudes of their students based on the environmental training they had. What Lahiri found was that in Indian schools, scientific attitude had more of an impact on responsible environmental behavior than did environmental attitude (2011).

Ultimately these studies point to the fact that the college student has been overlooked as a useful source of information. "In their comprehensive review of the literature, Van Liere and Dunlap (1980) concluded that positive attitudes and behaviors regarding recycling are most prevalent among people who are young, politically liberal, and from large households" (Larsen, 2001, p. 83). This point drives home the need to look to college student attitudes as they fit that description very well.

CHAPTER 3

METHODOLOGY

Introduction

This chapter describes the design of this research study including the research questions, population selection, survey design, pilot study, and the relationship between survey items and individual research questions. Additionally discussed are the data collection process, the methods of analysis of the collected data and the limitations encountered while conducting the research.

Research Questions

The principal question of concern is what are college students' attitudes and behaviors related to recycling? The three distinct populations offer the opportunity to answer several other questions:

1. Is there a difference in the attitudes between the students of each institution?
    a. Why may that be?
2. Are there differences in attitudes across ages?
3. Are there differences between classification ranges?
4. Are there any differences in attitudes of students across 11 different majors at each institution?
5. Are there differences in attitudes in comparable majors across institutions?
6. What are the recycling habits of college students?

Population Selection

The three institutions chosen for this study were selected partly because of their proximity to the researcher's own institution. The researcher has chosen to survey all 19,600 students at these institutions rather than focusing in on one particular group for multiple reasons. The researcher has access to the entire population of interest; by sending the survey to the entire population the chances of a significant response rate are increased. Also, by sending the survey to the entire student population any completed number of responses may be examined to determine if it is a representative sample of the entire population by comparing the respondent demographics with the known demographics from the institution. Focusing in on one demographic could prove problematic for making comparisons between institutions as that demographic may not be represented at all three institutions.

Survey Design

There are multiple environmental attitude surveys including the NEP (New Ecological Paradigm) scale used by Lee (2008) and the ATR (Attitude Toward Research) scale adapted by Larson (2001). After reviewing these and other associated literature it has been determined that a survey developed from de novo would best serve this study. The use of a web based survey was decided upon based on factors such as ease of use and access as well as cost. Additionally every member of the study population has equal access to e-mail and the required internet access to be able to participate in the study.

The survey questions (Appendix B) were developed to elicit responses that would best assess respondent attitudes towards recycling. Items 1 and 2 on the survey

established which institution the respondent attends and whether he or she live on or off campus for use in demographic and institutional comparisons. Items 3, 8, 11, and 12 established the respondents' recycling habits. The principal question of what are college student attitudes about recycling was addressed by items 4, 5, 6, 7, 9, 10, and 13 through 17. Items 19 and 20 are applicable to the question of attitude across classifications. The question of attitude differences across age ranges was addressed by item 21. Item 23 provides the variable of major which will be used to determine if there are attitude differences across institutions by major and across majors within the institution. Item 18 has been included in an attempt to determine if environmental concern has any influence on recycling attitudes or behaviors.

After careful selection of the wording of the survey questions they were uploaded to the Survey Monkey web site (surveymonkey.com). Once uploaded, question order was finalized along with the application of question logic. "Question Logic advances respondents to a page of follow-up questions based on the answer to a particular question" (surveymonkey.com, 2012). For example when responding to the question, "Do you live…" with the answer of "on campus" the respondent was directed to the question about whether they had used on campus recycling. If they instead answered "off campus" they were directed to a question about curbside recycling. Question logic then allows for the off campus respondent to also be asked a line of questions about on campus recycling. The survey was prefaced with a statement of confidentiality, which by clicking yes the respondent agreed to be a participant in the study. The survey questions and order were provided to a panel of experts who reviewed the survey for validity.

Pilot Study

Every survey should undergo a pilot study to examine the validity of the survey. The web link to the survey was provided to a select group of 35 students at Hawkeye Community College, 11 of which participated, taken from the researcher's online environmental science class. The survey these validators received was identical to the full survey with the addition of a comment question at the end where they were encouraged to share anything they noticed of concern about the wording of the questions. Modification of the survey in wording only was undertaken considering the validators' responses to this final question.

Data Collection Process

After completion of the pilot study and slight modifications to wording were made the web link was sent out via email to all students currently enrolled at HCC along with an introductory note (Appendix A) explaining the purpose to the survey and explaining the confidentiality of the survey results. The University of Northern Iowa required that the introductory note with link be sent to individual Deans and Department Heads for distribution to students. Students at Wartburg College were provided the introductory invitation through their weekly campus electronic newsletter. Upon the passing of two weeks' time a reminder email/notification (Appendix A) was distributed, once again explaining the importance of the survey, expressing gratitude for their participation and once again providing the link to the survey. At the end of four weeks a final reminder was sent as one last reminder to encourage further participation. At the end of a five week period the survey was closed and the results analyzed.

Methods of Analysis

The resulting data from this study were subjected to standard statistical analysis procedures, including descriptive statistics, chi-squared and Cramer's V where applicable. Key to data analysis is determining if sample size is large enough. The sample sizes for each of the populations was determined with the help of Raosoft's sample size calculator (Raosoft, 2004). The calculator takes into account the population size, a 5% confidence interval and a 95% confidence level.

CHAPTER 4

DATA PRESENTATION AND INTERPRETATION

Introduction

The purpose of this study was to examine college student attitudes about recycling as well as their recycling behaviors. Presented below are the analyses of each of the three institutions followed by an analysis of the data from the overall population.

Wartburg College

Response Rate

The survey was made available to 1747 students via the College weekly e-mail newsletter. Only 35 students responded to the survey for a response rate of 2%. This is well below the 235 responses needed for a 5% error with a 95% confidence interval. The sample size was determined with the help of Raosoft's sample size calculator (Raosoft, 2004). The calculator takes into account the population size, a 5% confidence interval and a 95% confidence level.

Demographics

Demographic data consisting of Gender, Age, Ethnicity, Major, and Classification were collected for comparison to known institutional values to evaluate the representativeness of the sample. In addition, Number of Years in College and Approximate Family Income were collected for possible consideration in relation to recycling attitudes and behaviors.

As illustrated in Table 1 the overwhelming majority of respondents were female (84%).

Table 1

Gender Distribution of Wartburg Respondents

Gender	%
Male	16
Female	85
Prefer not to answer	--

Table 2 reports the Age data in three year increments. The largest portion of respondents (59%), fall in the 18-20 year old age range. The remaining portion of respondents (41%), are in the 21-23 year old range.

Table 3 summarizes the Ethnicity distribution of the respondents. Overwhelmingly respondents reported Caucasian as their ethnicity (97%) with the remainder preferring not to answer.

Table 2

Age Distribution of Wartburg Respondents

Age	%
Below 18	--
18-20	59
21-23	41
24-26	--
27-29	--
30-32	--
33-35	--
Above 35	--

Table 3

Ethnicity Distribution of Wartburg Respondents

Ethnicity	%
Hispanic or Latino	--
American Indian or Alaska Native	--
Asian	--
Black or African American	--
Native Hawaiian or Other Pacific Islander	--
Caucasian	97
Prefer not to answer	3

The distributions of Major by respondents are shown in Table 4. Natural Sciences (25%), Humanities and Fine Arts (25%), Behavioral Science (16%) and Education (16%) are the top majors listed by respondents. Academic Classification of respondents is described in Table 5. The majority of respondents were Juniors (31%) and Seniors (41%).

Table 4

Major Distribution of Wartburg Respondents

Major	%
Behavioral Science	16
Natural Science	25
Math	6
English	3
Humanities and Fine Arts	25
Foreign Language	--
Business	9
Education	16
General Studies	--
Applied Technology Program	--
Nursing	--
Masters Studies	--
Doctoral Studies	--

Table 5

Classification of Wartburg Respondents

Classification	%
Freshman	16
Sophomore	13
Junior	30
Senior	41
Graduate Student	--

The distribution of the Respondents' Number of Years in College is presented in Table 6. Most respondents had been in college for 3 or 4 years (34% for each). Approximate Family Household Income distribution can be seen in Table 7. A majority (22%) of respondents preferred not to answer this question, the most chosen response (19%) was $90,000 to $99,999.

Table 6

Wartburg Respondents' Number of Years in College

Number of Years	%
Less than 1	16
1	--
2	16
3	34
4	34
5	--
More than 5	--

Table 7

Approximate Family Income of Wartburg Respondents

Income	%
Less than $10,000	3
$10,000 to $19,999	--
$20,000 to $29,999	--
$30,000 to $39,999	6
$40,000 to $49,999	3
$50,000 to $59,999	6
$60,000 to $69,999	6
$70,000 to $79,999	3
$80,000 to $89,999	6
$90,000 to $99,999	19
$100,000 to $149,999	16
$150,000 or more	9
Prefer not to answer	22

Respondents were asked where they lived during the academic year, 79% indicated on-campus and 21% off campus. Off campus respondents were asked which best described their place of residence, apartment (29%) or single family home (72%).

Research Question Data

The following data tables are structured to match up with the specific research question they apply to.

Recycling habits. Table 8 presents the responses to the question of whether students had curbside recycling or not, this question is only applicable to the 5

respondents who indicated that they live off-campus. Only one student indicated not having curbside recycling; that student indicated unwillingness to pay a small fee (less than $5 per month) for it.

Table 8

Curbside Recycling Rate for Wartburg Respondents

Response	%
Yes	80
No	20

The distribution of commodities that respondents recycle on a regular basis is presented in Table 9 with a breakdown of the specific responses for the selection of "other." Paper (100%), cardboard (91%), and plastic were listed as the top regularly recycled materials.

Table 9

Wartburg Respondent Commodities Recycle Regularly

Response	%
Cardboard	91
Paper	100
Metal	56
Plastic	91
Other (Glass)	15
Other (Terracycle)*	6

*This is a recycling company not a commodity.

Table 10 presents the rate of returning deposit containers by Wartburg respondents with 54.55% saying yes they do return their deposit containers.

Table 10

Wartburg Respondent Rate of Redemption

Response	%
Yes	55
No	45

Recycling attitudes. The one respondent who did not have curbside recycling indicated that he or she would not be willing to pay a small fee for curbside recycling. When on campus students were asked about their recycling habits, 24 respondents indicated that they recycle as much as possible (83%) and 5 indicated that they recycled what was convenient (17%). Table 11 presents this data.

Table 11

On-Campus Wartburg Respondent Recycling Habits

Response	%
I recycle as much as possible	83
I recycle what is convenient	17
I do not recycle	--

The off-campus respondents were also asked about their recycling habits the distribution of their responses can be found in Table 12. Of the 5 respondents, the majority (60%) indicated that they recycle what is convenient.

Table 12

Off-Campus Wartburg Respondent Recycling Habits

Response	%
I recycle as much as possible	40
I recycle what is convenient	60
I do not recycle	--

Respondents were asked to rank their reasons for recycling from most (1) to least (5) importance. Recycling to conserve energy and resources was selected by 13 respondents (38%) as being the most important reason to recycle. Recycling to make money (ie. return deposit containers) was ranked least important by 19 respondents (56%). The distribution of responses to this question are presented fully in Table 13.

Table 13

Wartburg Respondent Ranking of Reasons for Recycling

Response	Rank	%
I recycle to conserve energy and resources	1	38
I recycle to save landfill space	2	21
I recycle because it is the socially responsible thing to do	3	35
I recycle because we recycled at home	4	38
I recycle to make money (ie. return deposit containers)	5	56

When asked if they used on campus recycling 100% of the Wartburg respondents indicated that they did, 1 individual skipped the question but answered the follow up as to why he or she didn't use on campus recycling. That individual indicated using off campus recycling.

Respondents were asked if they supported expansion of the Deposit Law to include other beverage containers such as water bottles, sports drinks, etc. to which 33 (100%) responded yes. Respondents were then asked how a higher deposit of 10 cents would change their redemption habits, 61% responded that it would make them more likely to return their deposit containers. Table 14 presents the distributions of the answers to this question.

Table 14

Potential Changes in Redemption Habits Due to Higher Redemption of Wartburg Respondents

Response	%
More likely to return all your containers	61
Not change your redemption habits	39
Less likely to return all your containers	--

The next series of questions asked students about the influences on their recycling participation or lack thereof. The questions are based on the Likert format with answers ranging on a 5-point scale from Strongly Agree to Disagree. When asked if what they learned in school had the most influence on their participation or lack thereof 12 (36%) chose Disagree and 10 (30%) chose Agree. The full distribution of response data can be found in Table 15. In a similar fashion 14 (42%) of respondents agreed that their participation or lack thereof, in recycling was most influenced by their family. The distributions of the responses to this question can be found in Table 16. Table 17 presents the results of the question of influence of peers on respondent participation or lack thereof in recycling; with 11 (33%) respondents disagreeing with the statement.

Table 15

Distribution of Responses to What Respondents Learned in School Being Most Influential on Recycling Participation or Lack Thereof of Wartburg Respondents.

Response	%
Strongly Disagree	3
Disagree	36
Neither	21
Agree	30
Strongly Agree	9

Table 16

Distribution of Responses to Respondents Family Being Most Influential on Recycling Participation or Lack Thereof of Wartburg Respondents.

Response	%
Strongly Disagree	--
Disagree	21
Neither	24
Agree	42
Strongly Agree	12

Table 17

Distribution of Responses to Respondents Peers Most Influential on Recycling Participation or Lack Thereof of Wartburg Respondents.

Response	%
Strongly Disagree	12
Disagree	33
Neither	21
Agree	21
Strongly Agree	12

Respondents were asked to rate their level of concern with the current state of the environment to which 12 (36%) selected concerned on the Likert scale ranging from "not at all concerned" to "extremely concerned." The distributions of responses to this question can be found in Table 18.

Table 18

Wartburg Respondents Level of Concern with the Current State of the Environment

Response	%
Not at all concerned	--
Minimally concerned	21
Concerned	36
Very concerned	33
Extremely concerned	9

The majority of respondents had taken no classes (42%) or 1 class (30%) where recycling was a topic. The complete distribution of responses to this question can be found in Table 19. Similarly the respondents indicated participating in 0 (39%) or 1 (27%) recycling learning opportunities outside of class. Table 20 presents the distribution of responses to this question.

Table 19

Approximate Number of Classes Where Recycling Was a Topic

Response	%
0	42
1	30
2	21
3	--
4	6
More than 4	--

Table 20

Approximate Number of Outside Class Recycling Learning Opportunities

Response	%
0	39
1	27
2	12
3	9
4	--
More than 4	12

Wartburg Summary Comments

As a conclusion to the survey, other comments about recycling were solicited from the respondents. Some of the responses included the following. “I wish more people had a passion for it.” “I think there isn’t enough education about what state recycled items need to be in when they are taken to be recycled.” “Also, while I think recycling is very important, reducing and reusing containers is really important.” The complete responses to this question can be found in Appendix C.

University of Northern Iowa

Response Rate

The survey was made available to 12,273 students via e-mail invitations sent to every Academic Dean and Department head. Only 241 students responded to the survey for a response rate of 1.96%. This is well below the 377 responses needed for a 5% error with a 95% confidence interval. The sample size was determined with the help of Raosoft’s sample size calculator (Raosoft, 2004). The calculator takes into account the population size, a 5% confidence interval and a 95% confidence level.

Demographics

Demographic data consisting of Gender, Age, Ethnicity, Major, and Classification were collected for comparison to known institutional values to evaluate the representativeness of the sample. In addition, Number of Years in College and Approximate Family Income were collected for possible consideration in relation to recycling attitudes and behaviors.

As illustrated in Table 21 the overwhelming majority of respondents were female (72%).

Table 21

Gender Distribution of UNI Respondents

Gender	%
Male	28
Female	72
Prefer not to answer	--

Table 22 reports the Age data in three year increments. The largest portion of respondents (47%), fall in the 18-20 year old age range. The next largest portion of respondents (36%), are in the 21-23 year old range.

Table 23 summarizes the Ethnicity distribution of the respondents. Overwhelmingly respondents reported Caucasian as their ethnicity (92%) with the next largest portion (3%) preferring not to answer.

Table 22

Age Distribution of UNI Respondents

Age	%
Below 18	--
18-20	47
21-23	36
24-26	5
27-29	2
30-32	1
33-35	3
Above 35	6

Table 23

Ethnicity Distribution of UNI Respondents

Ethnicity	%
Hispanic or Latino	2
American Indian or Alaska Native	--
Asian	< 1
Black or African American	2
Native Hawaiian or Other Pacific Islander	< 1
Caucasian	92
Prefer not to answer	3

The distributions of Major by respondents are shown in Table 24. Behavioral Sciences (41%), Humanities and Fine Arts (17%), Natural Science (12%) and Education (12%) are the top majors listed by respondents. Academic Classification of respondents

is described in Table 25. The majority of respondents were Juniors (25%) and Seniors (37%).

Table 24

Major Distribution of UNI Respondents

Major	%
Behavioral Science	41
Natural Science	12
Math	1
English	< 1
Humanities and Fine Arts	17
Foreign Language	< 1
Business	3
Education	12
General Studies	1
Applied Technology Program	4
Nursing	1
Masters Studies	4
Doctoral Studies	2

Table 25

Classification of UNI Respondents

Classification	%
Freshman	18
Sophomore	11
Junior	25
Senior	37
Graduate Student	9

The distribution of the Respondents' Number of Years in College is presented in Table 26. Most respondents had been in college for 3 years (26%). Approximate Family Household Income distribution can be seen in Table 27 a majority (22%) of respondents preferred not to answer this question, the most chosen response (12%) was $100,000 to $149,999.

Table 26

UNI Respondents' Number of Years in College

Number of Years	%
Less than 1	18
1	3
2	15
3	26
4	19
5	9
More than 5	10

Table 27

Approximate Family Income

Income	%
Less than $10,000	7
$10,000 to $19,999	6
$20,000 to $29,999	6
$30,000 to $39,999	5
$40,000 to $49,999	8
$50,000 to $59,999	10
$60,000 to $69,999	5
$70,000 to $79,999	7
$80,000 to $89,999	4
$90,000 to $99,999	7
$100,000 to $149,999	12
$150,000 or more	7
Prefer not to answer	17

Respondents were asked where they lived during the academic year, on-campus (43%) or off campus (57%). The off campus respondents were asked what best described their place of residence, apartment (55%) or single family home (45%).

Research Question Data

The following data tables are structured to match up with the specific research question to which they apply.

Recycling habits. Table 28 presents the responses to the question of whether students had curbside recycling or not, this question is only applicable to the 128

respondents who indicated that they live off-campus. The 42 students who indicated they did not have curbside recycling were asked if they would be willing to pay a small fee (less than $5 per month) for curbside recycling, to which a majority, 30 (71%), indicated yes.

Table 28

Curbside Recycling Rate for UNI Respondents

Response	%
Yes	31
No	69

The distribution of commodities that respondents recycle on a regular basis is presented in Table 29 with a breakdown of the specific responses for the selection of "other." Plastic (87%) and paper (76 %) were listed as the top regularly recycled materials.

Table 29

UNI Respondent Commodities Recycle Regularly

Response	%
Cardboard	75
Paper	76
Metal	55
Plastic	87
Other (Glass)	10
Other (Tin, aluminum cans and bottles)	3
Other (Batteries and Tech)	1

Table 30 presents the rate of returning deposit containers by UNI respondents with 68% saying yes they do return their deposit containers.

Table 30

UNI Respondent Rate of Redemption

Response	%
Yes	68
No	32

Recycling attitudes. Table 31 presents the distribution of responses to willingness to pay a small fee for curbside recycling. When on campus students were asked about their recycling habits, 88 respondents indicated that they recycle as much as possible

(50%) and 72 indicated that they recycled what was convenient (41%). Table 32 presents this data.

Table 31

UNI Respondents Willingness to Pay a Small Fee for Curbside Recycling

Response	%
Yes	71
No	29

Table 32

On-Campus UNI Respondent Recycling Habits

Response	%
I recycle as much as possible	50
I recycle what is convenient	41
I do not recycle	9

The off-campus respondents were also asked about their recycling habits the distribution of their responses can be found in Table 33. The majority (52%) indicated that they recycle as much as possible.

Table 33

Off-Campus UNI Respondent Recycling Habits

Response	%
I recycle as much as possible	52
I recycle what is convenient	36
I do not recycle	11

The 23 respondents who indicated they did not recycle were asked to choose the reason that best described why they did not recycle. “I don’t have room to store recyclables,” and “I’m not aware of the recycling opportunities available to me” were each chosen by 11 respondents (48%). Table 34 presents the distributions of responses including the “Other (please specify)” category. A complete list of the “Other” responses can be found in Appendix D.

Table 34

UNI Respondents Reasons for Not Recycling

Response	%
I don’t have room to store recyclables.	48
I’m not aware of the recycling opportunities available to me.	48
I don’t have time to recycle.	22
Recycling isn’t very clean.	4
I don’t see the point of recycling	17
Other (Please specify)	17

Respondents were asked to rank their reasons for recycling from most (1) to least (5) importance. Recycling to conserve energy and resources was selected by 73 respondents (31%) as being the most important reason to recycle. Recycling to make money (ie. return deposit containers) was ranked least important by 85 respondents (36%). The distribution of the responses to this question are presented fully in Table 35.

Table 35

UNI Respondent Ranking of Reasons for Recycling

Response	Rank	%
I recycle to conserve energy and resources	1	22
I recycle because it is the socially responsible thing to do	2	29
I recycle to save landfill space	3	29
I recycle because we recycled at home	4	23
I recycle to make money (ie. return deposit containers)	5	36

When asked about using on-campus recycling habits, 69% of respondents indicated that they did use on-campus recycling. The respondents who indicated that they did not use on-campus recycling were asked to choose from a prepared list what best described why they did not use on-campus recycling. The largest portion of students (41%) indicated that they used off campus recycling. Table 36 provides the distribution of the responses to this question, the complete list of "other" responses can be found in Appendix D.

Table 36

UNI Respondent Reasons for Not Using On-campus Recycling

Response	%
I use off campus recycling.	41
I am not aware of the on-campus options.	36
On-campus options are not convenient for me.	38
I don't have storage space for recyclables.	21
Recycling isn't clean.	4
I don't see the point of recycling.	4
Other (please specify)	18

Respondents were asked if they supported expansion of the Deposit Law to include other beverage containers such as water bottles, sports drinks, etc. to which 205 (89%) responded yes. Respondents were then asked how a higher deposit of 10 cents would change their redemption habits, 68% responded that it would make them more likely to return their deposit containers. Table 37 presents the distributions of the answers to this question.

Table 37

Potential Changes in Redemption Habits Due to Higher Redemption of UNI Respondents

Response	%
More likely to return all your containers	68
Not change your redemption habits	31
Less likely to return all your containers	1

The next series of questions asked students about the influences on their recycling participation or lack thereof. The questions are based on the Likert formant with answers on a 5-point scale ranging from Strongly Agree to Disagree. When asked if what they learned in school had the most influence on their participation or lack thereof 72 (31%) chose Disagree and 62 (27%) chose Agree. The full distribution of response data can be found in Table 38. However, 109 (47%) respondents agreed that their participation or lack thereof, in recycling was most influenced by their family. The distributions of the responses to this question can be found in Table 39. Table 40 presents the results of the question of influence of peers on respondent participation or lack thereof in recycling; with the majority (34%) respondents neither agreeing nor disagreeing with the statement.

Table 38

Distribution of Responses to What Respondents Learned in School Being Most Influential on Recycling Participation or Lack Thereof of UNI Respondents.

Response	%
Strongly Disagree	7
Disagree	31
Neither	29
Agree	27
Strongly Agree	5

Table 39

Distribution of Responses to Respondents Family Being Most Influential on Recycling Participation or Lack Thereof of UNI Respondents.

Response	%
Strongly Disagree	6
Disagree	10
Neither	16
Agree	47
Strongly Agree	21

Table 40

Distribution of Responses to Respondents Peers Most Influential on Recycling Participation or Lack Thereof of UNI Respondents.

Response	%
Strongly Disagree	12
Disagree	29
Neither	34
Agree	21
Strongly Agree	3

Respondents were asked to rate their level of concern with the current state of the environment to which 100 (43%) selected concerned on the Likert scale ranging from "not at all concerned" to "extremely concerned." The distributions of responses to this question can be found in Table 41.

Table 41

UNI Respondents Level of Concern with the Current State of the Environment

Response	%
Not at all concerned	2
Minimally concerned	20
Concerned	43
Very concerned	26
Extremely concerned	9

The majority of respondents had taken no classes (39%) or 1 class (32%) where recycling was a topic. The complete distribution of responses to this question can be found in Table 42. Similarly the respondents indicated participating in 0 (65%) or 1 (18%) recycling learning opportunities outside of class. Table 43 presents the distribution of responses to this question.

Table 42

Approximate Number of Classes Where Recycling Was a Topic

Response	%
0	39
1	31
2	21
3	5
4	1
More than 4	3

Table 43

Approximate Number of Outside Class Recycling Learning Opportunities

Response	%
0	65
1	18
2	10
3	4
4	--
More than 4	3

UNI Summary Comments

As a conclusion to the survey, other comments about recycling were solicited from the respondents, 60 of whom chose to provide comments. Some of the responses are included here and the complete list can be found in Appendix D. “Recycling is the right thing to do and everyone should recycle as much as possible.” “I don’t think UNI is doing enough to make recycling easier on campus.” “I feel that recycling is a very important thing to do.” “There should be a law requiring all homes to recycle, or at least have a curbside recycle service like stated in the survey.” “It is time consuming and I don’t have much space so I recycle the easier things.” “I think students are more likely to recycle when it is more convenient for them.”

Hawkeye Community College

Response Rate

The survey was made available to 5,777 students via e-mail invitations. 350 students responded to the survey for a response rate of 6.1%. This is above the 259 responses needed for a 5% error with a 95% confidence interval. The sample size was determined with the help of Raosoft's sample size calculator (Raosoft, 2004). The calculator takes into account the population size, a 5% confidence interval and a 95% confidence level.

Demographics

Demographic data consisting of Gender, Age, Ethnicity, Major, and Classification were collected for comparison to known institutional values to evaluate the representativeness of the sample. In addition, Number of Years in College and Approximate Family Income were collected for possible consideration in relation to recycling attitudes and behaviors.

As illustrated in Table 44 the overwhelming majority of respondents were female (69%).

Table 44

Gender Distribution of HCC Respondents

Gender	%
Male	29
Female	69
Prefer not to answer	2

Table 45 reports the Age data in three year increments. The largest portion of respondents (35%), fall in the 18-20 year old age range. The next largest portion of respondents (19%), are in the Above 35 category.

Table 46 summarizes the Ethnicity distribution of the respondents. Overwhelmingly respondents reported Caucasian as their ethnicity (86%) with the next largest portion (6%) choosing Black or African American.

Table 45

Age Distribution of HCC Respondents

Age	%
Below 18	4
18-20	35
21-23	16
24-26	11
27-29	8
30-32	5
33-35	2
Above 35	19

Table 46

Ethnicity Distribution of HCC Respondents

Ethnicity	%
Hispanic or Latino	2
American Indian or Alaska Native	1
Asian	1
Black or African American	6
Native Hawaiian or Other Pacific Islander	< 1
Caucasian	86
Prefer not to answer	4

The distributions of Major by respondents are shown in Table 47. General Studies (20%), Applied Technology (18%), Nursing (18%) and Business (17%) are the top majors listed by respondents. Academic Classification of respondents is described in Table 48 the majority of respondents were Freshmen (33%) and Sophomores (32%).

Table 47

Major Distribution of HCC Respondents

Major	%
Behavioral Science	4
Natural Science	9
Math	< 1
English	1
Humanities and Fine Arts	4
Foreign Language	< 1
Business	17
Education	6
General Studies	20
Applied Technology Program	18
Nursing	18
Masters Studies	1
Doctoral Studies	1

Table 48

Classification of HCC Respondents

Classification	%
Freshman	33
Sophomore	32
Junior	15
Senior	16
Graduate Student	4

The distribution of the Respondents' Number of Years in College is presented in Table 49. Most respondents had been in college for 2 years (28%). Approximate Family Household Income distribution can be seen in Table 50. A majority (17%) of respondents preferred not to answer this question, the most chosen response (14%) was $10,000 to $19,999.

Table 49

HCC Respondents' Number of Years in College

Number of Years	%
Less than 1	26
1	13
2	28
3	18
4	8
5	3
More than 5	4

Table 50

Approximate Family Income

Income	%
Less than $10,000	11
$10,000 to $19,999	14
$20,000 to $29,999	14
$30,000 to $39,999	6
$40,000 to $49,999	7
$50,000 to $59,999	7
$60,000 to $69,999	7
$70,000 to $79,999	5
$80,000 to $89,999	3
$90,000 to $99,999	2
$100,000 to $149,999	4
$150,000 or more	2
Prefer not to answer	17

HCC respondents were asked if they lived on UNI's campus as HCC does not have any on-campus residence options. The majority of respondents (97%) indicated that they did not live on UNI's campus. The respondents were then asked which best described their place of residence, apartment (29%) or single family home (71%).

Research Question Data

The following data tables are structured to match up with the specific research question they apply to.

Recycling habits. Table 51 presents the responses to the question of whether students had curbside recycling or not.

Table 51

Curbside Recycling Rate for HCC Respondents

Response	%
Yes	46
No	55

The distribution of commodities that respondents recycle on a regular basis is presented in Table 52 with a breakdown of the specific responses for the selection of "other." Plastic (82%) and cardboard (68%) were listed as the top regularly recycled materials.

Table 52

HCC Respondent Commodities Recycle Regularly

Response	%
Cardboard	68
Paper	62
Metal	52
Plastic	82
Other (Glass)	8
Other (Cans/bottles)	6
Other (Appliances/Electronics)	1

Table 53 presents the rate of returning deposit containers by HCC respondents with 86% saying yes they do return their deposit containers.

Table 53

HCC Respondent Rate of Redemption

Response	%
Yes	84
No	16

Recycling attitudes. The respondents who indicated they did not have curbside recycling were asked if they would be willing to pay a small fee (less than $5 per month) for curbside recycling, to which 91 (68%) said yes. Table 54 shows the distribution of

responses to this question. When on campus students were asked about their recycling habits, 38 respondents indicated that they recycle as much as possible (38%) and 43 indicated that they recycled what was convenient (43%). Table 55 presents this data.

Table 54

HCC Respondent Willingness to Pay a Small Fee for Curbside Recycling

Response	%
Yes	68
No	32

Table 55

On-Campus HCC Respondent Recycling Habits

Response	%
I recycle as much as possible	38
I recycle what is convenient	43
I do not recycle	20

The off-campus respondents were also asked about their recycling habits, the distribution of their responses can be found in Table 56. The majority of respondents (56%) indicated that they recycled as much as possible.

Table 56

Off-Campus HCC Respondent Recycling Habits

Response	%
I recycle as much as possible	56
I recycle what is convenient	39
I do not recycle	5

The 34 respondents who indicated that they do not recycle were asked to choose from a prepared list the best description for why they do not recycle, the distribution of responses can be found in Table 57. The largest portion of respondents chose the "other" option, a complete list of their responses can be found in Appendix E. A sampling of their responses includes the following: "My apartment complex doesn't offer recycling opportunities," "I don't have a recycle bin and the city should be incorporating it into their city," "I'm lazy and the trash bin seems simpler than the process of recycling."

Table 57

HCC Respondent Reasons for Not Recycling

Response	%
I don't have room to store recyclables	26
I'm not aware of the recycling opportunities available to me	32
I don't have time to recycle	15
Recycling isn't very clean	--
I don't see the point of recycling	18
Other (please specify)	38

A majority of respondents (53%) indicated that they did use on-campus recycling. The 161 (47%) that said they did not use on-campus recycling were then asked to select the statement that best described why they did not use on-campus recycling, 58% chose the "I use off campus recycling" option. The full distribution of responses can be found in Table 58 with the complete "other" category responses found in Appendix E.

Table 58

Distribution of Reasons for Not Using On-Campus Recycling by HCC Respondents

Response	%
I use off campus recycling.	58
I am not aware of the on-campus options.	44
On-Campus options are not convenient for me.	17
I don't have storage space for recyclables	13
Recycling isn't clean.	--
I don't see the point of recycling.	4
Other (please specify)	13
Other (not on campus/online student)	7

Respondents were asked to rank their reasons for recycling from most (1) to least (5) importance. Recycling to make money (ie. return deposit containers) was selected by 96 respondents (28 %) as being the most important reason to recycle. Recycling because we recycled at home was ranked least important by 116 respondents (34%). The distribution of the responses to this question is presented fully in Table 59.

Table 59

HCC Respondent Ranking of Reasons for Recycling

Response	Rank	%
I recycle to make money (ie. return deposit containers)	1	28
I recycle to save landfill space.	2	29
I recycle because it is the socially responsible thing to do.	3	24
I recycle to conserve energy and resources.	4	26
I recycle because we recycled at home.	5	34

Respondents were asked if they supported expansion of the Deposit Law to include other beverage containers such as water bottles, sports drinks, etc. to which 298 (88%) responded yes. Respondents were then asked how a higher deposit of 10 cents would change their redemption habits, 66% responded that it would make them more likely to return their deposit containers. Table 60 presents the distributions of the answers to this question.

Table 60

Potential Changes in Redemption Habits Due to Higher Redemption of HCC Respondents

Response	%
More likely to return all your containers	66
Not change your redemption habits	34
Less likely to return all your containers	< 1

The next series of questions asked students about the influences on their recycling participation or lack thereof. The questions are based on the Likert formant with answers ranging from Strongly Agree to Disagree. When asked if what they learned in school had the most influence on their participation or lack thereof 128 (38%) chose neither agree or disagree and 88 (26%) chose Agree. The full distribution of response data can be found in Table 61. When it comes to family influence, 130 (39%) of respondents agreed that their participation or lack thereof, in recycling was most influenced by their family. The distributions of the responses to this question can be found in Table 62. Table 63 presents the results of the question of influence of peers on respondent participation or lack thereof in recycling; with 141 (43%) respondents neither agreeing nor disagreeing with the statement.

Table 61

Distribution of Responses to What Respondents Learned in School Being Most Influential on Recycling Participation or Lack Thereof of HCC Respondents.

Response	%
Strongly Disagree	12
Disagree	18
Neither	38
Agree	26
Strongly Agree	6

Table 62

Distribution of Responses to Respondents Family Being Most Influential on Recycling Participation or Lack Thereof of HCC Respondents.

Response	%
Strongly Disagree	9
Disagree	11
Neither	22
Agree	39
Strongly Agree	20

Table 63

Distribution of Responses to Respondents Peers Most Influential on Recycling Participation or Lack Thereof of HCC Respondents.

Response	%
Strongly Disagree	14
Disagree	27
Neither	42
Agree	16
Strongly Agree	2

Respondents were asked to rate their level of concern with the current state of the environment to which 139 (41%) selected concerned on the Likert scale ranging from "not at all concerned" to "extremely concerned." The distributions of responses to this question can be found in Table 64.

Table 64

HCC Respondents Level of Concern with the Current State of the Environment

Response	%
Not at all concerned	4
Minimally concerned	18
Concerned	41
Very concerned	22
Extremely concerned	16

The majority of respondents had taken no classes (50%) or 1 class (26%) where recycling was a topic. The complete distribution of responses to this question can be found in Table 65. Similarly the respondents indicated participating in 0 (69%) or 1 (17%) recycling learning opportunities outside of class. Table 66 presents the distribution of responses to this question.

Table 65

Approximate Number of Classes Where Recycling Was a Topic

Response	%
0	50
1	26
2	18
3	4
4	1
More than 4	2

Table 66

Approximate Number of Outside Class Recycling Learning Opportunities

Response	%
0	69
1	17
2	8
3	3
4	< 1
More than 4	3

HCC Summary Comments

As a conclusion to the survey, other comments about recycling were solicited from the respondents. 115 respondents chose to share comments, which can be viewed in Appendix E. Some of the responses included the following. “I believe that recycling is the responsible thing to do.” “Should be more laws.” “I would like to see a day, once per month that there is a recycling activity on campus, and a clean up campus day during the fall and summer months. ie: warm months.” “At our house, we burn everything because we live outside city limits and it gets quite expensive to pay the city to come out and get our recycling. So, it is safe to say, if the bill would be lower, we would most likely recycle everything we could.” “Recycling is important but I don’t always do it.” “It is selfish to not recycle. Too many lazy people in this world.”

Entire Population Data

Response Rate

The survey was made available to 19,797 students across the three institutions. 626 students responded to the survey for a response rate of 3.16%. This is above the 377 responses needed for a 5% error with a 95% confidence interval. The sample size was determined with the help of Raosoft's sample size calculator (Raosoft, 2004). The calculator takes into account the population size, a 5% confidence interval and a 95% confidence level.

Demographics

Demographic data consisting of Gender, Age, Ethnicity, Major, and Classification were collected for comparison to known institutional values to evaluate the representativeness of the sample. In addition, Number of Years in College and Approximate Family Income were collected for possible consideration in relation to recycling attitudes and behaviors.

As illustrated in Table 67 the overwhelming majority of respondents were female (71%).

Table 67

Gender Distribution of Respondents

Gender	%
Male	28
Female	71
Prefer not to answer	1

Table 68 reports the Age data in three year increments. The largest portion of respondents (41%), fall in the 18-20 year old age range. The next largest portion of respondents (25%), are in the 21-23 year old category. Table 69 summarizes the Ethnicity distribution of the respondents. Overwhelmingly respondents reported Caucasian as their ethnicity (89%) with the next largest portion (4%) choosing Black or African American.

Table 68
Age Distribution of Respondents

Age	%
Below 18	2
18-20	41
21-23	25
24-26	8
27-29	5
30-32	3
33-35	2
Above 35	13

Table 69

Ethnicity Distribution of Respondents

Ethnicity	%
Hispanic or Latino	2
American Indian or Alaska Native	< 1
Asian	1
Black or African American	4
Native Hawaiian or Other Pacific Islander	< 1
Caucasian	89
Prefer not to answer	4

The distributions of Major by respondents are shown in Table 70. Behavioral Sciences (19%), Applied Technology (12%), General Studies (12%) are the top majors chosen. Academic Classification of respondents is described in Table 71 the majority of respondents were Freshmen (27%) and Seniors (25%).

Table 70

Major Distribution of Respondents

Major	%
Behavioral Science	19
Natural Science	11
Math	< 1
English	1
Humanities and Fine Arts	10
Foreign Language	< 1
Business	12
Education	9
General Studies	12
Applied Technology Program	12
Nursing	11
Masters Studies	2
Doctoral Studies	1

Table 71

Classification of Respondents

Classification	%
Freshman	27
Sophomore	23
Junior	20
Senior	25
Graduate Student	6

The distribution of the Respondents' Number of Years in College is presented in Table 72. Most respondents had been in college for 2 years (28%). Approximate Family Household Income distribution can be seen in Table 73 a majority (17%) of respondents preferred not to answer this question, the most chosen response (10%) was $10,000 to $19,999.

Table 72

Respondents' Number of Years in College

Number of Years	%
Less than 1	23
1	9
2	22
3	22
4	14
5	5
More than 5	6

Table 73

Approximate Family Income

Income	%
Less than $10,000	9
$10,000 to $19,999	10
$20,000 to $29,999	10
$30,000 to $39,999	6
$40,000 to $49,999	7
$50,000 to $59,999	8
$60,000 to $69,999	6
$70,000 to $79,999	5
$80,000 to $89,999	3
$90,000 to $99,999	5
$100,000 to $149,999	8
$150,000 or more	4
Prefer not to answer	17

Respondents were asked where they lived during the academic year, on-campus (47%) or off campus (53%). Respondents were asked which best described their place of residence, apartment (36%) or single family home (64%)

Research Question Data

The following data tables are structured to match up with the specific research question they apply to.

Recycling habits. Table 74 presents the responses to the question of whether off-campus students had curbside recycling or not.

Table 74

Curbside Recycling Rate

Response	%
Yes	43
No	57

The distribution of commodities that respondents recycle on a regular basis is presented in Table 75. Plastic (84%) and cardboard (72%) were listed as the top regularly recycled materials.

Table 75

Respondent Commodities Recycle Regularly

Response	%
Cardboard	72
Paper	70
Metal	53
Plastic	84
Other	19

Table 76 presents the rate of returning deposit containers by respondents with 76% saying yes they do return their deposit containers.

Table 76

Respondent Rate of Redemption

Response	%
Yes	76
No	24

Recycling attitudes. The respondents who indicated they did not have curbside recycling were asked if they would be willing to pay a small fee (less than $5 per month) for curbside recycling, to which 121 (68 %) said yes. Table 77 shows the distribution of responses to this question. When on campus students were asked about their recycling habits, 151 respondents indicated that they recycle as much as possible (49%) and 121 indicated that they recycled what was convenient (39%). Table 78 presents this data.

Table 77

Respondent Willingness to Pay a Small Fee for Curbside Recycling

Response	%
Yes	68
No	32

Table 78

On-Campus Respondent Recycling Habits

Response	%
I recycle as much as possible	49
I recycle what is convenient	39
I do not recycle	12

The off-campus respondents were also asked about their recycling habits, the distribution of their responses can be found in Table 79. The majority of respondents (55%) indicated that they recycled as much as possible.

Table 79

Off-Campus Respondent Recycling Habits

Response	%
I recycle as much as possible	55
I recycle what is convenient	39
I do not recycle	6

The respondents who indicated that they do not recycle were asked to choose from a prepared list the best description for why they do not recycle, the distribution of responses can be found in Table 80. The largest portion of respondents chose I'm not aware of the recycling opportunities available to me option.

Table 80

Respondent Reasons for Not Recycling

Response	%
I don't have room to store recyclables	35
I'm not aware of the recycling opportunities available to me	39
I don't have time to recycle	18
Recycling isn't very clean	2
I don't see the point of recycling	18
Other (please specify)	30

A majority of respondents (62%) indicated that they did use on-campus recycling. The 233 (38%) that said they did not use on-campus recycling were then asked to select the statement that best described why they did not use on-campus recycling, 53% chose the "I use off campus recycling" option. The full distribution of responses can be found in Table 81.

Table 81

Distribution of Reasons for Not Using On-Campus Recycling

Response	%
I use off campus recycling.	53
I am not aware of the on-campus options.	41
On-Campus options are not convenient for me.	23
I don't have storage space for recyclables	15
Recycling isn't clean.	1
I don't see the point of recycling.	4
Other (please specify)	14

Respondents were asked to rank their reasons for recycling from most (1) to least (5) importance. Recycling to make money (ie. return deposit containers) was selected by 206 respondents (34%) as being the least important reason to recycle. Recycling to conserve energy and resources was ranked most important by 147 respondents (24%). The distribution of the responses to this question is presented fully in Table 82.

Table 82

Respondent Ranking of Reasons for Recycling

Response	Rank	%
I recycle to conserve energy and resources.	1	24
I recycle because it is the socially responsible thing to do.	2	26
I recycle to save landfill space.	3	29
I recycle because we recycled at home.	4	23
I recycle to make money (ie. return deposit containers)	5	34

Respondents were asked if they supported expansion of the Deposit Law to include other beverage containers such as water bottles, sports drinks, etc. to which 538 (90%) responded yes. Respondents were then asked how a higher deposit of 10 cents would change their redemption habits, 66% responded that it would make them more likely to return their deposit containers. Table 83 presents the distributions of the answers to this question.

Table 83

Potential Changes in Redemption Habits Due to Higher Redemption

Response	%
More likely to return all your containers	66
Not change your redemption habits	33
Less likely to return all your containers	< 1

The next series of questions asked students about the influences on their recycling participation or lack thereof. The questions are based on the Likert formant with answers ranging from Strongly Agree to Disagree. When asked if what they learned in school had the most influence on their participation or lack thereof 204 (34%) chose neither agree or disagree and 160 (26%) chose Agree. The full distribution of response data can be found in Table 84. When it comes to family influence, 254 (42%) of respondents agreed that their participation or lack thereof, in recycling was most influenced by their family. The distributions of the responses to this question can be found in Table 85. Table 86 presents the results of the question of influence of peers on respondent participation or lack thereof in recycling; with 228 (38%) respondents neither agreeing nor disagreeing with the statement.

Table 84

Distribution of Responses to What Respondents Learned in School Being Most Influential on Recycling Participation or Lack Thereof.

Response	%
Strongly Disagree	10
Disagree	24
Neither	34
Agree	26
Strongly Agree	6

Table 85

Distribution of Responses to Respondents Family Being Most Influential on Recycling Participation or Lack Thereof.

Response	%
Strongly Disagree	7
Disagree	11
Neither	20
Agree	42
Strongly Agree	20

Table 86

Distribution of Responses to Respondents Peers Most Influential on Recycling Participation or Lack Thereof.

Response	%
Strongly Disagree	13
Disagree	28
Neither	38
Agree	18
Strongly Agree	3

Respondents were asked to rate their level of concern with the current state of the environment to which 251 (41%) selected concerned on the Likert scale ranging from "not at all concerned" to "extremely concerned." The distributions of responses to this question can be found in Table 87.

Table 87

Respondents Level of Concern with the Current State of the Environment

Response	%
Not at all concerned	3
Minimally concerned	19
Concerned	41
Very concerned	24
Extremely concerned	12

The majority of respondents had taken no classes (45%) or 1 class (28%) where recycling was a topic. The complete distribution of responses to this question can be found in Table 88. Similarly the respondents indicated participating in 0 (66%) or 1 (18%) recycling learning opportunities outside of class. Table 89 presents the distribution of responses to this question.

Table 88

Approximate Number of Classes Where Recycling Was a Topic

Response	%
0	45
1	28
2	19
3	4
4	1
More than 4	2

Table 89

Approximate Number of Outside Class Recycling Learning Opportunities

Response	%
0	45
1	28
2	19
3	4
4	1
More than 4	2

CHAPTER 5

SUMMARY OF FINDINGS, RECCOMENDATIONS AND CONCLUSIONS

Introduction

This study was undertaken to assess the attitudes and behaviors of Midwestern American college students as related to recycling. The college student population is one which is often times under-represented in environmental research, specifically recycling studies. The response rate of the overall college student population surveyed was above the minimum required for significance; however this is due almost entirely to the responses from the two year community college portion which was quite large (56%) in relation to that of the four year public (38%) and private institutions (6%). It would be quite easy to misinterpret this lack of participation as being due to a lack of interest in recycling, but more likely it was due to the delivery methods dictated by the institutions. This chapter will discuss the findings of this study, present conclusions, offer suggestions and make recommendations and offer suggestions for future research.

Findings and Discussion

The number of responses from each of the institutions was below what was expected but is still quite large given the target population of college students. These individuals tend to be very busy and are often times not aware of the importance of research. Some students may not have received the invitation due to unforeseen e-mail problems or a lack of cooperation from individuals asked to forward the invitation to departmental e-mail lists.

Each of the three institutions has more female students than male (53%, 43% Wartburg, 58%, 42% UNI, 57%, 43% HCC; Wartburg College, 2012a; UNI Office of Institutional Research, 2012; Records & Registration Department, 2012), the survey results give a larger gender gap with Wartburg showing 84% female, UNI showing 72% female and HCC showing 69% female. Gender results were combined with the results of the three questions about the influences on recycling behavior or lack thereof; School, Family, Peers (questions 15-17). This data was used in a two way chi-squared analysis (full results in Appendix F). When looking at the results only the question relating peer influence on participation in or lack thereof in recycling shows a significant relationship with gender (result of 11.938 is above the 11.07 threshold with a 0.05 alpha). It is a small significance with a Cramer's V of 0.1402 which is significantly greater than 0. Cramer's V is a measure of effect size, and effect is quite small but could be worth further study. These findings conflict with what Vermier (2009), found regarding social pressures and recycling. Further statistical analysis of the data is hindered by the poor response rate.

The principal question of concern is; what are college student attitudes and behaviors related to recycling? The majority of college students (51%) recycle as much as possible with only a small portion (9%) saying they do not recycle at all. When this small percentage were asked why they do not recycle; lack of awareness of the recycling opportunities and not having room to store recyclables are given as the two main reasons for not recycling.

The students that do recycle do not appear to choose one commodity over all others but do recycle all of the main categories, paper, cardboard, plastics, metal, and

glass. Respondents repeatedly stated that recycling and recycling awareness is very important, as is evident in the responses to the final item in the survey asking respondents to share any final comments about recycling. The respondents appear to be in favor of curbside recycling, even at a small fee. The majority of respondents redeem the deposit from deposit containers and support expansion of the bottle bill to include more containers. The 76% of respondents that redeem deposits is only slightly below the state average for Iowa which is 86% according to the Container Recycling Institute (2013).

A large portion of respondents use the on-campus recycling opportunities available to them. Several respondents indicated a need for more on-campus recycling locations and a wider variety of materials to be accepted. Those students who didn't use on-campus recycling either did not know about the opportunities available to them or used off-campus options. It is apparent that increasing awareness of on-campus recycling opportunities would be of benefit at each of the institutions.

The two most popular rationales for recycling were to save energy and resources, and because it is the socially responsible thing to do. These results support Hansmann et al. (2006) belief that energy conservation is a motivator for recycling This could offer a means of improving existing recycling programs by displaying the amounts of energy and resources being conserved for each item recycled or how much has been conserved in the past year based on the volume of materials collected. Another potential means of expansion of recycling participation would be the use of social media applications to increase awareness of opportunities and activities related to recycling. Respondents

indicate that in class and extracurricular learning opportunities where recycling is a topic are not prevalent at any of the three institutions.

It does not appear that there is a difference in attitude between the students of each institution, however the less than ideal response rates make answering this question with any statistical significance difficult. This does provide an opportunity for future research.

Determining a difference in attitudes across age ranges is also made difficult by the lack of responses. This is a subject worthy of further research because as Hansmann (2006) points out demographic influences have been inconsistent.

As with age, determining differences across classifications, across majors and in comparable majors across institutions is made difficult by the low response rate. Again these are areas that should be further explored in future research.

This study was designed to minimize bias as much as possible however, there appears to be an area of potential bias. When examining the responses to the question related to major, a large portion of respondents indicated Behavioral Sciences. This is a field where surveys are often employed in research and these individuals are taught the importance of surveys, which may account for their participation and may introduce some bias to the study.

Based on the results of this study, it would appear that the college student attitudes and behaviors relative to recycling are positive. The data does give a clear indication of the respondents' attitudes and behaviors relative to recycling. This study

provides an excellent starting point for further research into the attitudes and behaviors of college students related to recycling.

Recommendations

Institutional

This study clearly points out a need for all three institutions to consider adjustments to their recycling education programs. All three institutions could benefit from a liberal arts core course focusing on environmental issues and recycling. A recycling education program should be developed to show students the connection between environmental concern and recycling. This program could encourage student involvement in recycling through competitions, and displays (showing how much has been recycled in the last semester and/or how much energy or raw materials have been conserved). On-campus recycling opportunities need to be made more visible, in dorms and public spaces.

Future Research

It would be quite easy to dismiss the data from this study as meaningless due to the poor response rate. This would be a mistake, some data is better than no data and as stated earlier this study is a very good starting point for further research on the college student demographic and recycling.

In future research the response rate for the survey needs to be improved greatly. There are multiple ways this can be done but of paramount importance is that students be contacted directly via email preferably without going through second or third parties or a newsletter format. It is apparent from this study that those students contacted directly by

email participated more than those contacted through a weekly newsletter. Another option to improve response rate would be to offer some incentive or prize for participation, however this complicates confidentiality concerns and adds in a need for funding for the research which may not be readily available. Making these adjustments could also serve as a means of mitigating the bias indicated earlier in that by ensuring students of all majors receive the survey rather than just those whose departmental contact forwarded the email to. Another means of combating the low response rate would be to switch to a stratified sampling method, thus ensuring a more demographically representative sample.

The collection of demographic data can be an excellent tool in this type of study as it offers a means of comparing the sample to the overall population and as Lee (2008) points out this data is very important for recycling studies. Institutions of the type used in this study collect and provide much of the demographic information that that was collected in this study. It could be of some interest to focus in on specific demographic areas in future research. Gender may influence recycling attitudes and behaviors, it might be of use to target specific questions to males and females to further gauge the impact gender may or may not have. It would also be interesting to examine whether males or females have more positive attitudes related to recycling.

Another recommendation for further study would be to compare on-campus respondents with off-campus. This would allow for deeper exploration of the use of on-campus recycling by both groups. Exploring this option would require the assistance of the institutions Department of Residence, to ensure that all on-campus students are

offered the opportunity to participate, and could incorporate a focus group component of data gathering.

Due to the low response rate several of the questions that had such promise were not able to be addressed in this study. In future studies, an examination of differences in attitude due to age, major, classification, or between institutions could be undertaken with an eye on increasing the response rate. In addition further examination of the level of environmental concern and its possible effects on attitudes and behaviors would be worthy of additional study.

The survey itself could benefit from some improvements in future study. One improvement should be to ensure that questions cannot be skipped. This will help to ensure accurate results. Additionally, the commodity of glass should be included alongside cardboard, paper, plastic and metal as materials recycled. The reliability of the survey instrument itself should be examined to ensure accurate responses are being collected.

A final suggestion for future research would be to conduct individual studies at each of the institutions. This would allow for the focusing of resources on each institution in turn. With the use of the same or very similar surveys the results of the individual studies could be analyzed for comparisons between the institutions and provide a much more in depth view of college student attitudes and behaviors related to recycling.

Conclusions

This study was undertaken with the goal of studying the attitudes and behaviors of college students relative to recycling. It is clear from the data gathered that this broad

goal was achieved. Just because a study does not produce the results the researcher expected does not mean the study is a failure. This study provided the researcher with a view of the attitudes and behaviors of college students across three institutions.

In preparing this study much time was spent examining the literature. While there are numerous studies on environmental attitudes and recycling attitudes and behaviors, the college student demographic is woefully under represented. It is the opinion of the researcher that the reason for this is the difficulties of surveying this particular population. College students tend to be very active with little time for surveys, however from the data collected it appears that they are not so busy as to not recycle. It can be difficult to secure the cooperation of the institutions with regards to contacting the members of the population.

The data also give the impression of another possible bias: those students who do recycle are more likely to respond to a survey about recycling than those students that do not recycle. This is a bias that would be very difficult to eliminate. Another surprising outcome of this survey involved the fact that multiple faculty members completed the survey, despite the number of times the term “students” appears in the survey. Their responses were retained due to the extreme difficulty of removing them

The college student demographic remains an important subject of recycling behavior and attitude research. By expanding on this study to ensure better response rates as well as applying the study to other geographic regions, a clearer picture of college student attitudes and behavior can be obtained, and recycling programs and the associated educational components can be improved upon.

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APPENDIX A

INTRODUCTORY LETTER

Greetings,

My name is Mark Wilcox and I am a graduate student at the University of Northern Iowa. I am conducting a study on the attitudes of college students about recycling. I understand that your time is valuable but this study will provide much needed insight that may allow your institution to better meet your recycling needs. This brief internet survey is anonymous and completely voluntary. The survey will take approximately 15 minutes of your time. The results of this study may be shared with interested parties at each of the three institutions being sent this opportunity and you as well may receive the results if you wish. If you have any questions or concerns regarding this study please feel free to contact me via email (mark.wilcox@uni.edu).

If you are willing to share your attitudes about recycling please click the link below and complete the survey. You may exit the survey at any time and your anonymity will be preserved as much as possible. Your participation is very greatly appreciated.

Thank you so much for your time.

Very Sincerely Yours,

Mark Wilcox
Department of Technology
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REMINDER

Greetings,

I am sending you this short reminder note to once again encourage you to participate in the research study of the attitudes of college students about recycling. If you have already participated in the survey, I offer you my thanks. If you have not participated, please click the link below.

Thank you for your time

Very Sincerely Yours,

Mark Wilcox
Department of Technology
University of Northern Iowa

APPENDIX B

SURVEY

1. Choose your institution
    a. Hawkeye Community College
    b. University of Northern Iowa
    c. Wartburg College
2. Do you live _____?
    a. On Campus *response directs to question 5*
    b. Off Campus *response directs to question 3*
3. Do you have curbside recycling?
    a. Yes *response directs to question 4*
    b. No *response directs to question 5*
4. Would you be willing to pay a small fee (less than $5 per month) for curbside recycling?
    a. Yes *response directs to question 6*
    b. No *response directs to question 6*
5. Which of the following statements best applies to you?
    a. I recycle as much as possible *response directs to question 8*
    b. I recycle what is convenient *response directs to question 8*
    c. I do not recycle *response directs to question 7*

6. Which of the following statements best applies to you?
    a. I recycle as much as possible *response directs to question 8*
    b. I recycle what is convenient *response directs to question 8*
    c. I do not recycle *response directs to question 7*
7. Which of the following best describes why you do not recycle? (check all that apply)
    a. I don't have room to store recyclables.
    b. I'm not aware of the recycling opportunities available to me.
    c. I don't have time to recycle.
    d. Other (please specify) _____
8. Do you use on-campus recycling?
    a. Yes *response directs to question 10*
    b. No *response directs to question 9*
9. Which of the following best describes why you do not use on-campus recycling options? (check all that apply)
    a. I use off campus recycling.
    b. I am not aware of the on-campus options.
    c. On-campus options are not convenient for me.
    d. I don't have storage space for recyclables
    e. Other (please specify) _____

10. Please rank in order of importance from most important (1) to least (4) your reasons for recycling.
    a. I recycle to make money (i.e. return deposit containers)
    b. I recycle because it is the socially responsible thing to do.
    c. I recycle to save landfill space
    d. I recycle to conserve energy and resources
11. Which of the following do you recycle on a regular basis? (select all that apply).
    a. Cardboard
    b. Paper
    c. Metal
    d. Plastic
    e. Other (please specify)
12. Do you return your deposit bottles and cans for the 5 cent deposit?
    a. Yes
    b. No
13. Do you support expansion of the Deposit Law to include other beverage containers such as water bottles, sports drinks, etc.?
    a. Yes
    b. No
14. A higher deposit of 10 cents per container would make you _____?
    a. More likely to return all of your containers.
    b. Not change your redemptions habits.

c. Less likely to return all of your containers.

15. My participation or lack thereof, in recycling is most influenced by what I've learned in school.

    a. Strongly Disagree
    b. Disagree
    c. Neither Agree or Disagree
    d. Agree
    e. Strongly Agree

16. My participation or lack thereof, in recycling is most influenced by my family.

    a. Strongly Disagree
    b. Disagree
    c. Neither Agree or Disagree
    d. Agree
    e. Strongly Agree

17. My participation or lack thereof, in recycling is most influenced by my peers.

    a. Strongly Disagree
    b. Disagree
    c. Neither Agree or Disagree
    d. Agree
    e. Strongly Agree

18. How concerned are you about the condition of the environment?

    a. Not at all concerned
    b. Minimally concerned
    c. Concerned
    d. Very concerned
    e. Extremely concerned

Demographics

The following questions will be used for comparison purposes

19. How many years have you been in college?

    a. 1 year
    b. 2 years
    c. 3 years
    d. 4 years
    e. 5 years
    f. More than 5 years

20. What is your classification

    a. Freshman
    b. Sophomore
    c. Junior
    d. Senior
    e. Graduate Student

21. What is your age

    a. Below 18

    b. 18-25

    c. 26-30

    d. 21-35

    e. Above 35

22. Are you?

    a. Male

    b. Female

23. Which of the following most closely represents your major?

    a. Behavioral Science

    b. Natural Science

    c. Math

    d. English

    e. Humanities and Fine Arts

    f. Foreign Language

    g. Business

    h. Education

    i. General Studies

    j. Masters Studies

    k. Doctoral Studies

One last question

24. Please share any other comments you have about recycling.
25. Do you have any questions/concerns with any of the questions or formatting of this survey? (*this question used in pilot study only.)*

APPENDIX C

WARTBURG EXPANDED RESPONSES

Other Comments About Recycling

1. I wish more people had a passion for it. It's so easy to do yet many refuse to think about the consequences of their actions.
2. I think sometimes there is confusion about what we can and cannot recycle. Also I think there isn't enough education about what state recycled items need to be in when they are taken to be recycled.
3. I try to recycle as much as I can and encourage others to do the same. Also, while I think recycling is very important, reducing and reusing containers is really more important. If people didn't use as much stuff, then there would be less going to landfills and less needing to be recycled in the first place.
4. :)
5. Recycling opportunities on college campuses need to be convenient and easy in order to be effective.
6. The more you promote it and make it accessible, the more people are going to recycle.
7. Recycling importance needs to be increased among college students because we are tomorrow's leaders who can make a difference. Another important aspect of recycling students should engage in more often is upcycling.

APPENDIX D

UNI EXPANDED RESPONSES

Reasons for Not Recycling, Other Responses

1. They charge a deposit for cans and I will not give them the benefit of receiving that money and the can, so I throw them away. They also charge me, on my garbage bill, to recycle and that is the other reason I will not recycle. Recycling should pay for itself.
2. Waterloo requires use of yard waste container for recycling.
3. never think of it
4. I try, but no options available

Reasons for Not Using On-Campus Recycling, Other Responses

1. I don't have anything to recycle on-campus
2. I recycle as much as possible at home, but not in cedar falls. It has proven to be difficult.
3. Not on campus often
4. I do not live near campus
5. I'm lazy. Cleaning tin cans and plastic to recycle is too much work on campus.
6. At UNI in the buildings I am in, I have never been able to locate any type of recycling bin other than ones for paper only
7. I live off campus

8. There is no on campus recycling for the apartments and I recycle way too much for it to be convenient
9. It is inconvenient to travel down many flights of stairs to recycle.
10. I don't live on campus
11. Can't find the recycling area.
12. I live off campus.
13. I live off campus. I sometimes use off campus recycling, but not regularly.

Which Do You Recycle On A Regular Basis, Other Responses

1. None unless it's on UNI campus
2. Cans, bottles, etc.
3. Glass
4. Glass
5. Glass
6. tin/aluminum
7. I don’t
8. glass
9. cans
10. glass, tin
11. Glass
12. Dryer Lint
13. Glass

14. Tech
15. glass
16. Glass
17. glass
18. glass
19. Glass,
20. Everything that can be
21. Everything I can pretty much
22. tin
23. soda cans/bottles
24. glass
25. Glass
26. Glass
27. glass, wax, and corks
28. Glass
29. glass/bottles
30. Batteries
31. glass, plastic grocery bags
32. glass
33. tin (cans)
34. Cans, aluminum and tin.
35. Glass

36. Glass
37. aluminum
38. Glass
39. glass
40. glass
41. glass
42. glass
43. Glass
44. Bottles and cans
45. Glass
46. Glass
47. Newspapers and glass
48. Cans

Other Comments About Recycling

1. The main reason I do not recycle is because I am tired of the Government raising taxes. If they think I am going to pay a deposit on a coke can and then put it their recycle bin for them to profit, then they dumber than I thought. However if the deposit was raised to 20 cents, and the ridiculous rule of not being able to return crushed cans was repealed then I would probably return them for the deposit. I do recycle cardboard, newspaper, etc. to reduce the cost

associated with garbage collection, or use common garbage cans located at businesses.

2. I like to recycle.
3. In my opinion, UNI's recycling program is sub-par. In my experience, the school does not actively promote recycling and does not make recycling readily available in many of its buildings.
4. I have been recycling since I helped create the Environmental Action Center in La Canada, California in 1969. BTW, your last set of questions was aimed only at students. I am a faculty member. Should I have been filling this out?
5. I think recycling is a good thing, but where I'm from you can take it to a place to recycle. Here in cedar falls, I am not willing to pay for something I believe should be free, but also I have 2 jobs and go to school full time, as well as take a work out class to stay healthy and going on campus to recycle various items has proven to be a hassle, not to mention there is not much space in my duplex to store the items that need to be recycled.
6. There needs to be more recycling containers around campus, especially in computer labs.
7. I used to recycle my pop bottles, cans, and paper but since I live in a one bedroom apartment, I don't really have room or time to find some place to recycle my paper products at. Additionally, I watched a documentary on how most of the things that people try to recycle aren't able to be recycled anyway. I would probably recycle again if I knew more locations to recycle and they

were reasonably conveniently placed but right now, much of the recycled materials end up in my trash can because of the mess they're creating in my apartment. It'd be nice if campus had one of those drop off bins for recycling. I'd definitely bring stuff there.

8. I wish there were more easily accessed recycling locations near my residence.
9. People need to stop littering and more people need to recycle
10. Love it! Especially paper and deposit can returns
11. starting kids early, will only make it easier to get them to do it throughout their life. Becomes habit.
12. I grew up in a small town with curb-side recycling. Recycling is difficult in Waterloo. I live in an apartment that does not provide recycling services, and I have to find space to store my recycling. The city drop offs are often filled or over-filled, and can machines often reject products making it a hassle.
13. everyone should do it
14. Environment, Technology, and Society at UNI is a great class to learn about recycling
15. Would it be better to burn our garbage as fuel? Some places do this effectively.
16. I very much enjoy recycling and I try m y best to do it often and to persuade my peers to do the same.
17. I lived in Wisconsin, where it is M ANDAT ORY to recycle everything that you can possibly recycle. in our area, we could only use clear garbage bags, so it could be determined if you were throwing away recyclables. We did not get

deposits back on cans, but mandatory laws on recycling coupled with clear garbage bags for accountability goes a long way to get people to recycle. T hen, after moving back to Iowa, we've continued the practices we started in Wisconsin -- it just makes sense and have less trash every week. I have been terribly frustrated with the lack of recycling options at UNI... Either I have to carry the containers of things I drink throughout the day back home to recycle or throw them in the trash, which makes me cringe.

18. I think it’s something everyone should do, and there honestly isn't a legitimate reason not to recycle.
19. Cedar falls does not advertise a city recycling program. If they do it is not advertised well.
20. Cedar Falls does not offer a free curbside pick-up. It is hard, as a college student, to pay for recycling when one already pays for trash rem oval through CFU is absurd.
21. If cities want citizens to recycle there shouldn't be a charge for recycling.
22. Just to clarify, I don't usually drink soda, so I don't have any 5 cent deposit types of cans/bottles to recycle.
23. I think curbside recycling is the only way to get everyone to recycle. I don't participate in bottle or can refunding because I do not like to accumulate mountains of "junk" at my home.
24. Your question #7 did not allow me to rank my preferences. It filled them in and did not allow me to choose. Just wanted to let you know.

25. Cedar Falls has great recycling facilities, however I think they should begin free curbside recycling where the cost is figured in to utility cost. It is more convenient to set a container outside your door then drive to Fareway or the transfer station, so more people would recycle. Plus many college students who live off campus with no vehicles have limited access to recycling (think Hillcrest or thunder ridge apartments).
26. I would definitely recycle more if grad student housing (Hillside/Jennings) provided a facility for recycling. I recycled everything when I lived in the dorms! In my hometown we have curbside recycling pick-up, so it's very easy and convenient.
27. The decision to recycle is not a choice. It is the only logical and responsible thing to do. I have been actively recycling for over a decade and when I see the difference it has made I am encouraged that I can make such an impact. When you can see how much waste we as individuals make it's shocking, I am unwilling to contribute so much trash. I am also a mother and my children (6 & 10) have been recycling their entire lives. This makes me proud because they know no other way to live. It feels like a good start. Have and great day and good luck on your project :~)
28. I wish that more apartment buildings offered recycling. It is difficult to properly recycle when you have to transport the materials to a recycling facility that will (hopefully) take everything (this including cardboard, all plastics, metal, batteries, etc.). Making a special trip (on a relatively frequent

basis) can prove exhausting and lessen the likelihood of recycling by this population.

29. Recycling, although it may not seem like a big deal on a personal level , on a nationwide or global level, it is a big deal , along with the many other things we could be doing to help the environment in the process.
30. I think students are more likely to recycle when it is more convenient for them. (For example: having recycling bins in the dorms) UNI is very good about providing those services.
31. I recycle everything possible! I feel terrible when I have to toss something that could have been recycled at one point but has gotten to the point of destruction. Recycling is a passion of mine that I inform as m any others as I can about it! It is also an easy concept that hopefully everyone can someday become a helping hand in the process.
32. If it's going to take more effort to recycle than throwing something away, then I will probably just throw the item away.
33. Where I live, in a big city, there is no recycling available. 2 minutes away, in a small town, they have recycling options every week! I want to change that.
34. It is time consuming and I don't have much space so I recycle the easier things.
35. My Mother works for a non-profit organization that employs intellectually challenged individuals. The organization is my home-towns recycling center.
36. I recycle beyond my own accounts...I recycle for my roommates & family in town. Yet it is still uncommon for others around me, recycling should be an

easier thing for those who do not care or are just too lazy to do via (free) curbside recycling, sorted garbage collections, all plastic deposits required, closer recycling dumpsters, etc ... unfortunately.

37. There should be a law requiring all homes to recycle, or at least have a curbside re1cycle service like stated in the survey.
38. I have worked for and heard many stories about large corporations who do not recycle and they print thousands of papers a day. Due to the multitude of this I feel that whether I recycle my two pieces of paper a day makes no impact.
39. Thank you for doing research on this topic! It is my opinion that this needs to be comfortable and familiar to all our citizens.
40. I feel like we the environment is so important yet we, as humans, seem to just keep making it worse and worse. I'm glad that people are concerned, and yet sometimes I feel it is not enough. In school we talked a little but not much. I learned a lot from doing a report on polar bears. In college I have not talked about the environment once. This needs to change, maybe it's my major, and the fact that I transferred in as to way I have not talked about the environment while a student here at UNI.
41. waste of time, as it has no significant impact
42. I wish it was more convenient to recycle and there were more places for me recycle pop cans and bottles on campus.
43. I recycle more often when it is convenient. I know there is a set up in some towns that sort the recycling for you if you separate recyclables from trash

before-hand. I think that if towns wish to make recycling more common, they should raise the income from recycling bottles. Another option that would open job opportunities is that towns could set up the recycling truck as I mentioned earlier. Works just like a garbage truck, but recycling only.

44. I know that there are opportunities on UNI's campus to learn about recycling although I have never been able to participate. I currently live off campus and am completing an internship which is also off campus. Because of this, I rarely go to campus where it would be easy to recycle but the process of storing those materials and then transporting them to campus is not convenient. Whereas it is easy to take cans in for redemption because it's available where I buy my food.

45. I recycle as often and as much as I can, and often it can become really difficult when you live with someone who does not seem to care or figure he can't make a difference. He doesn't see the value in being sure to recycle one item, so he makes jokes about it instead. It can make it tough to recycle or try to make a difference when you have someone that you feel is undoing everything you work towards.

46. I feel that recycling is a very important thing to do. It disgusts me when people throw things away that are perfectly good to be recycled and used again.

47. I would love to see curbside recycling in Cedar Falls!

48. I think as young people, it is our job to recycle and be productive in reducing the amount of waste we contribute to the world's landfills. However, as someone who lives off campus it isn't very convenient to recycle, because the recycling center is far from my home. I wish I was more familiar with the options on campus, because that is closer to my apartment.
49. Recycling is the right thing to do and everyone should recycle as much as possible. We only get one earth so we might as well save it.
50. I wish all cities would have recycling available for free. I know that in a city in TN where my family lives, it cost money for them to recycle, so therefore they have chosen not to recycle and when I found that out I was disappointed since I generally do recycle a lot when I am home.
51. It is a great idea that can help slow the filling of landfills.
52. I don't think UNI is doing enough to make recycling easier on campus.
53. Though I answered honestly, I also think that my participation in recycling depends on the day. Some days I recycle everything, and some days I don't recycle at all. I think that affects my answers some.
54. I wish Cedar Falls, and especially my apt complex, had curbside pickup and you did not have to drive and sort all the materials
55. I think it is a good way to reuse things that we already made and keep them from harming animals/the environment further.
56. Just do it. ~Nike

57. I don't know that this pertains to the purpose of this specific survey, but compared to the system of recycling that I had in my hometown, Cedar Falls' is quite a hassle. I would imagine that's the reason most of the people in the area that don't recycle fail to do so. As I said, I'm not sure if that's relevant. Good luck with your work!

58. I feel as though more people should recycle, but are too lazy to do so. I believe if students could see the direct consequences of not recycling they would do it more often. Most of the time students don't think that recycling doesn't directly affects them, so they don't care about it.

59. I fully support recycling, and I actually hate it when people throw away things that should be recycled. Your survey allowed me to realize my main reason for doing this stems from my family being pro-recycling. Thank you!

APPENDIX E

HCC EXPANDED ANSWERS

Reasons for Not Recycling, Other Responses

1. Because it sucks
2. My apartment complex (Hawkeye village) doesn't offer recycling opportunities
3. I burn all waste products
4. I don't have a recycle bin and the city should be incorperating it into their city. Dubuque does and there is no fee.
5. Not convenient
6. I'm lazy and the trash bin seems simpler then the process of recycling
7. I have enough schedules to keep track of the city's recycling scheduled is not one I find very important. If it was every week I would have no problem recycling.
8. There is no separate place to but plastics and cardboard at the Village Apartments across from Hawkeye otherwise I would
9. None of your apply. I do recycle.
10. I'm a troll so I don't recycle
11. The apartments I live in don't have recycling so it hard for me to take my recycling into the recycling center
12. My apt complex doesn't have a place for recyclables
13. I don't have the funds to purchase the container needed/required.

Reasons for Not Using On-Campus Recycling, Other Responses

1. I am never on campus
2. I'm too lazy...
3. I am an online student
4. I don't live close to on campus facilities
5. Home town recycling sites
6. Don't live on campus
7. I rarely use the vending machines.
8. What I know of recycling the cost goes to the consumer and all the profit is raked in by the company providing the bins or pickup service.
9. I don't really think about it
10. Online classes
11. I don't go on campus.
12. I live off campus and do not bring my items to campus
13. I have nothing to recycle while on campus.
14. I do not live on or near campus.
15. I don't live on campus
16. Campus is too far away
17. Fuck recycling
18. I take my classes online.
19. I'm not on campus. I'm a web based student.
20. Most janitors don’t recycle what’s in the bin

21. I live off campus in a house.

Which Do You Recycle On A Regular Basis, Other Responses

1. Pop Bottles
2. Glass, Cans, Clothing (Goodwill)
3. Wood
4. Glass
5. Aluminum /tin cans
6. Light bulbs, clothing,
7. Pop cans
8. Glass occasionally
9. Carbonated/alcoholic drink containers
10. Glass
11. Cans/Bottles
12. Glass
13. Glass
14. My husband makes me recycle at home.
15. Glass
16. Pop cans
17. Glass
18. Paper at school and can at my apartment
19. I usually take a load of cardboard to the landfill

20. I make makeshift ashtrays out of old plastic bottles for my car

21. Cans

22. I don't. There's no convenient way to recycle in Waterloo

23. Glass

24. Glass containers

25. Glass

26. Shopping bags

27. Glass

28. Glass Bottles

29. Nothing

30. Boxes, electronics, yard waste

31. Pop bottles or cans

32. Glass

33. I buy and sell or give away used office and other furniture when I can.

34. Foil

35. Glass

36. Cans

37. Cans

38. No

39. Glass

40. Glass when possible

41. Glass, Appliances, Batteries

42. Furniture

43. Car parts

44. Clear glass, grocery bags

45. Glass/cardboard

46. Glass

47. Glass

48. Aluminum cans

49. Pop cans

50. Glass

51. Glass

52. Pop cans

53. Cans, glass

54. Pop cans

55. Pop bottles

56. Glass, garden waste

57. Aluminum (cans)

58. Cans/ bottles

59. Glass

Other Comments About Recycling

1. N/A
2. Cedar fall s needs to have a clearly defined space for Styrofoam.

3. I believe that recycling is the responsible thing to do. Conservation and efficient use of resources is important. But I do not think it should be an agenda that is assumed cheaper. When private sector companies can make it profitable then the masses will jump on board. As of now it is still a fiscal burden on my municipalities, an agenda pushed by environmentalists; for a conservationist it would see the need for responsibility in resources and finances.
4. Should be more laws.
5. I wish I could recycle more often, but I do as much as I can! I'm in total favor of recycling.
6. It would be nice to see more recycling containers in the classrooms at Hawkeye. I have seen one but for only white paper. There are many times students have tons of recyclable waste from the vending machines that is going into the regular trash. It makes me ill .....
7. I would like to see a day, once per month that there is a recycling activity on campus, and a clean-up campus day during the fall & summer months. i.e. warm months.
8. I feel recycling is a good habit to get into
9. Recycling education is something I feel should be strongly instilled in our children all through school and encouraged at home.
10. At our house, we burn everything because we live outside city limits and it gets quite expensive to pay the city to come out and get our recycling. So, it is safe to say, if the bill would be lower, we would most likely recycle everything we could.

11. Recycling is an extremely underutilized source of materials. It should be something that people must participate in, unless I am the only person concerned with the wellbeing of my great great great great great great grandchildren... There is a quote that goes a little something like this "If we are alive in 200 years people will not think like we do nor could they afford to do so"
12. I believe I was most strongly influenced by my family. I have tried to uphold my commitment to recycling in college but it is harder with lowered access and my roommates not recycling. I've tried to get them to recycle which has been somewhat successful.
13. There needs to be more recycling receptacles so people can have more opportunities to recycle.
14. Would like to see it happen in our community. I am not aware of any building that exists for recycling if there was people would be more apt to recycle if they had containers and it was picked up curbside on their garbage day. I am surprised with a town this side with an adjoining community it has not already done so.
15. Recycling is a very important topic that needs to be discussed more to our society, especially our youth. They are our future. Programs in schools, teaching life, resources, and preservation. That combined with more effective ways of recycling. Curbside recycling programs. Weekly recycling trucks. I however, will be looking into electronic recycling. Show me the gold and silver. Go Planet!

16. I have been recycling with my parents since the 1970's, we were the first in our area that did so. I took Environmental Science last year, and it made me proud of my recycling background, and I learned more about it. Thanks for the great class!
17. Curbside for residential areas would help people recycle
18. Recycling is very important for us and our kids
19. I think more effort should be put into unveiling infinite energy and its source, aesthetic , and function
20. I live with 3 other roommates currently and we try to recycle as much as possible. We have a big bin for cans and bottles and a big box for cardboard and paper, and my sister and I make a run to the transfer station or redemption center usually when they get pretty full! We also try to save any glass bottles we can, but I think that it's harder to deal with so it's less of a concern for us, but I feel like it should be the most concern since it's glass.
21. I grew up in a different country where recycling pickup was free - for paper and plastic - everyone in the large apartment complex participated, not just because this was the right thing to do, but al so because it was convenient. If this was offered in our city (free recycling pickup) more people would do it, some just do not have the extra time to drive to the recycling centers that are available
22. Corkery waste will take care of your recycling needs... at a cost to you. The consumer pays for the packaging when he/she makes a purchase, then the consumer pays a fee to have the trash pi c ked up, if the consumer wants to recycle he/she has to pay for containers and additional pickup fees. The consumer

takes the time to clean sort and store recyclables. I think the focus should be spent on making the manufacturers change their packaging so less waste material is generated and the manufacturer/producer should share (a significant percentage) of the cost of recycling.

23. Everyone should do it!
24. I feel people would recycle more if it was more convenient for them, like the city adding curbside recycling services.
25. I love and enjoy recycling
26. Recycling is something more people need to do
27. It’s the right thing to do.
28. Everyone should be doing it!
29. Recycling is healthy for the environment.....
30. None at this time.
31. I started recycling about 3 years ago. Before that, I only returned cans and bottles for the deposit. Now I recycle all cans and do not bother to take them back. My recyclables are picked up every three weeks. I store what I have collected in my basement until it's time to fill my container. It is usually all the way full. I wish I could recycle my glass in there. Some friends that live out of state tell me they have their glass pic ked up. I end up throwing mine away and it makes me feel bad but I don't like taking it back. At places around town where you can just put it in a recycling container, they take green glass, but not brown. I wish there was an easier way to get rid of my brown glass.

32. I think curbside recycling should be a part of our normal garbage pickup and fee
33. My husband grew up with recycling as important. I grew up with recycling as not important.
34. I think if the government made recycling more of a rewarding action to society more people would be inclined to do so...and to make it easier to recycle i.e. locations, hours.. etc.
35. Save the earth recycle!!
36. I think everyone should recycle because it helps the environment and the animals and basically everyone and everything.
37. Recycling is important but I don't always do it
38. I do not take my cans or bottle back because of storage and the mess. if they allowed us to crush our cans I would probably start taking those back.
39. I visited Seattle, Washington over this past summer and it is l aw that there is to be multiple "garbage" containers labeled for recyclables, non-recyclables, and leftover food. I think that would be beneficial for multiple states if not the entire United States also the can deposit thing would be phenomenal for more if not all states.
40. I take recycling to the recycling thing behind the carpet store, but the stuff store in waterloo when I have time too.
41. I know it is a good thing to do and yield pollution with, but I find it easier to throw pizza boxes away than send them to a Recycling center

42. I share a dorm with another person and our recycling habits are very different. She doesn't recycle anything and just throws it away whereas I use the recycle bin. I told her that I would take out the bin if she used it but she continues not to. This surprised me because I had never met anyone who wouldn't recycle if it at least was more convenient.
43. If Waterloo had a dedicated curbside recycling bin/service I would have no problem recycling.
44. It is selfish to not recycle. Too many lazy people in this world.
45. Something needs to be done with water bottles I bicycle on the trails an if I could pick-up all the bottles I would be rich.
46. Help the environment.
47. I believe that recycling is a great thing and it should be shared and taught more to our younger generations.
48. Recycling is more than just keeping material out of landfills. It saves natural resources, has a positive effect on the environment and community saves money. It is a positive thing all around and too few people realize the importance in recycling, conserving resources, and caring for the planet that gives us life. We should care and take action, or how long we can live on this planet will be lessened.
49. Saves money, less garbage and best for our environment a win-win! We do not pay garbage pick-up; at home we recycle almost everything we almost do not

have garbage. We make a trip to the landfill to dispose the left over. Old clothes we take to Salvation Army or Saint Vincent of Paul.

50. I believe if recycling of different types of material (glass, other types of plastic, etc.) was more convenient, more people would recycle. In my community, you have to drive to the local recycling drop off point. It is far easier for people to simply toss recyclable material in the trash and move on.
51. It's very important and beneficial to the earth. When garbage is dumped in the ocean those plastic things on pop cans get stuck on dolphins and kill them. Also a pop can, can be thrown in a dump and sit there from 2011 until 2050 and still look exactly the same these materials don't degrade taking up more space.
52. I think more people need to recycle.
53. I think Cedar Falls/Waterloo need to have a co-mingled recycling pick up available in housing types (apartments, townhomes, houses, etc.). Recycling is not hard and I think a lot of the issues lie with the lack of education people have in regards to it. I'm from CO and I've never paid a deposit for plastic items, and everyone recycled. It is just what I am used to. It was definitely a shock to move out here and see the lack of recycling in the community; heartbreaking really.
54. Everybody should be made to recycle if we are going to save the world.
55. I respect the environment and do care for some basic human rights
56. Recycling is good.
57. No comments at this time

58. I really wish it was important for others to recycle! I get weird looks for saving plastic from the day (water bottle, plastic baggies etc.) To take home and recycle. I know I am making a difference however small it may be. If only we had more opportunities on campus. I am so glad they finally got those little recycling bins for us! I am tired of garbage being thrown all over campus. It is up to us, the students, to make the difference. That is why I am so passionate about recycling! I want my children in the future to know they are living in an environment that is safe for their health. I care about the world around me. It takes one to cause a ripple.
59. I am 56 years old and lived in California for 10 years where recycling was part of the community. In large metro areas it becomes a choice between where will you, as a society put your trash, in your streets, yards, water and air or into your economy. Simple decision really.
60. I am actually doing a report in my American Government class about a recycling system that should be offered in America. Thought it was a good idea to get the idea out there, and also influence students to try to get more involved with a greener and cleaner environment. If you have any information or suggestions please let me know. My email address is

    . Look forward to hearing back, thanks and good survey!
61. I would be more likely to recycle more if it were as easy as putting the items, like plastic, cans, and paper out for pick-up and was free or very small fee. I tend to save these items for a long time and then don't know what to do with it.

62. I don't know where I can go to recycle. I have very limited space in my apartment to store things to recycle.
63. It would be a lot easier if the City of Cedar Falls would establish a free or relatively cheap curbside recycling
64. I recycle whenever possible and you really don't have my age group listed, so I picked the closes to my age. I am a few years older.
65. If there were more opportunities to recycle I would but there is no separate place to put them where I live (Village Apartments) otherwise I would, so it all just goes together
66. I think it’s pretty cool
67. Everybody should recycle
68. When I was a child I did not live in a community where recycling was taught. The one recycling center we had was filled with garbage. I was not taught.
69. I think that more people should learn about recycling! It would be really smart if we started really pushing it in high school because then when they continue to college they will already know and teach others about recycling.
70. I recycle because I choose too. I wasn't influenced by anyone. I know it's the right thing to do so I do it!
71. Sorta makes me more of a hippie..
72. After taking environmental science, my whole aspect on recycling changed. We recycle everything we possibly can and also reduce and reuse as much as possible.

Everyone should be required to take a course that discusses serious issues such as: recycling, preserving resources, and protecting our environment.

73. Hawkeye should have more opportunities to recycle. If there isn't a $0.05 refund then there isn't a container to place your plastic bottles. My town doesn't have curbside recycling pick-up. I have to drive my recycling in to the bins by Stuff in Waterloo. It is a pain. We still do it but it would be nice if it was easier. Thanks!
74. I believe recycling is a simple way to save our environment and wish more people would do it.
75. In my previous residence, we recycled everything we could. Now that I am back living with my parents, we generally only recycle newspaper and cardboard, plus take back cans and bottles. When I move out into my own household again, I will go back to recycling as much as possible again.
76. I always try to encourage others to recycle and pass on the benefits of recycling!
77. Recycling would be easier to do if more containers were made available besides a trash can.
78. Should be done daily.
79. I think that smaller towns such as Jesup and Independence need to be brought in towards recycling with the bigger cities. If everyone would expand their thinking and work together we can recycle so much more things, since home waste is not recycled or required to be and I think it should be.
80. I wish there were recycling receptacles for paper, plastic and metal products on campus.

81. I wish there was a way to encourage others to recycle more. I have many classmates that don't even make the effort to recycle their pop cans.
82. We need to make recycling bins available everywhere in the community, and to continue to teach everyone to use them. Good luck with this project.
83. Several years ago, I worked for the Department of Natural Resources. The Waste Management Authority Division, one of my budget & grant reporting areas gave grants to local governments to institute recycling & other waste reduction programs.
84. I feel that the only thing that is holding back our increase in bottle raises is that everyone is getting too greedy on how much their percentage will be within the process. I feel that everyone should have a moral duty in wanting to help save our environment and a more of an incentive would help our society to help in this process. People today no longer cares about the environment unless they know the real impact it has on them alone as individuals.
85. I don't have any regarding recycling but question # 7 will not let you change any of the answers to what you want so you survey will be off.
86. Hawkeye is horrible for recycling. There are not enough recycling containers on campus, and the ones we have do not have instructions on what can be recycled. Most the trash can be recycled!
87. Go green
88. Things needs to change
89. I wish more people would get involved with it.

90. It needs to be done more often and by more people.
91. I live in another town and because the curbside recycling is every other week and it accumulates, I have to bring it down to the Cedar Falls location. They have a wonderful facility and it should be more advertised so people know exactly where it is and the hours. I believe that more people would use it if they only knew how easy it was. Maximum of 5 minutes is all it takes.
92. Recycling: Everyone should do it!
93. I would recycle a lot more at school if they had recycling bins in every class room. I've only seen them in the library.
94. I believe that recycling helps people with be aware of their environment and how they can help the landfills.
95. I realize that recycling can a commodity, but how much of what people recycle actually gets recycled? My issue with recycling is that there is not enough to recycle to make any noticeable impact, thus what is the point?
96. Most of my recycling habits is determined by convenience. I live in the country so for me to recycle I have to make sure I hit the recycling center within business hours which is not always easy when you work full-time and go to school full-time.
97. I grew up recycling things. In my country recycling was important and by law, I cannot mix the plastic, cans, glass with other kind of garbage. Al so the importance of recycling was taught at schools, and through TV.
98. I wasn't aware that HCC had any recycling options, this is new news to me.

99. I try to recycle as much as possible but it doesn't always happen, but I try.

100. I think there needs to be more education presented to people about the topic because people are not aware enough of how much recycling can help benefit our environment and world.

101. More programs should be adopted in this state

102. REDUCE, REUSE, RECYCLE!!!!!!

103. My wife and I started to recycle to cut down the amount of garbage we had. We went from having to put out our garbage for pickup from every week to every other week.

104. I believe recycling is pretty important for our communities to participate in. I have been interested in recycling at home for a while now but the information on doing so is not as readily available as it should be.

105. I would love to recycle paper and plastic and cardboard. However, there is no at home pick-up from my apartment. So, I have to pick what I want to haul to the recycling centers.

106. Go Green!

107. I think that if more people don't start recycling, the world is going to be in big trouble by the ti me our kids and grandkids are adults.

108. The wife set it up. I do it because it is there.

109. There is way too much politics and opinions in the whole recycling, green energy debates. We need to be concerned but too many people are pushing

agendas and not truths. Also for recycling to work it must be convenient and cost effective.

110. Our family of four does not use the curbside pick-up. I drive to the recycling facility and do my own sorting there. We also TerraCycle. I could not get the 1-5 rating to work so all my answers came out in order, 1,2,3,4,5.

111. None

112. The curbside recycling in Waterloo is not enough. They only pick-up once a month I recycle enough I could use two pick-ups a month. And I only have a two person household. Larger households should have more need for more pick-up.

113. My apartment personally uses all bottle and can recycling through the homeless. It is a concern. It would be fantastic if those pesky water bottles had a reward or on the other end of the spectrum a BAN.

APPENDIX F

MINITAB RESULTS

Tabulated Statistics: Gender 0 is male, School Influence

1 Strongly Disagree
2 Disagree
3 Neither
4 Agree
5 Strongly Agree

```
Rows: Gender 0 is male   Columns: School Influence

       -   1    2    3    4   5  All

0      0  23   34   61   52   8  178
1      2  37  111  143  108  28  429
All    2  60  145  204  160  36  607

Cell Contents:      Count


Pearson Chi-Square = 7.283, DF = 5
Likelihood Ratio Chi-Square = 7.866, DF = 5

* WARNING * 1 cells with expected counts less than 1
* WARNING * Chi-Square approximation probably invalid

* NOTE * 2 cells with expected counts less than 5


Cramer’s V-square  0.0119979
```

Tabulated Statistics: Gender 0 is male, Family Influence

```
Rows: Gender 0 is male   Columns: Family Influence

       -   1   2    3    4    5  All

0      3   9  14   38   82   32  178
1      2  34  53   81  172   87  429
All    5  43  67  119  254  119  607

Cell Contents:      Count


Pearson Chi-Square = 7.833, DF = 5, P-Value = 0.166
Likelihood Ratio Chi-Square = 7.818, DF = 5, P-Value = 0.167

* NOTE * 2 cells with expected counts less than 5
```

Cramer’s V-square 0.0129039

Tabulated Statistics: Gender 0 is male, Peer Influence

Rows: Gender 0 is male   Columns: Peer Influence

	-	1	2	3	4	5	All
0	0	36	44	66	29	3	178
1	1	45	127	162	80	14	429
All	1	81	171	228	109	17	607

Cell Contents: Count

Pearson Chi-Square = 11.938, DF = 5
Likelihood Ratio Chi-Square = 11.708, DF = 5

* WARNING * 2 cells with expected counts less than 1
* WARNING * Chi-Square approximation probably invalid

* NOTE * 3 cells with expected counts less than 5

Cramer’s V-square 0.0196675

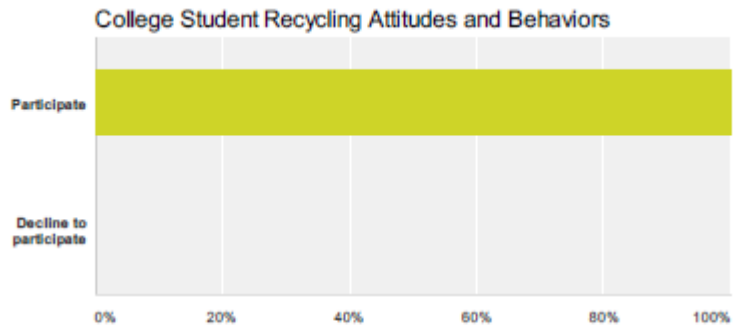
APPENDIX G

WARTBURG FULL SURVEY RESULTS

College Student Recycling Attitudes and Behaviors

Q1 Greetings, My name is Mark Wilcox and I am a graduate student at the University of Northern Iowa. I am conducting a study on the attitudes of college students about recycling. I understand that your time is valuable but this study will provide much needed insight that may allow your institution to better meet your recycling needs. This brief internet survey is anonymous and completely voluntary. The survey will take approximately 15 minutes of your time. This study has risks no greater than those of day-to-day life. You may not receive any direct benefit from participating in this study. The results of this study may be shared with interested parties at each of the three institutions being sent this opportunity and you as well may receive the results if you wish. Your confidentiality will be maintained to the degree permitted by the technology used. Specifically, no guarantees can be made regarding the interception of data sent via the Internet by any third parties. If you have any questions or concerns regarding this study please feel free to contact me via email (mark.wilcox@uni.edu). You may also contact Anita Gordon, the UNI IRB administrator by phone: 319-273-6148 or E-mail anita.gordon@uni.edu. If you are willing to share your attitudes about recycling please click the link below and complete the survey. You may exit the survey at any time and your anonymity will be preserved as much as possible. Your participation is very greatly appreciated. Thank you so much for your time. Sincerely, Mark Wilcox Department of Technology University of Northern Iowa

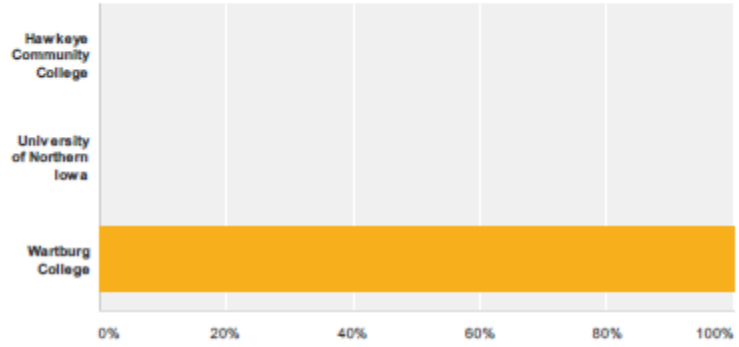
Answered: 34 Skipped: 1



Answer Choices	Responses	
Participate	100%	34
Decline to participate	0%	0
Total		34

Q2 Choose your institution.

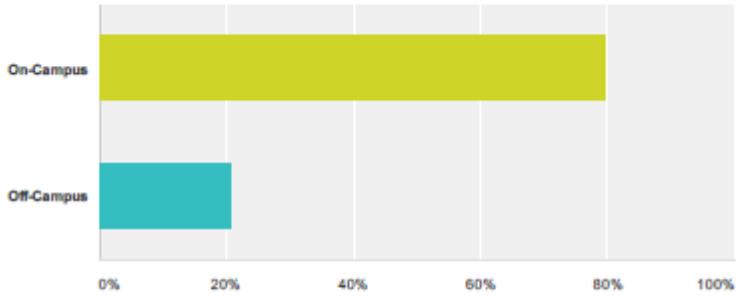
Answered: 35 Skipped: 0



Answer Choices	Responses	
Hawkeye Community College	0%	0
University of Northern Iowa	0%	0
Wartburg College	100%	35
Total		35

Q3 During the academic year do you live_____?

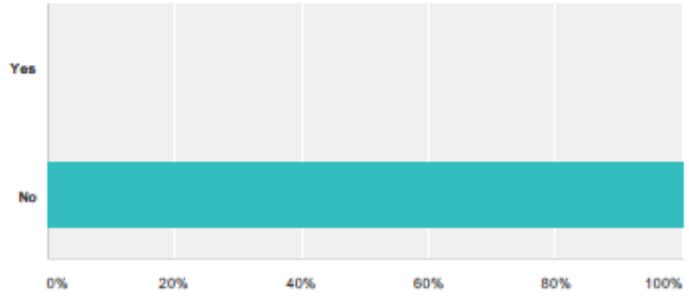
Answered: 34 Skipped: 1



Answer Choices	Responses	
On-Campus	79.41%	27
Off-Campus	20.59%	7
Total		34

Q4 Do you live on UNI's Campus?

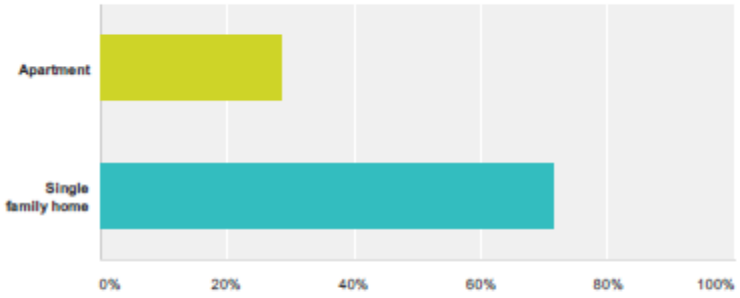
Answered: 34 Skipped: 1



Answer Choices	Responses	
Yes	0%	0
No	100%	34
Total		34

Q5 Which best describes your place of residence?

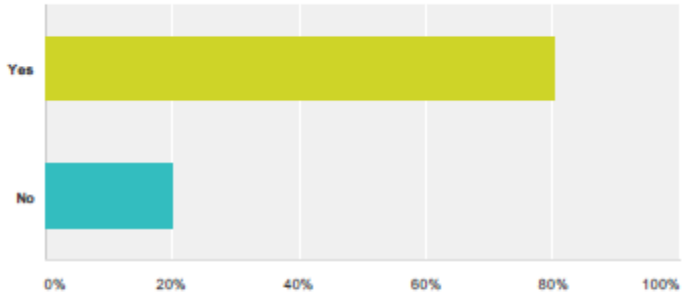
Answered: 7 Skipped: 28



Answer Choices	Responses	
Apartment	28.57%	2
Single family home	71.43%	5
Total		7

Q6 Do you have curbside recycling?

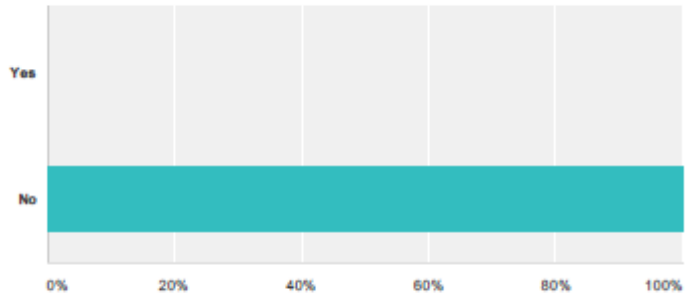
Answered: 5 Skipped: 30



Answer Choices	Responses	
Yes	80%	4
No	20%	1
Total		5

Q7 Would you be willing to pay a small fee (less than $5 per month) for curbside recycling?

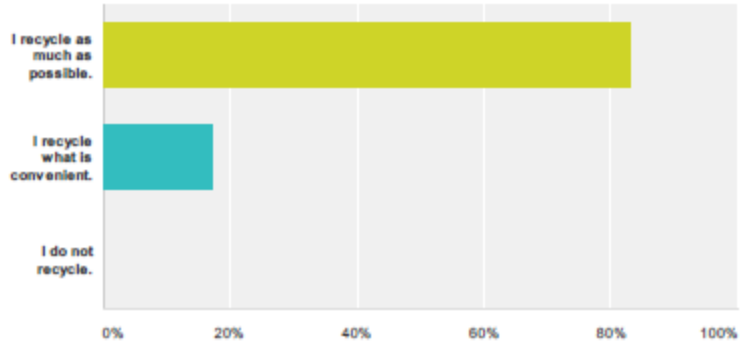
Answered: 1 Skipped: 34



Answer Choices	Responses	
Yes	0%	0
No	100%	1
Total		1

Q8 Which of the following statements best applies to you?

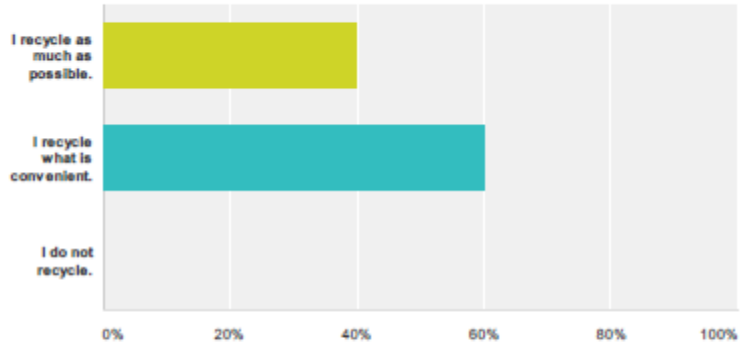
Answered: 29 Skipped: 6



Answer Choices	Responses	
I recycle as much as possible.	82.76%	24
I recycle what is convenient.	17.24%	5
I do not recycle.	0%	0
Total		29

Q9 Which of the following statements best applies to you?

Answered: 5 Skipped: 30



Answer Choices	Responses	
I recycle as much as possible.	40%	2
I recycle what is convenient.	60%	3
I do not recycle.	0%	0
Total		5

Q10 Which of the following best describes why you do not recycle? (check all that apply)

Answered: 0 Skipped: 35

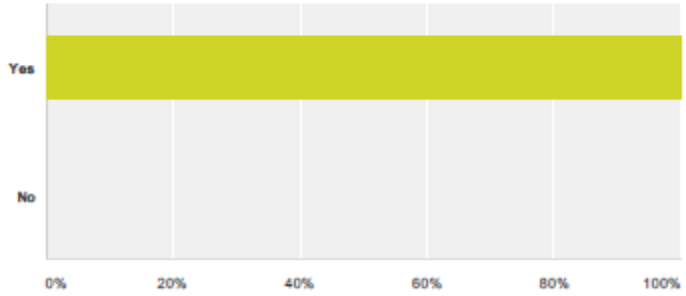
! No matching responses.

Answer Choices	Responses	
I don't have room to store recyclables.	0%	0
I'm not aware of the recycling opportunities available to me.	0%	0
I don't have time to recycle.	0%	0
Recycling isn't very clean.	0%	0
I don't see the point of recycling	0%	0
Other (please specify)	0%	0
Total Respondents: 0		

#	Other (please specify)	Date
	There are no responses.	

Q11 Do you use on-campus recycling?

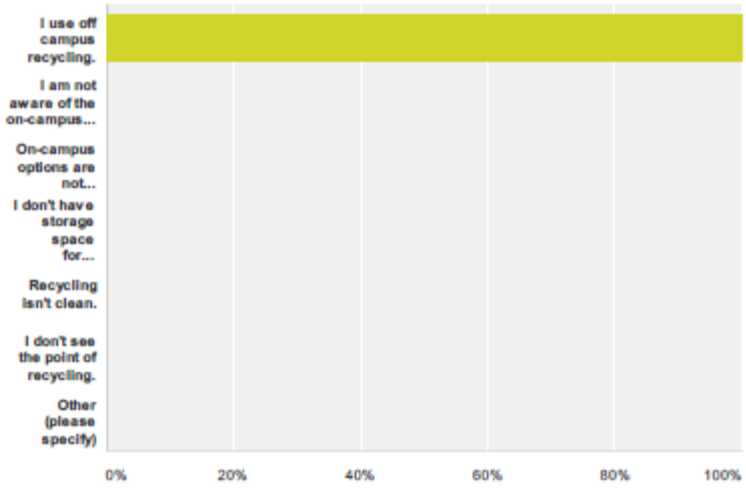
Answered: 33 Skipped: 2



Answer Choices	Responses	
Yes	100%	33
No	0%	0
Total		33

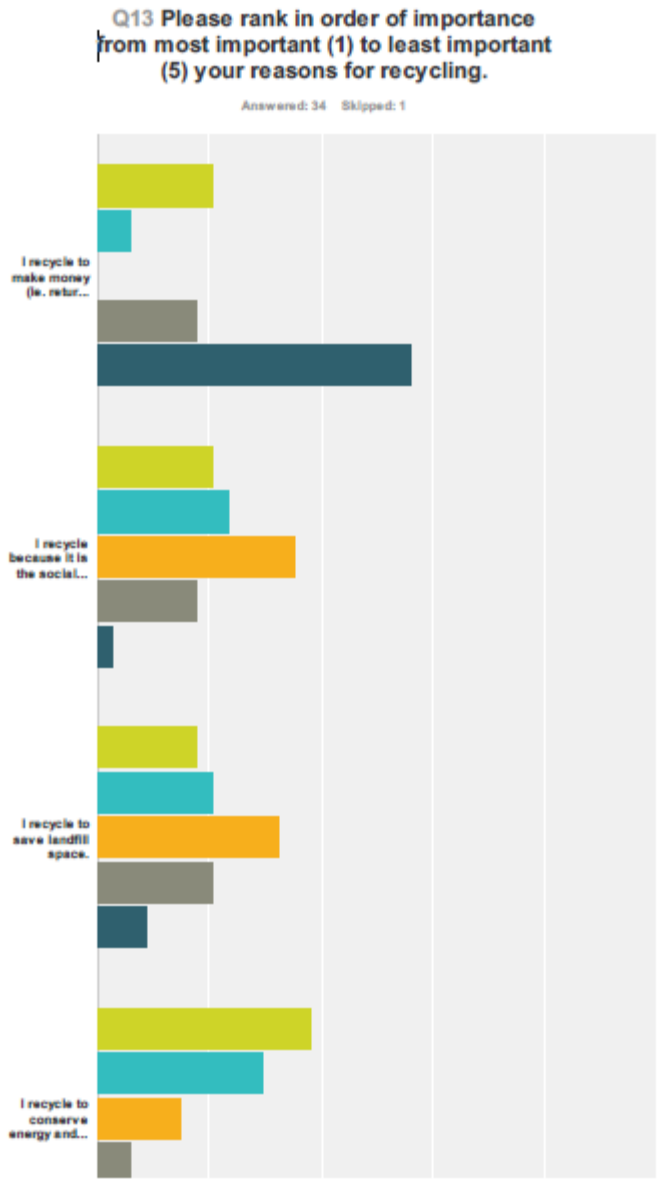
Q12 Which of the following best describes why you do not use on-campus recycling options? (check all that apply)

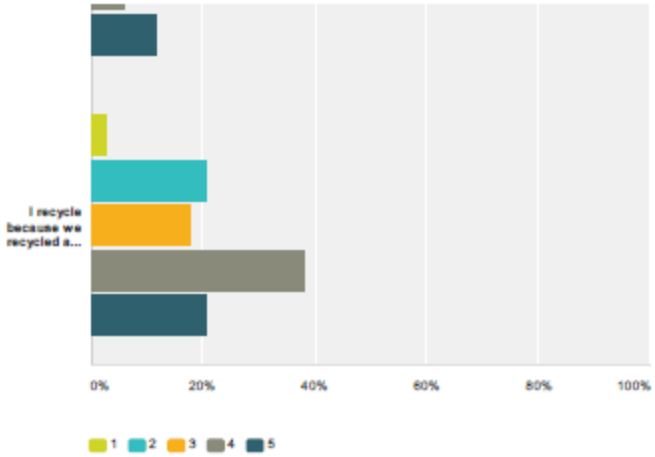
Answered: 1 Skipped: 34



Answer Choices	Responses	
I use off campus recycling.	100%	1
I am not aware of the on-campus options.	0%	0
On-campus options are not convenient for me.	0%	0
I don't have storage space for recyclables.	0%	0
Recycling isn't clean.	0%	0
I don't see the point of recycling.	0%	0
Other (please specify)	0%	0
Total Respondents: 1		

#	Other (please specify)	Date
	There are no responses.	

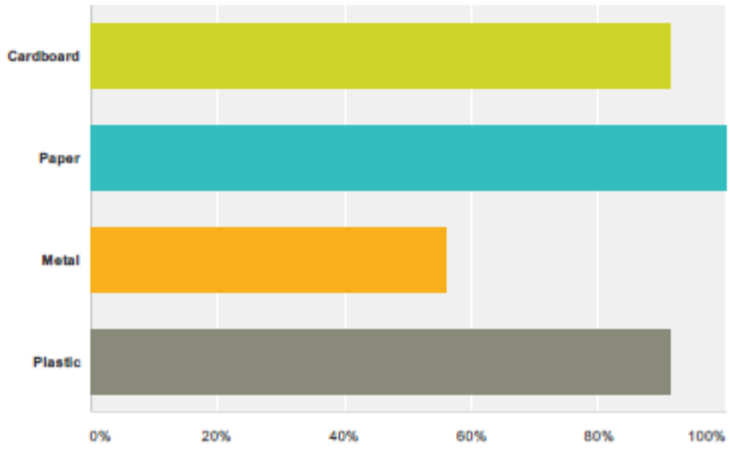

Q13 Please rank in order of importance from most important (1) to least important (5) your reasons for recycling.
Answered: 34 Skipped: 1
I recycle to make money (ie. retur...
I recycle because it is the social...
I recycle to save landfill space.
I recycle to conserve energy and...



	1	2	3	4	5	Total	Average Ranking
I recycle to make money (ie. return deposit containers)	20.59% 7	5.88% 2	0% 0	17.65% 6	55.88% 19	34	2.18
I recycle because it is the socially responsible thing to do.	20.59% 7	23.53% 8	35.29% 12	17.65% 6	2.94% 1	34	3.41
I recycle to save landfill space.	17.65% 6	20.59% 7	32.35% 11	20.59% 7	8.82% 3	34	3.18
I recycle to conserve energy and resources.	38.24% 13	29.41% 10	14.71% 5	5.88% 2	11.76% 4	34	3.76
I recycle because we recycled at home.	2.94% 1	20.59% 7	17.65% 6	38.24% 13	20.59% 7	34	2.47

Q14 Which of the following do you recycle on a regular basis? (select all that apply)

Answered: 34 Skipped: 1

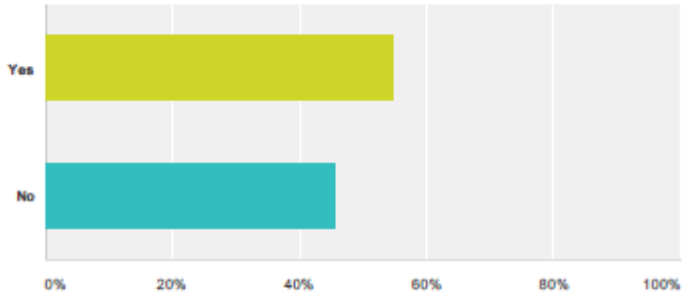


Answer Choices	Responses	
Cardboard	91.18%	31
Paper	100%	34
Metal	55.88%	19
Plastic	91.18%	31
Total Respondents: 34		

#	Other (please specify)	Date
1	Glass	11/18/2013 12:13 PM
2	Terracycle	11/14/2013 9:56 AM
3	Glass	11/4/2013 11:08 AM
4	Glass	11/4/2013 7:15 AM
5	Glass	10/31/2013 5:23 PM
6	TerraCycle	10/31/2013 10:14 AM
7	glass	10/31/2013 6:25 AM

Q15 Do you return your deposit bottles and cans for the 5 cent deposit?

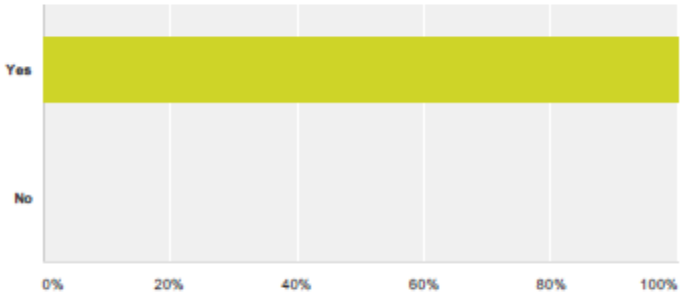
Answered: 33 Skipped: 2



Answer Choices	Responses	
Yes	54.55%	18
No	45.45%	15
Total		33

Q16 Do you support expansion of the Deposit Law to include other beverage containers such as water bottles, sports drinks, etc.?

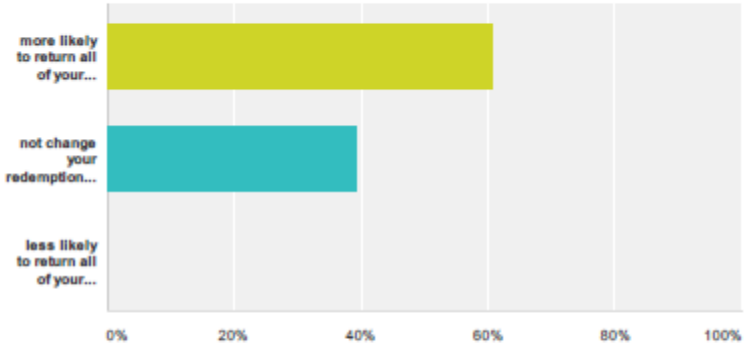
Answered: 33 Skipped: 2



Answer Choices	Responses	
Yes	100%	33
No	0%	0
Total		33

Q17 A higher deposit of 10 cents per container would make you

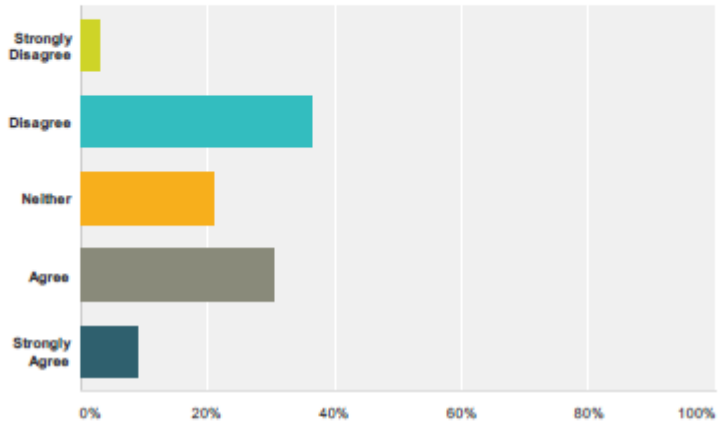
Answered: 33 Skipped: 2



Answer Choices	Responses	
more likely to return all of your containers.	60.61%	20
not change your redemption habits.	39.39%	13
less likely to return all of your containers.	0%	0
Total		33

Q18 My participation, or lack thereof, in recycling is most influenced by what I've learned in school.

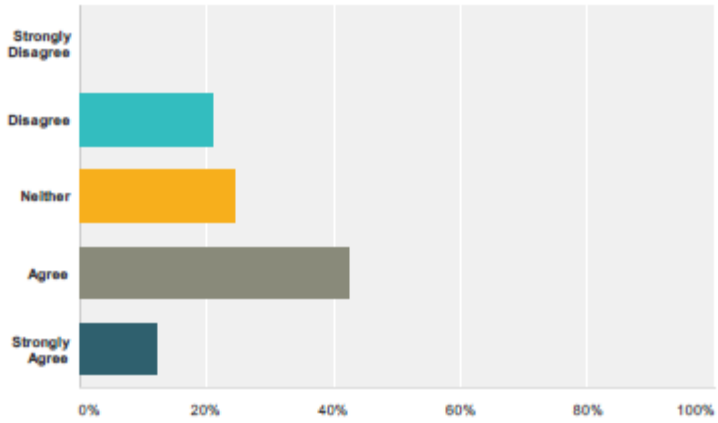
Answered: 33 Skipped: 2



Answer Choices	Responses	
Strongly Disagree	3.03%	1
Disagree	36.36%	12
Neither	21.21%	7
Agree	30.30%	10
Strongly Agree	9.09%	3
Total		33

Q19 My participation, or lack thereof, in recycling is most influenced by my family.

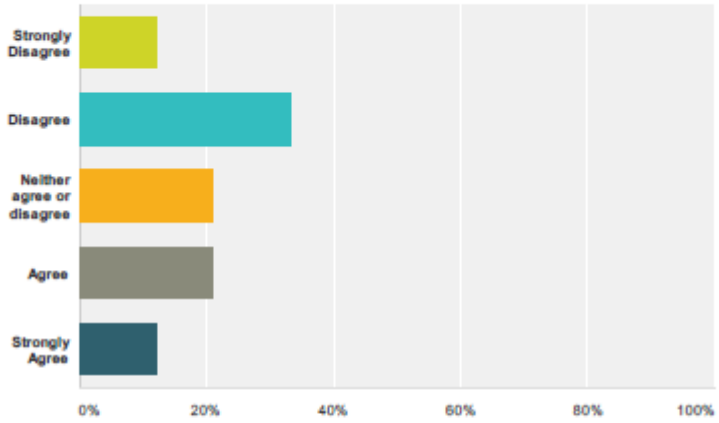
Answered: 33 Skipped: 2



Answer Choices	Responses	
Strongly Disagree	0%	0
Disagree	21.21%	7
Neither	24.24%	8
Agree	42.42%	14
Strongly Agree	12.12%	4
Total		33

Q20 My participation, or lack thereof, in recycling is most influenced by my peers.

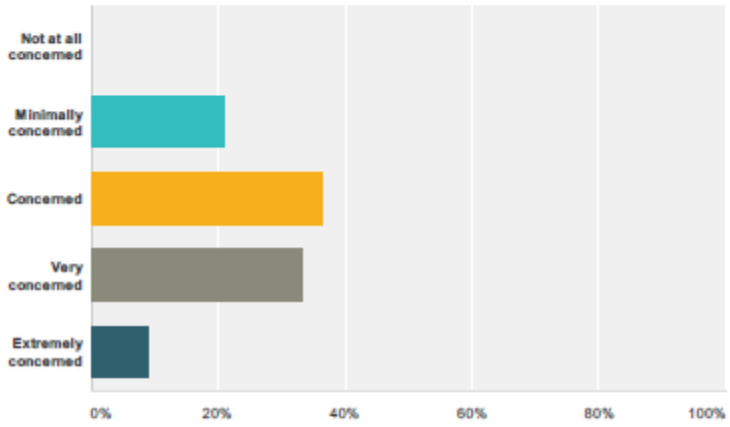
Answered: 33 Skipped: 2



Answer Choices	Responses	
Strongly Disagree	12.12%	4
Disagree	33.33%	11
Neither agree or disagree	21.21%	7
Agree	21.21%	7
Strongly Agree	12.12%	4
Total		33

Q21 How would you rate your level of concern with the current state of the environment?

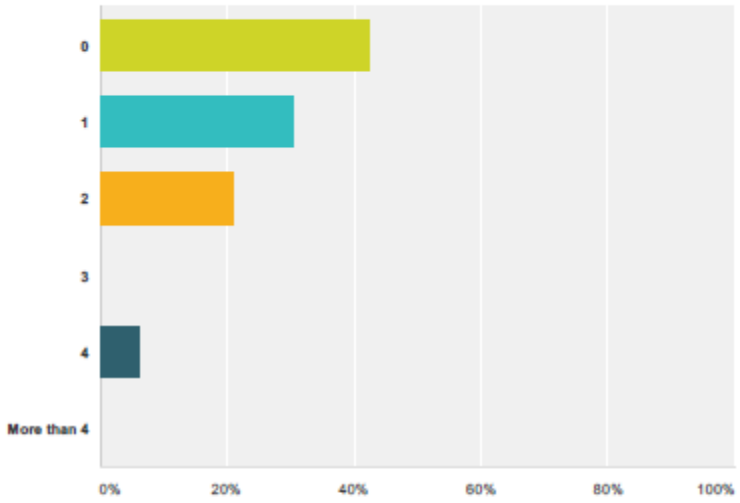
Answered: 33 Skipped: 2



Answer Choices	Responses	
Not at all concerned	0%	0
Minimally concerned	21.21%	7
Concerned	36.36%	12
Very concerned	33.33%	11
Extremely concerned	9.09%	3
Total		33

Q22 Approximately how many classes have you taken where Recycling was a topic?

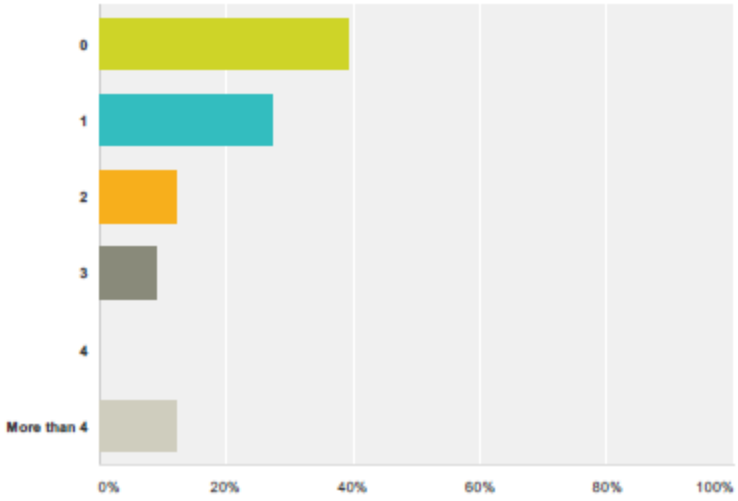
Answered: 33 Skipped: 2



Answer Choices	Responses	
0	42.42%	14
1	30.30%	10
2	21.21%	7
3	0%	0
4	6.06%	2
More than 4	0%	0
Total		33

Q23 Outside of class, approximately how many learning opportunities have you participated in about recycling (workshops, seminars, etc.)?

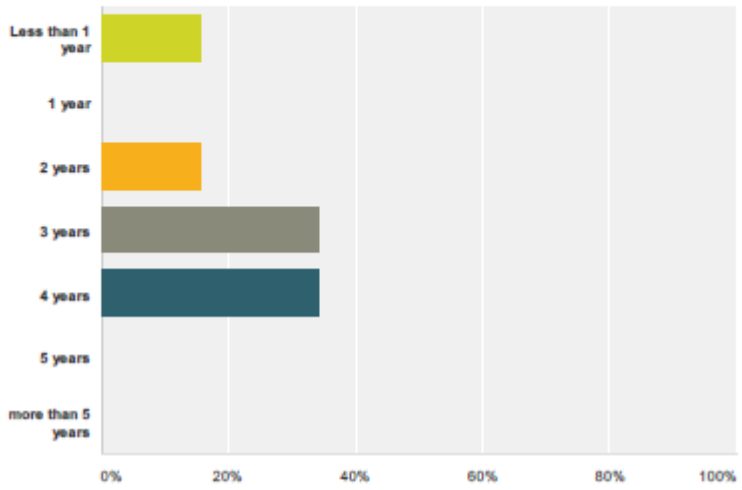
Answered: 33 Skipped: 2



Answer Choices	Responses	
0	39.39%	13
1	27.27%	9
2	12.12%	4
3	9.09%	3
4	0%	0
More than 4	12.12%	4
Total		33

Q24 How many years have you been in college?

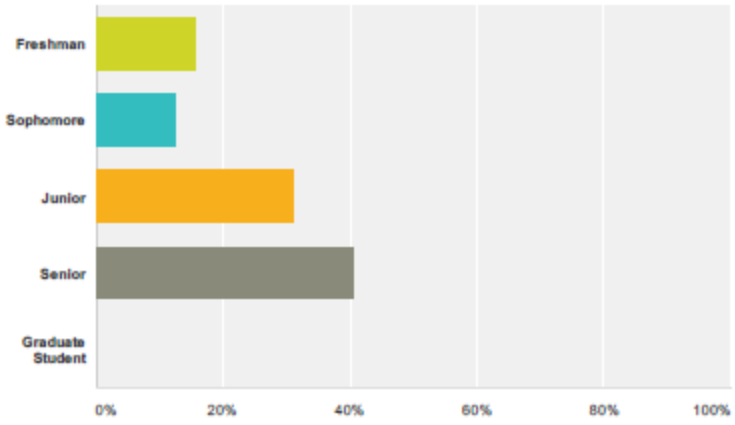
Answered: 32 Skipped: 3



Answer Choices	Responses	
Less than 1 year	15.63%	5
1 year	0%	0
2 years	15.63%	5
3 years	34.38%	11
4 years	34.38%	11
5 years	0%	0
more than 5 years	0%	0
Total		32

Q25 What is your current classification?

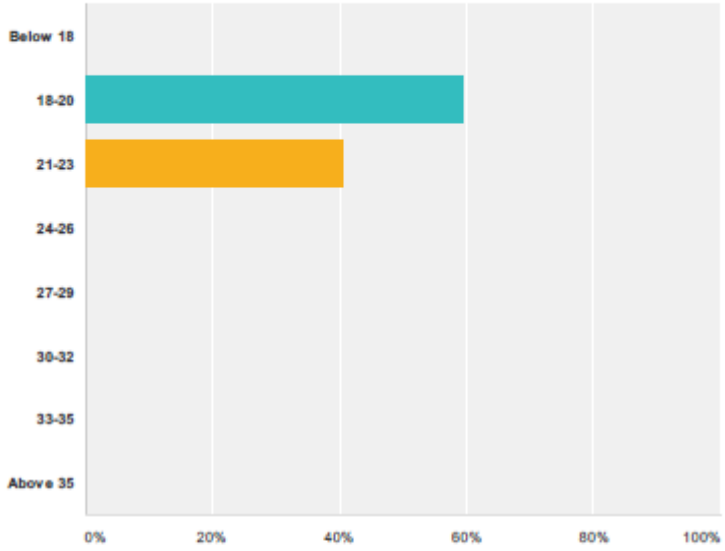
Answered: 32 Skipped: 3



Answer Choices	Responses	
Freshman	15.63%	5
Sophomore	12.50%	4
Junior	31.25%	10
Senior	40.63%	13
Graduate Student	0%	0
Total		32

Q26 What is your age?

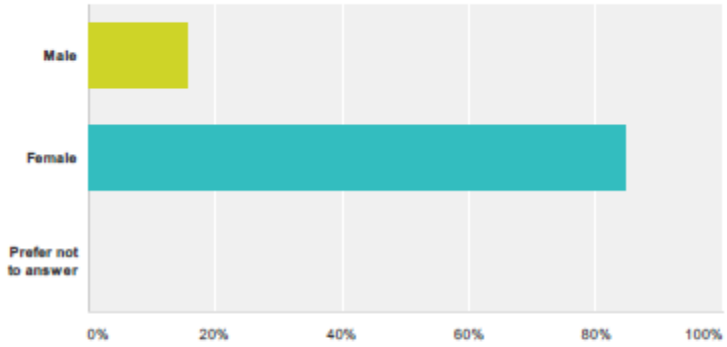
Answered: 32 Skipped: 3



Answer Choices	Responses	
Below 18	0%	0
18-20	59.38%	19
21-23	40.63%	13
24-26	0%	0
27-29	0%	0
30-32	0%	0
33-35	0%	0
Above 35	0%	0
Total		32

Q27 What is your gender?

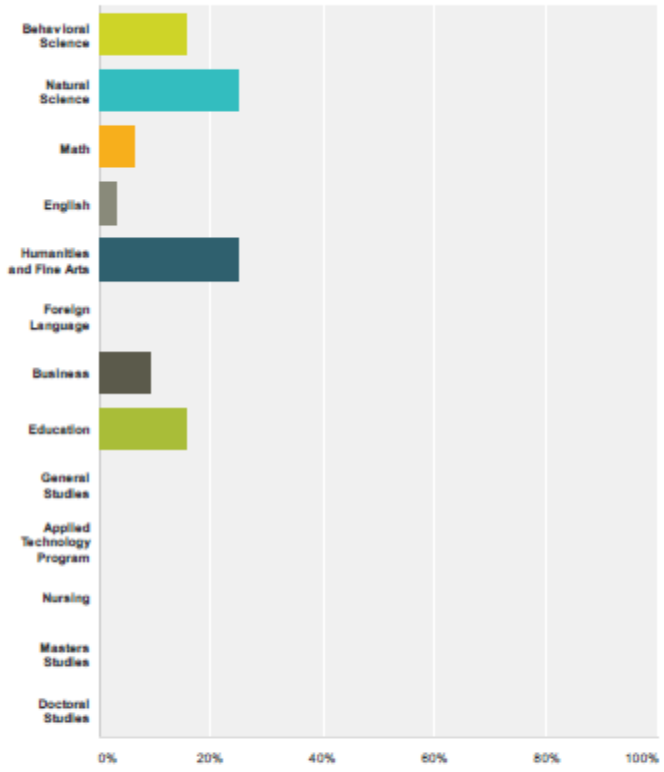
Answered: 32 Skipped: 3



Answer Choices	Responses	
Male	15.63%	5
Female	84.38%	27
Prefer not to answer	0%	0
Total		32

Q28 Which of the following most closely represents your major?

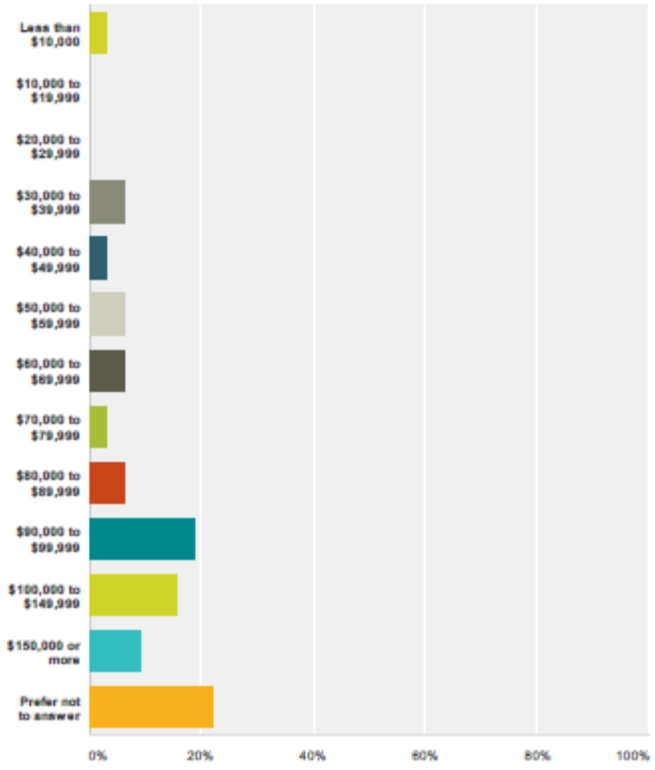
Answered: 32 Skipped: 3



Answer Choices	Responses	
Behavioral Science	15.63%	5
Natural Science	25%	8
Math	6.25%	2
English	3.13%	1
Humanities and Fine Arts	25%	8
Foreign Language	0%	0

Q29 What is your approximate family income?

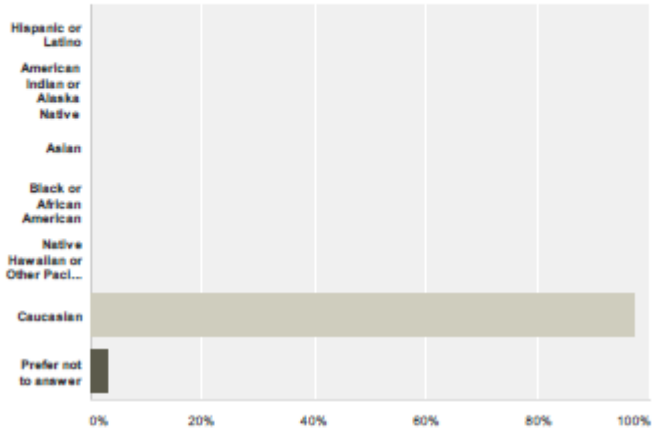
Answered: 32 Skipped: 3



Answer Choices	Responses	
Less than $10,000	3.13%	1
$10,000 to $19,999	0%	0
$20,000 to $29,999	0%	0
$30,000 to $39,999	6.25%	2
$40,000 to $49,999	3.13%	1
$50,000 to $59,999	6.25%	2
$60,000 to $69,999	6.25%	2
$70,000 to $79,999	3.13%	1
$80,000 to $89,999	6.25%	2
$90,000 to $99,999	18.75%	6
$100,000 to $149,999	15.63%	5
$150,000 or more	9.38%	3
Prefer not to answer	21.88%	7
Total		32

Q30 What is your race/ethnicity?

Answered: 32 Skipped: 3



Answer Choices	Responses	
Hispanic or Latino	0%	0
American Indian or Alaska Native	0%	0
Asian	0%	0
Black or African American	0%	0
Native Hawaiian or Other Pacific Islander	0%	0
Caucasian	96.88%	31
Prefer not to answer	3.13%	1
Total		32

Q31 Please share any other comments you have about recycling.

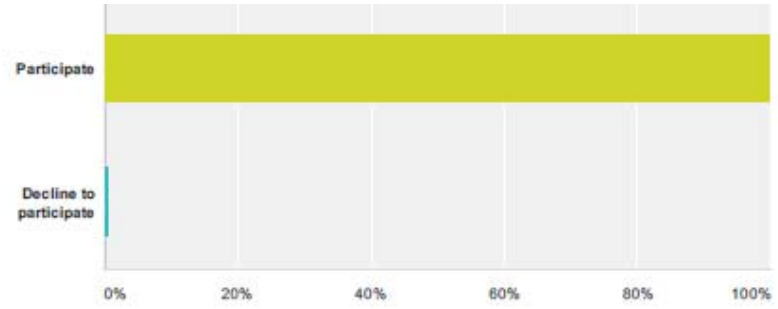
Answered: 7 Skipped: 28

#	Responses	Date
1	I wish more people had a passion for it. It's so easy to do yet many refuse to think about the consequences of their actions.	11/18/2013 3:56 PM
2	I think sometimes there is confusion about what we can and cannot recycle. Also, I think there isn't enough education about what state recycled items need to be in when they are taken to be recycled.	11/18/2013 12:15 PM
3	I try to recycle as much as I can and encourage others to do the same. Also, while I think recycling is very important, reducing and reusing containers is really more important. If people didn't use as much stuff, then there would be less going to landfills and less needing to be recycled in the first place.	11/14/2013 8:09 AM
4	:)	11/8/2013 1:39 AM
5	Recycling opportunities on college campuses need to be convenient and easy in order to be effective.	10/31/2013 11:38 AM
6	The more you promote it and make it accessible, the more people are going to recycle.	10/31/2013 11:00 AM
7	Recycling importance needs to be increased among college students because we are tomorrow's leaders who can make a difference. Another important aspect of recycling students should engage in more often is upcycling.	10/31/2013 10:18 AM

APPENDIX H

UNI FULL SURVEY RESULTS

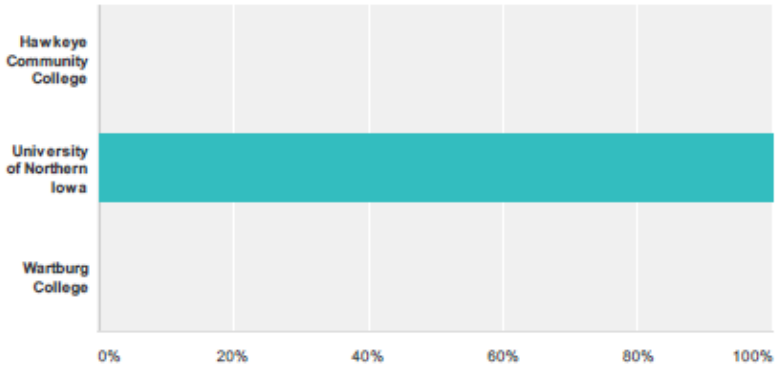
Q1 **Greetings, My name is Mark Wilcox and I am a graduate student at the University of Northern Iowa. I am conducting a study on the attitudes of college students about recycling. I understand that your time is valuable but this study will provide much needed insight that may allow your institution to better meet your recycling needs. This brief internet survey is anonymous and completely voluntary. The survey will take approximately 15 minutes of your time. This study has risks no greater than those of day-to-day life. You may not receive any direct benefit from participating in this study. The results of this study may be shared with interested parties at each of the three institutions being sent this opportunity and you as well may receive the results if you wish. Your confidentiality will be maintained to the degree permitted by the technology used. Specifically, no guarantees can be made regarding the interception of data sent via the Internet by any third parties. If you have any questions or concerns regarding this study please feel free to contact me via email (mark.wilcox@uni.edu). You may also contact Anita Gordon, the UNI IRB administrator by phone: 319-273-6148 or E-mail anita.gordon@uni.edu. If you are willing to share your attitudes about recycling please click the link below and complete the survey. You may exit the survey at any time and your anonymity will be preserved as much as possible. Your participation is very greatly appreciated. Thank you so much for your time. Sincerely, Mark Wilcox Department of Technology University of Northern Iowa**



Answer Choices	Responses	
Participate	99.58%	239
Decline to participate	0.42%	1
Total		240

Q2 Choose your institution.

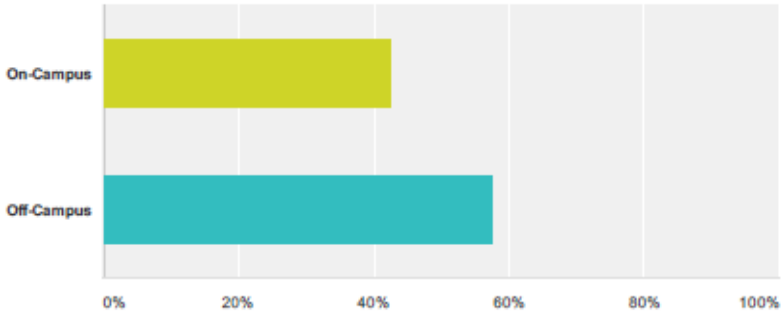
Answered: 241 Skipped: 0



Answer Choices	Responses	
Hawkeye Community College	0%	0
University of Northern Iowa	100%	241
Wartburg College	0%	0
Total		241

Q3 During the academic year do you live_____?

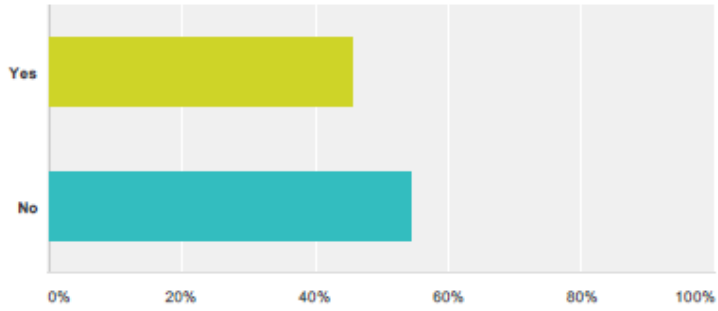
Answered: 237 Skipped: 4



Answer Choices	Responses	
On-Campus	42.62%	101
Off-Campus	57.38%	136
Total		237

Q4 Do you live on UNI's Campus?

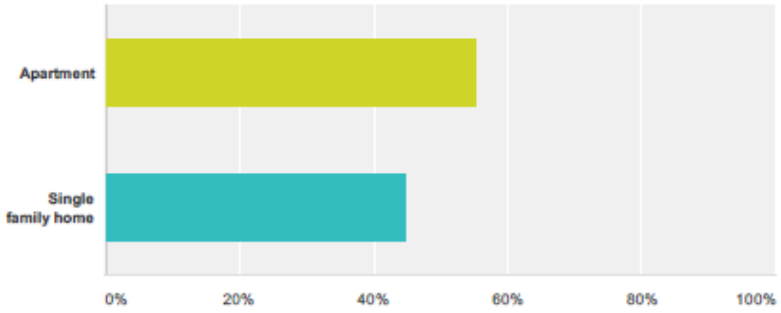
Answered: 235 Skipped: 6



Answer Choices	Responses	
Yes	45.53%	107
No	54.47%	128
Total		235

Q5 Which best describes your place of residence?

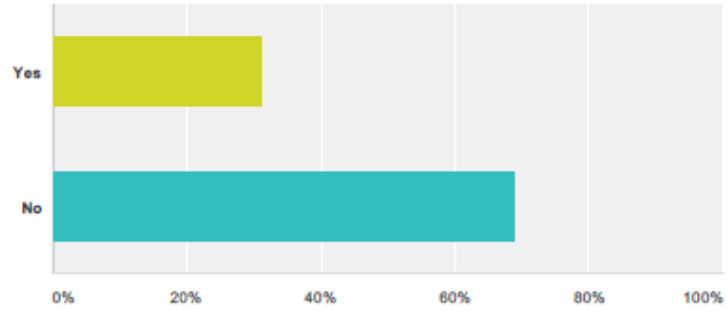
Answered: 136 Skipped: 105



Answer Choices	Responses	
Apartment	55.15%	75
Single family home	44.85%	61
Total		136

Q6 Do you have curbside recycling?

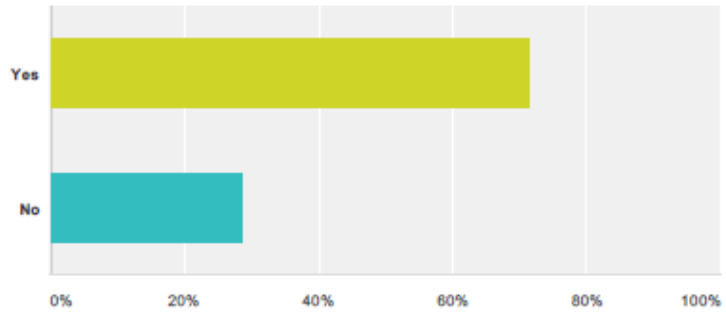
Answered: 61 Skipped: 180



Answer Choices	Responses	
Yes	31.15%	19
No	68.85%	42
Total		61

Q7 Would you be willing to pay a small fee (less than $5 per month) for curbside recycling?

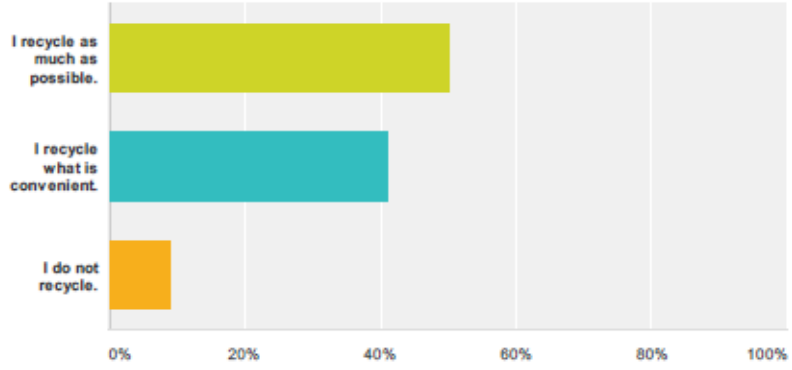
Answered: 42 Skipped: 199



Answer Choices	Responses	
Yes	71.43%	30
No	28.57%	12
Total		42

Q8 Which of the following statements best applies to you?

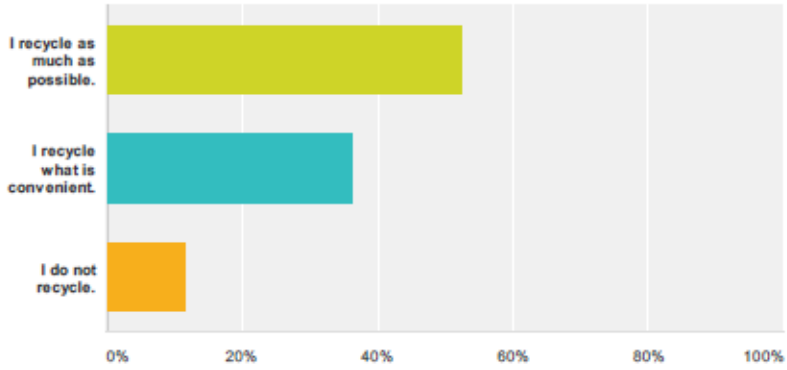
Answered: 176 Skipped: 65



Answer Choices	Responses	
I recycle as much as possible.	50%	88
I recycle what is convenient.	40.91%	72
I do not recycle.	9.09%	16
Total		176

Q9 Which of the following statements best applies to you?

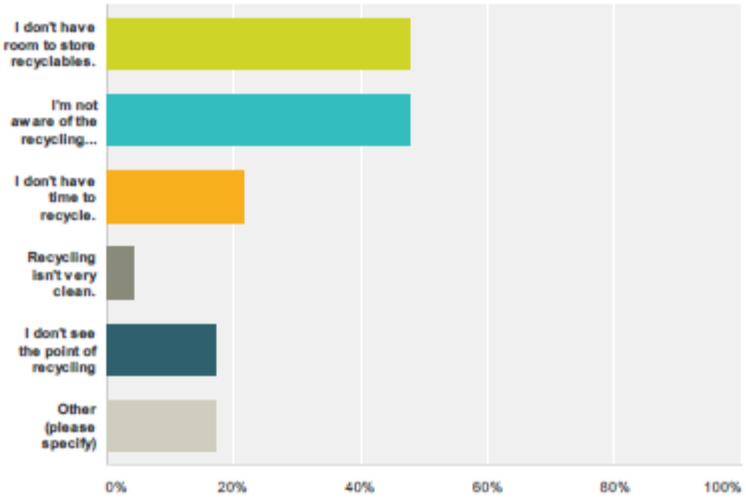
Answered: 61 Skipped: 180



Answer Choices	Responses	
I recycle as much as possible.	52.46%	32
I recycle what is convenient.	36.07%	22
I do not recycle.	11.48%	7
Total		61

Q10 Which of the following best describes why you do not recycle? (check all that apply)

Answered: 23 Skipped: 218

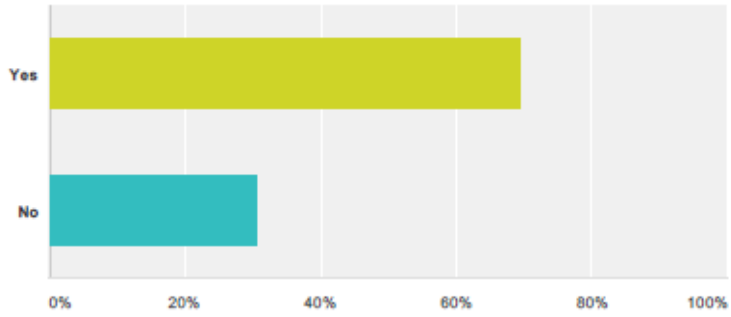


Answer Choices	Responses	
I don't have room to store recyclables.	47.83%	11
I'm not aware of the recycling opportunities available to me.	47.83%	11
I don't have time to recycle.	21.74%	5
Recycling isn't very clean.	4.35%	1
I don't see the point of recycling	17.39%	4
Other (please specify)	17.39%	4
Total Respondents: 23		

#	Other (please specify)	Date
1	They charge a deposit for cans and I will not give them the benefit of receiving that money and the can, so I throw them away. They also charge me, on my garbage bill, to recycle and that is the other reason I will not recycle. Recycling should pay for itself.	11/20/2013 9:49 AM
2	Waterloo requires use of yard waste container for recycling.	10/29/2013 3:19 PM
3	never think of it	10/28/2013 9:53 PM
4	I try, but no options available	10/22/2013 7:44 PM

Q11 Do you use on-campus recycling?

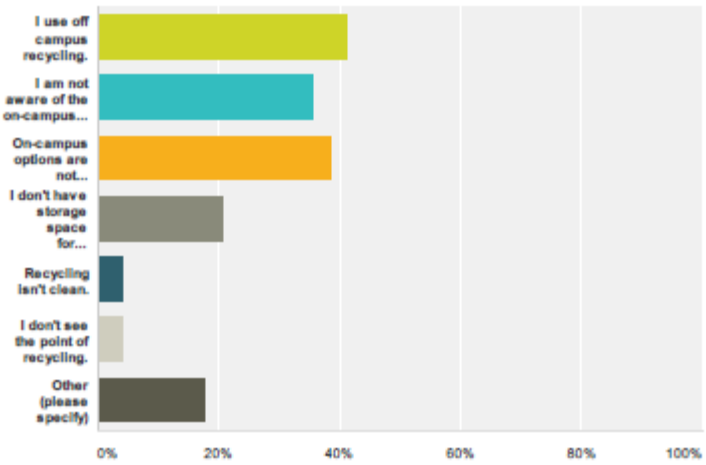
Answered: 235 Skipped: 6



Answer Choices	Responses	
Yes	69.36%	163
No	30.64%	72
Total		235

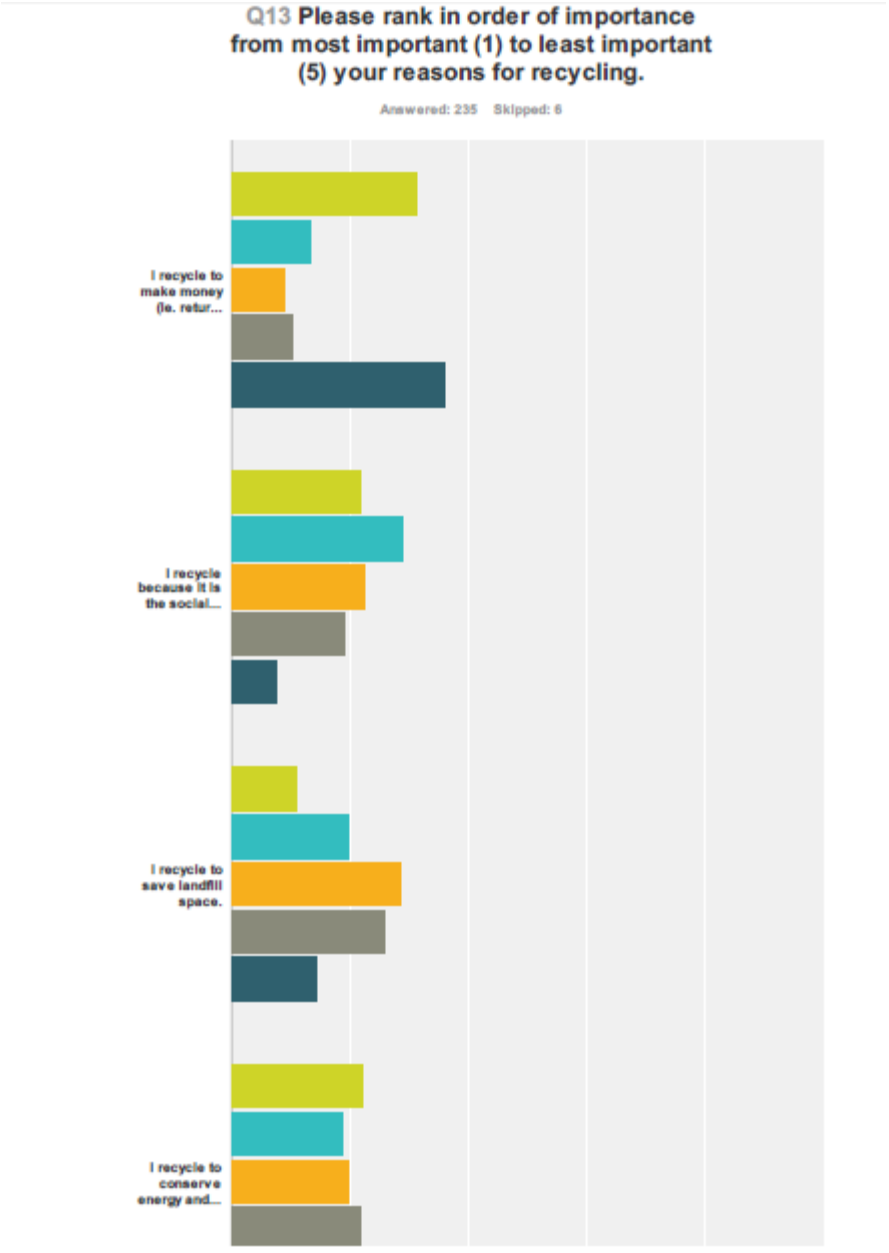
Q12 Which of the following best describes why you do not use on-campus recycling options? (check all that apply)

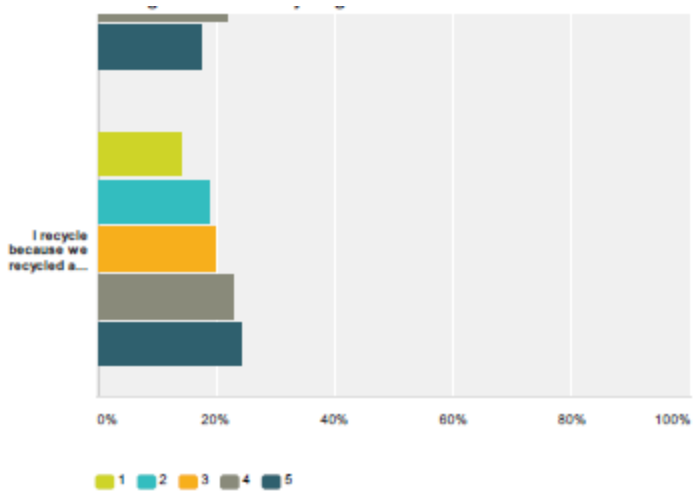
Answered: 73 Skipped: 168



Answer Choices	Responses	
I use off campus recycling.	41.10%	30
I am not aware of the on-campus options.	35.62%	26
On-campus options are not convenient for me.	38.36%	28
I don't have storage space for recyclables.	20.55%	15
Recycling isn't clean.	4.11%	3
I don't see the point of recycling.	4.11%	3
Other (please specify)	17.81%	13
Total Respondents: 73		

#	Other (please specify)	Date
1	I dont have anything to recycle on-campus	11/11/2013 6:43 PM
2	i recycle as much as possible at home, but not in cedar falls. it has proven to be difficult.	11/11/2013 6:32 PM
3	Not on campus often	10/30/2013 9:53 AM
4	I do not live near campus	10/28/2013 5:51 PM
5	I'm lazy. Cleaning tin cans and plastic to recycle is too much work on campus.	10/28/2013 1:42 PM
6	At UNI in the buildings I am in, I have never been able to locate any type of recycling bin other than ones for paper only	10/28/2013 12:36 PM
7	I live off campus	10/28/2013 11:23 AM

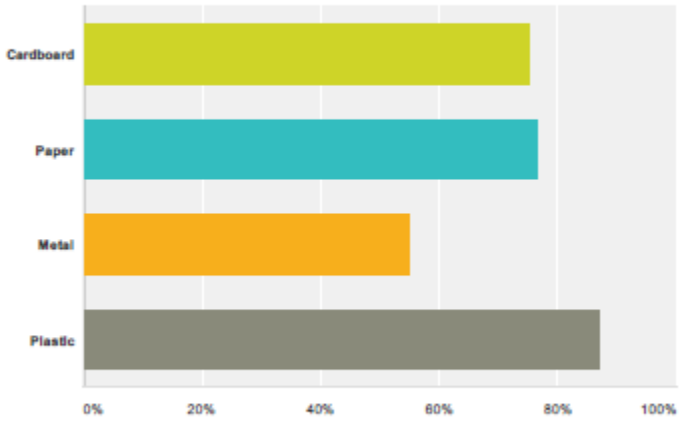

Q13 Please rank in order of importance from most important (1) to least important (5) your reasons for recycling.
Answered: 235 Skipped: 6
I recycle to make money (ie. retur...
I recycle because it is the social...
I recycle to save landfill space.
I recycle to conserve energy and...



	1	2	3	4	5	Total	Average Ranking
I recycle to make money (ie. return deposit containers)	31.06% 73	13.62% 32	8.94% 21	10.21% 24	36.17% 85	235	2.93
I recycle because it is the socially responsible thing to do.	21.70% 51	28.94% 68	22.55% 53	19.15% 45	7.66% 18	235	3.38
I recycle to save landfill space.	11.06% 26	20% 47	28.51% 67	25.96% 61	14.47% 34	235	2.87
I recycle to conserve energy and resources.	22.13% 52	18.72% 44	20% 47	21.70% 51	17.45% 41	235	3.06
I recycle because we recycled at home.	14.04% 33	18.72% 44	20% 47	22.98% 54	24.26% 57	235	2.75

Q14 Which of the following do you recycle on a regular basis? (select all that apply)

Answered: 221 Skipped: 20



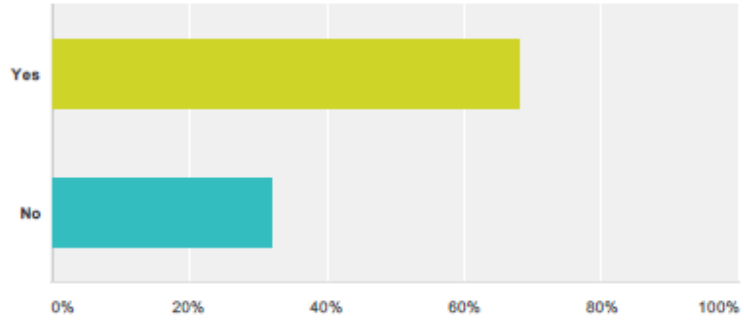
Answer Choices	Responses	
Cardboard	75.11%	166
Paper	76.47%	169
Metal	54.75%	121
Plastic	86.88%	192
Total Respondents: 221		

#	Other (please specify)	Date
1	none unless it's on UNI campus	11/20/2013 9:52 AM
2	Cans, bottles, etc.	11/5/2013 11:44 AM
3	Glass	11/5/2013 9:54 AM
4	Glass	10/30/2013 9:35 AM
5	Glass	10/29/2013 10:24 AM
6	tin/alluminum	10/28/2013 11:23 PM
7	I dont	10/28/2013 9:54 PM
8	glass	10/28/2013 9:30 PM
9	cans	10/28/2013 8:58 PM
10	glass, tin	10/28/2013 6:20 PM
11	Glass	10/28/2013 5:52 PM
12	Dryer Lint	10/28/2013 1:43 PM
13	Glass	10/28/2013 1:43 PM

14	Tech	10/28/2013 12:37 PM
15	glass	10/28/2013 10:21 AM
16	Glass	10/28/2013 10:20 AM
17	glass	10/28/2013 9:41 AM
18	glass	10/28/2013 9:10 AM
19	Glass,	10/25/2013 3:41 PM
20	Everything that can be	10/24/2013 11:24 AM
21	Everything I can pretty much	10/23/2013 8:34 PM
22	tin	10/23/2013 1:32 PM
23	soda cans/bottles	10/23/2013 12:27 PM
24	glass	10/22/2013 5:49 PM
25	Glass	10/22/2013 1:24 PM
26	Glass	10/22/2013 12:59 PM
27	glass, wax, and corks	10/22/2013 11:22 AM
28	Glass	10/22/2013 8:11 AM
29	glass/bottles	10/21/2013 8:29 PM
30	Batteries	10/21/2013 8:17 PM
31	glass, plastic grocery bags	10/21/2013 7:26 PM
32	glass	10/21/2013 6:14 PM
33	tin (cans)	10/21/2013 5:28 PM
34	cans aluminum and tin.	10/21/2013 5:07 PM
35	Glass	10/21/2013 1:54 PM
36	Glass	10/21/2013 1:48 PM
37	aluminum	10/21/2013 1:03 PM
38	Glass	10/21/2013 11:11 AM
39	glass	10/21/2013 10:56 AM
40	glass	10/21/2013 10:17 AM
41	glass	10/21/2013 9:43 AM
42	glass	10/20/2013 7:17 PM
43	Glass	10/19/2013 4:11 PM
44	Bottles and cans	10/19/2013 10:20 AM
45	Glass	10/18/2013 5:42 PM
46	Glass	10/18/2013 2:06 PM
47	Newspapers and glass	10/18/2013 1:53 PM
48	Cans	10/18/2013 1:20 PM

Q15 Do you return your deposit bottles and cans for the 5 cent deposit?

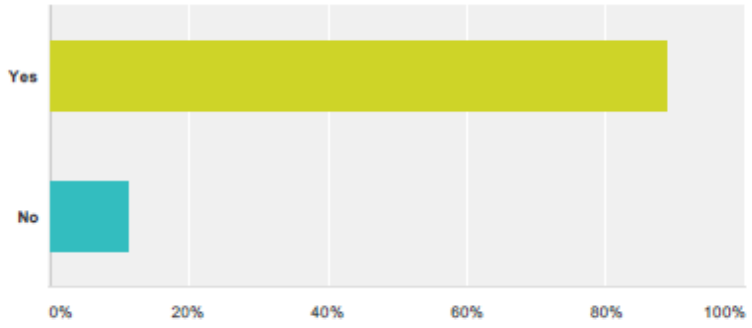
Answered: 232 Skipped: 9



Answer Choices	Responses	
Yes	68.10%	158
No	31.90%	74
Total		232

Q16 Do you support expansion of the Deposit Law to include other beverage containers such as water bottles, sports drinks, etc.?

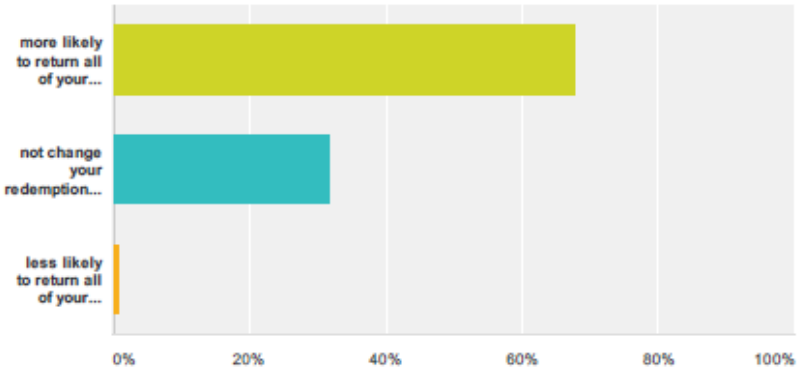
Answered: 231 Skipped: 10



Answer Choices	Responses	
Yes	88.74%	205
No	11.26%	26
Total		231

Q17 A higher deposit of 10 cents per container would make you

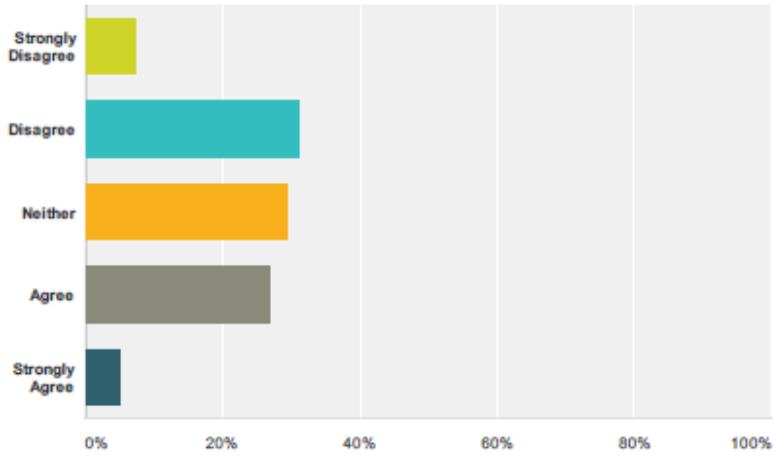
Answered: 232 Skipped: 9



Answer Choices	Responses	
more likely to return all of your containers.	67.67%	157
not change your redemption habits.	31.47%	73
less likely to return all of your containers.	0.86%	2
Total		232

Q18 My participation, or lack thereof, in recycling is most influenced by what I've learned in school.

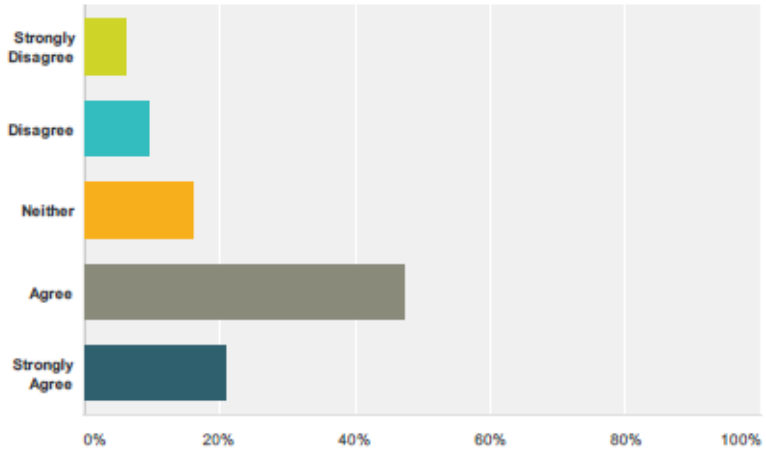
Answered: 231 Skipped: 10



Answer Choices	Responses	
Strongly Disagree	7.36%	17
Disagree	31.17%	72
Neither	29.44%	68
Agree	26.84%	62
Strongly Agree	5.19%	12
Total		231

Q19 My participation, or lack thereof, in recycling is most influenced by my family.

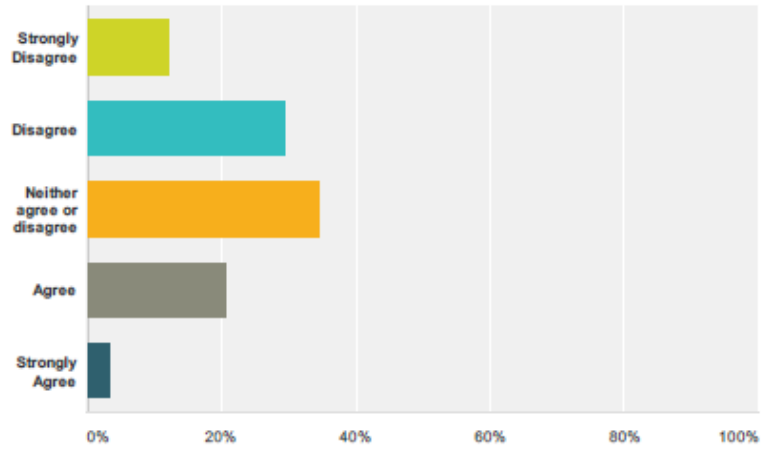
Answered: 230 Skipped: 11



Answer Choices	Responses	
Strongly Disagree	6.09%	14
Disagree	9.57%	22
Neither	16.09%	37
Agree	47.39%	109
Strongly Agree	20.87%	48
Total		230

Q20 My participation, or lack thereof, in recycling is most influenced by my peers.

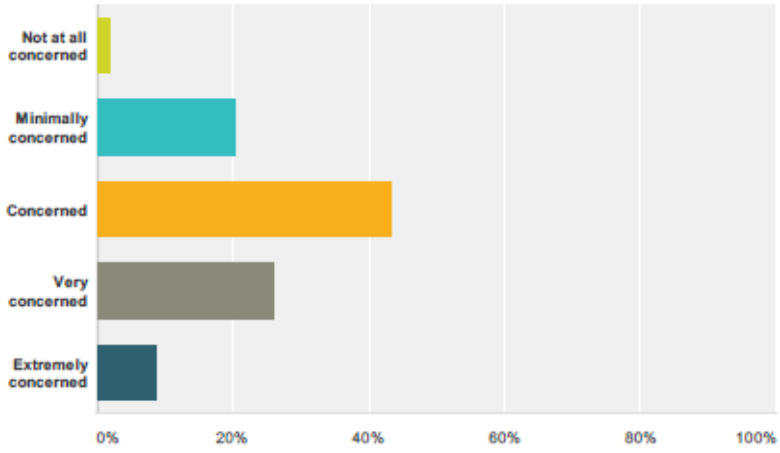
Answered: 232 Skipped: 9



Answer Choices	Responses	
Strongly Disagree	12.07%	28
Disagree	29.31%	68
Neither agree or disagree	34.48%	80
Agree	20.69%	48
Strongly Agree	3.45%	8
Total		232

Q21 How would you rate your level of concern with the current state of the environment?

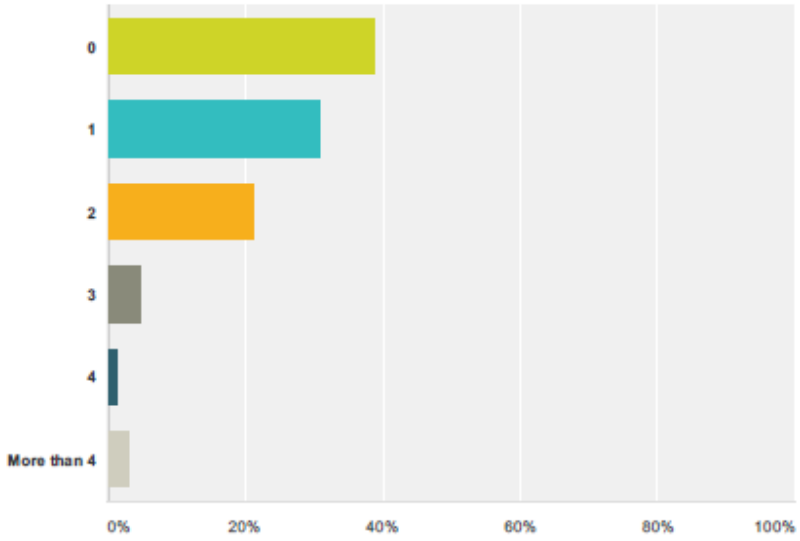
Answered: 232 Skipped: 9



Answer Choices	Responses	
Not at all concerned	2.16%	5
Minimally concerned	20.26%	47
Concerned	43.10%	100
Very concerned	25.86%	60
Extremely concerned	8.62%	20
Total		232

Q22 Approximately how many classes have you taken where Recycling was a topic?

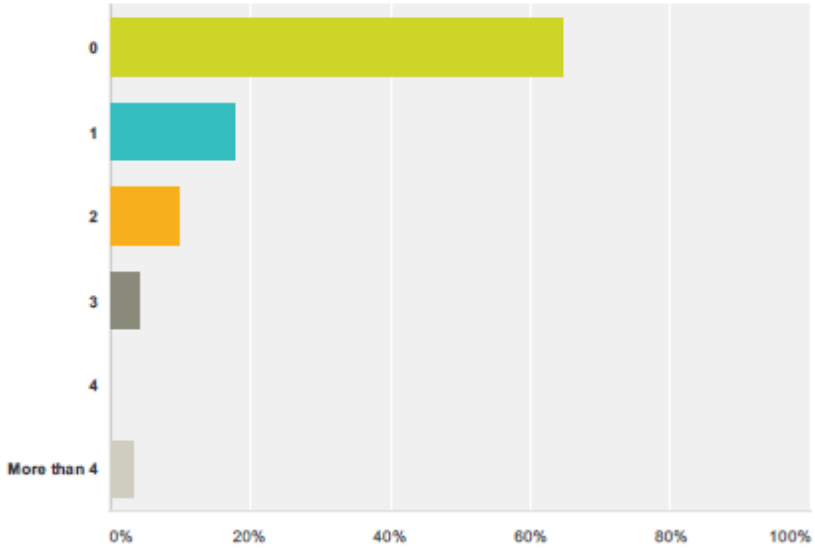
Answered: 232 Skipped: 9



Answer Choices	Responses	
0	38.79%	90
1	31.03%	72
2	21.12%	49
3	4.74%	11
4	1.29%	3
More than 4	3.02%	7
Total		232

Q23 Outside of class, approximately how many learning opportunities have you participated in about reycling (workshops, seminars, etc.)?

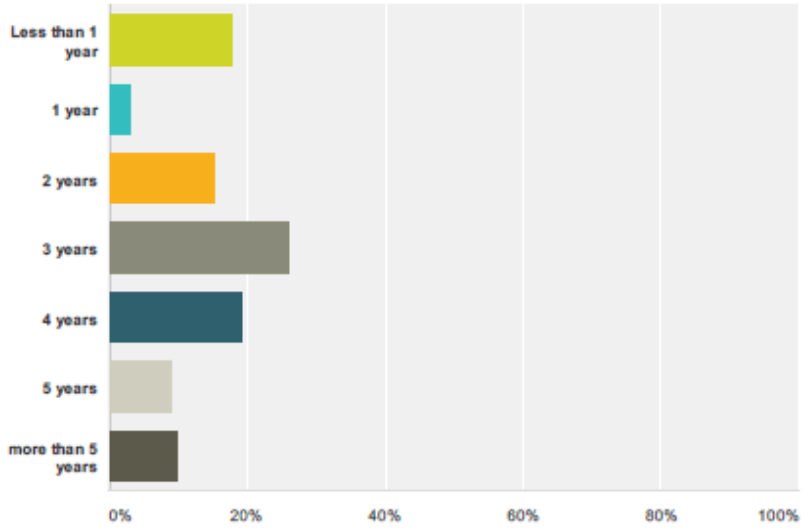
Answered: 232 Skipped: 9



Answer Choices	Responses	
0	64.66%	150
1	17.67%	41
2	9.91%	23
3	4.31%	10
4	0%	0
More than 4	3.45%	8
Total		232

Q24 How many years have you been in college?

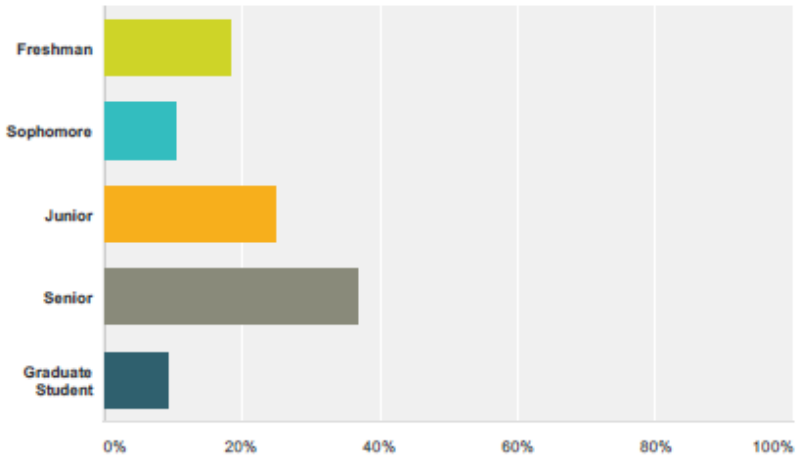
Answered: 231 Skipped: 10



Answer Choices	Responses	
Less than 1 year	17.75%	41
1 year	3.03%	7
2 years	15.15%	35
3 years	25.97%	60
4 years	19.05%	44
5 years	9.09%	21
more than 5 years	9.96%	23
Total		231

Q25 What is your current classification?

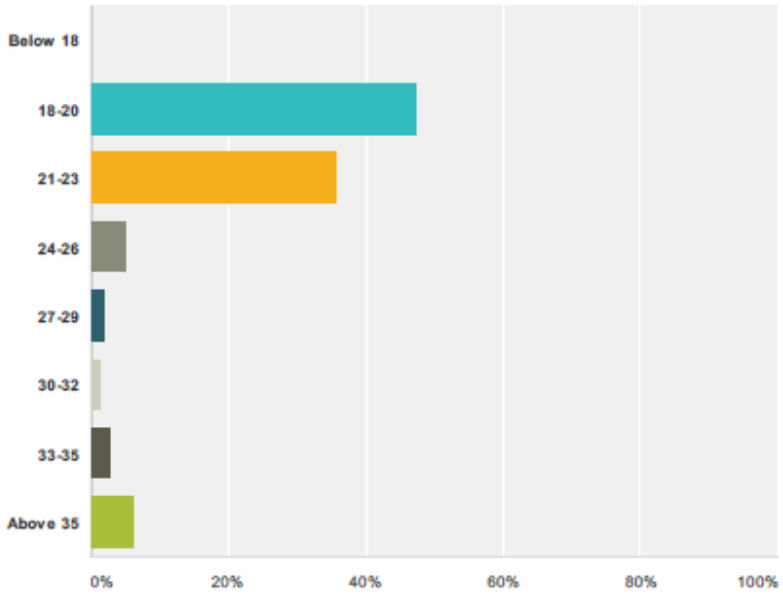
Answered: 228 Skipped: 13



Answer Choices	Responses	
Freshman	18.42%	42
Sophomore	10.53%	24
Junior	25%	57
Senior	36.84%	84
Graduate Student	9.21%	21
Total		228

Q26 What is your age?

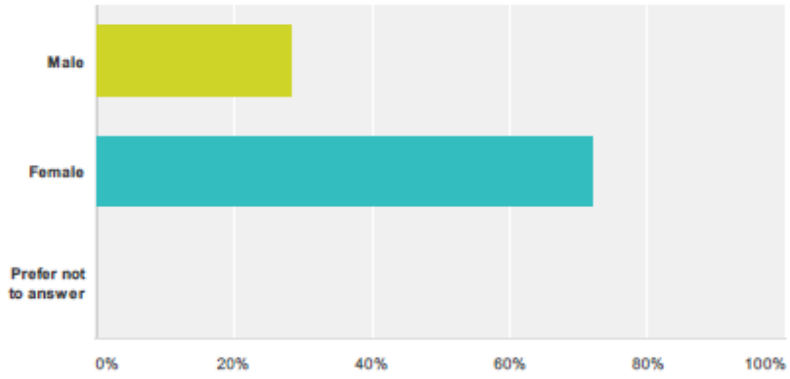
Answered: 231 Skipped: 10



Answer Choices	Responses	
Below 18	0%	0
18-20	47.19%	109
21-23	35.50%	82
24-26	5.19%	12
27-29	2.16%	5
30-32	1.30%	3
33-35	2.60%	6
Above 35	6.06%	14
Total		231

Q27 What is your gender?

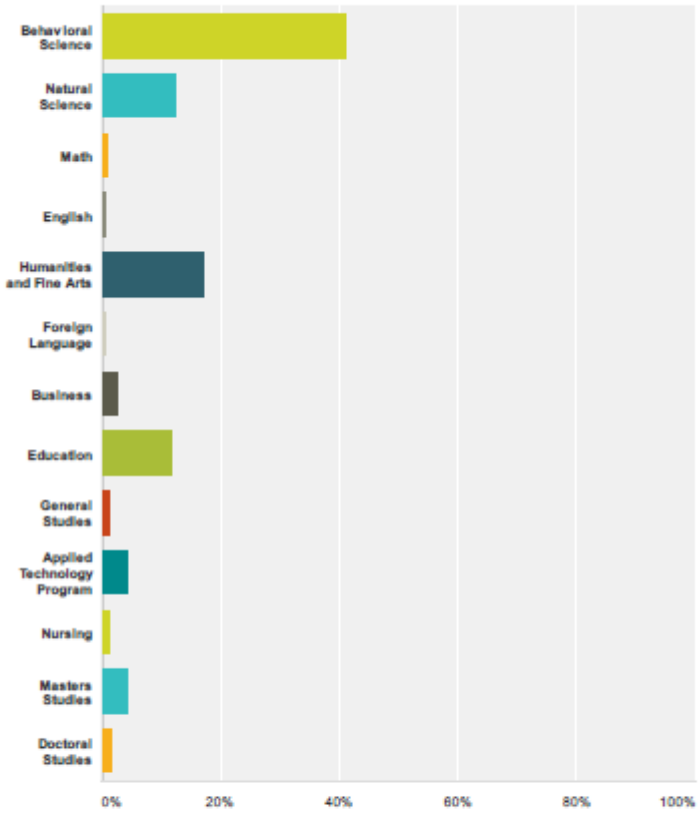
Answered: 231 Skipped: 10



Answer Choices	Responses	
Male	28.14%	65
Female	71.86%	166
Prefer not to answer	0%	0
Total		231

Q28 Which of the following most closely represents your major?

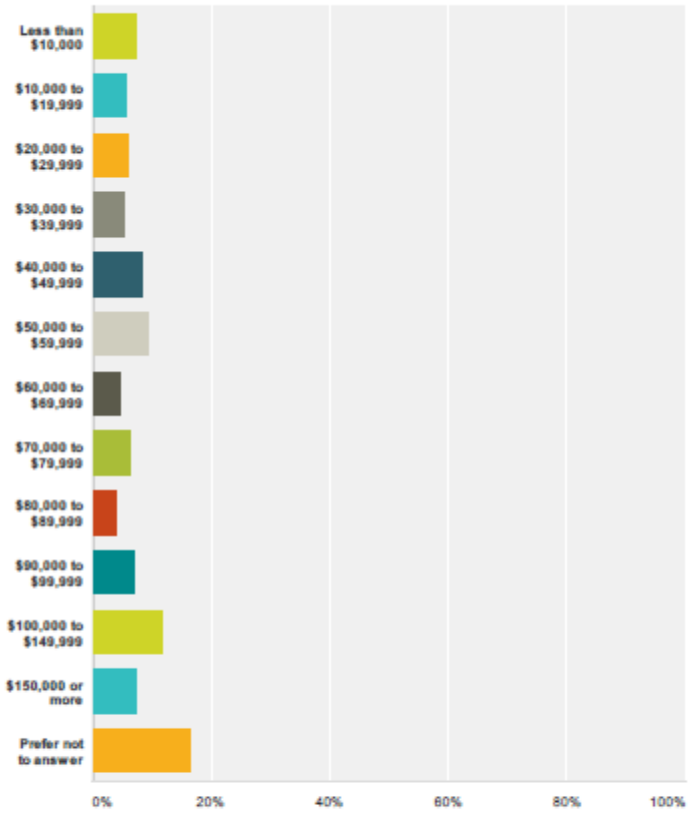
Answered: 228 Skipped: 13



Answer Choices	Responses	
Behavioral Science	41.23%	94
Natural Science	12.28%	28
Math	0.88%	2
English	0.44%	1
Humanities and Fine Arts	17.11%	39
Foreign Language	0.44%	1
Business	2.63%	6
Education	11.84%	27
General Studies	1.32%	3
Applied Technology Program	4.39%	10
Nursing	1.32%	3
Masters Studies	4.39%	10
Doctoral Studies	1.75%	4
Total		228

Q29 What is your approximate family income?

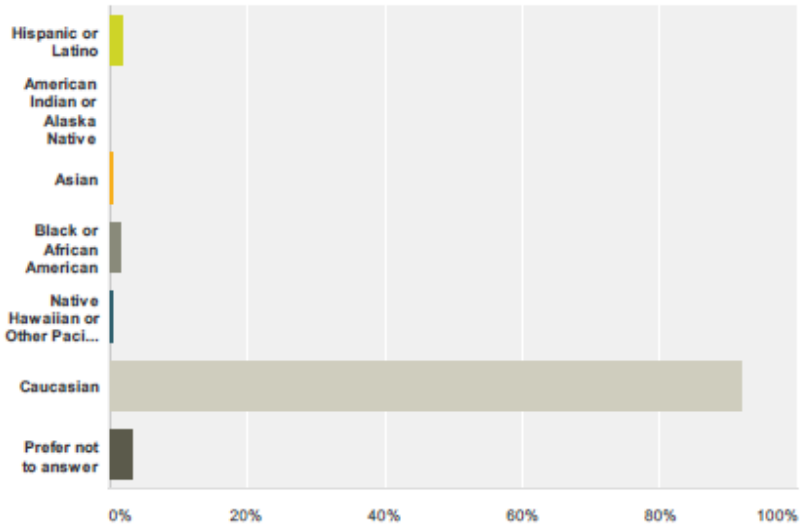
Answered: 230 Skipped: 11



Answer Choices	Responses	
Less than $10,000	7.39%	17
$10,000 to $19,999	5.65%	13
$20,000 to $29,999	6.09%	14
$30,000 to $39,999	5.22%	12
$40,000 to $49,999	8.26%	19
$50,000 to $59,999	9.57%	22
$60,000 to $69,999	4.78%	11
$70,000 to $79,999	6.52%	15
$80,000 to $89,999	3.91%	9
$90,000 to $99,999	6.96%	16
$100,000 to $149,999	11.74%	27
$150,000 or more	7.39%	17
Prefer not to answer	16.52%	38
Total		230

Q30 What is your race/ethnicity?

Answered: 230 Skipped: 11



Answer Choices	Responses	
Hispanic or Latino	2.17%	5
American Indian or Alaska Native	0%	0
Asian	0.43%	1
Black or African American	1.74%	4
Native Hawaiian or Other Pacific Islander	0.43%	1
Caucasian	91.74%	211
Prefer not to answer	3.48%	8
Total		230

Q31 Please share any other comments you have about recycling.

Answered: 60 Skipped: 181

#	Responses	Date
1	The main reason I do not recycle is because I am tired of the Government raising taxes. If they think I am going to pay a deposit on a coke can and then put it their recycle bin for them to profit, then they dumber than I thought. However if the deposit was raised to 20 cents, and the ridiculous rule of not being able to return crushed cans was repealed then I would probably return them for the deposit. I do recycle cardboard, newspaper, etc. to reduce the cost associated with garbage collection, or use common garbage cans located at businesses.	11/20/2013 10:02 AM
2	I like to recycle.	11/12/2013 11:05 AM
3	In my opinion, UNI's recycling program is sub-par. In my experience, the school does not actively promote recycling and does not make recycling readily available in many of its buildings.	11/11/2013 7:58 PM
4	I have been recycling since I helped create the Environmental Action Center in La Canada, California in 1969. BTW, your last set of questions was aimed only at students. I am a faculty member. Should I have been filling this out?	11/11/2013 7:16 PM
5	I think recycling is a good thing, but where I'm from you can take it to a place to recycle. Here in cedar falls, I am not willing to pay for something I believe should be free, but also I have 2 jobs and go to school full time, as well as take a work out class to stay healthy and going on campus to recycle various items has proven to be a hassle, not to mention there is not much space in my duplex to store the items that need to be recycled.	11/11/2013 6:36 PM
6	There needs to be more recycling containers around campus, especially in computer labs.	11/1/2013 2:41 PM
7	I used to recycle my pop bottles, cans, and paper but since I live in a one bedroom apartment, I don't really have room or time to find some place to recycle my paper products at. Additionally, I watched a documentary on how most of the things that people try to recycle aren't able to be recycled anyway. I would probably recycle again if I knew more locations to recycle and they were reasonably conveniently placed but right now, much of the recycled materials end up in my trash can because of the mess they're creating in my apartment. It'd be nice if campus had one of those drop off bins for recycling. I'd definitely bring stuff there.	10/31/2013 12:31 AM
8	I wish there were more easily accessed recycling locations near my residence.	10/29/2013 4:13 PM
9	People need to stop littering and more people need to recycle	10/29/2013 2:12 PM
10	Love it! Especially paper and deposit can returns	10/28/2013 11:26 PM
11	starting kids early, will only make it easier to get them to do it throughout their life. Becomes habit.	10/28/2013 9:45 PM
12	I grew up in a small town with curb-side recycling. Recycling is difficult in Waterloo. I live in an apartment that does not provide recycling services, and I have to find space to store my recycling. The city drop offs are often filled or over-filled, and can machines often reject products making it a hassle.	10/28/2013 5:58 PM
13	everyone should do it	10/28/2013 4:17 PM
14	Environment, Technology, and Society at UNI is a great class to learn about recycling	10/28/2013 2:31 PM
15	Would it be better to burn our garbage as fuel? Some places do this effectively.	10/28/2013 1:45 PM
16	I very much enjoy recycling and I try my best to do it often and to persuade my peers to do the same.	10/28/2013 1:04 PM
17	I lived in Wisconsin, where it is MANDATORY to recycle everything that you can possibly recycle. In our area, we could only use clear garbage bags, so it could be determined if you were throwing away recyclables. We did not get deposits back on cans, but mandatory laws on recycling coupled with clear garbage bags for accountability goes a long way to get people to recycle. Then, after moving back to Iowa, we've continued the practices we started in Wisconsin -- it just makes sense and have less trash every week. I have been terribly frustrated with the lack of recycling options at UNI... Either I have to carry the containers of things I drink throughout the day back home to recycle or throw them in the trash, which makes me cringe.	10/28/2013 12:41 PM
18	I think its something everyone should do, and there honestly isn't a legitimate reason not to recycle.	10/28/2013 12:38 PM
19	Cedar falls does not advertise a city recycling program. If they do it is not advertised well.	10/28/2013 11:27 AM

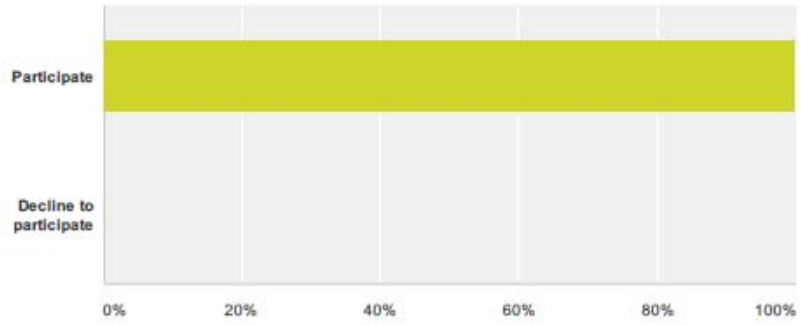
20	Cedar Falls does not offer a free curbside pick up. It is hard, as a college student, to pay for recycling when one already pays for trash removal through CFU is absurd.	10/28/2013 10:46 AM
21	If cities want citizens to recycle there shouldn't be a charge for recycling.	10/28/2013 10:39 AM
22	Just to clarify, I don't usually drink soda, so I don't have any 5 cent deposit types of cans/bottles to recycle.	10/28/2013 10:27 AM
23	I think curbside recycling is the only way to get everyone to recycle. I don't participate in bottle or can refunding because I do not like to accumulate mountains of "junk" at my home.	10/28/2013 10:26 AM
24	Your question #7 did not allow me to rank my preferences. It filled them in and did not allow me to choose. Just wanted to let you know.	10/28/2013 10:21 AM
25	Cedar Falls has great recycling facilities, however I think they should begin free* curbside recycling where the cost is figured in to utility cost.* It is more convenient to set a container outside your door then drive to Fareway or the transfer station, so more people would recycle. Plus many college students who live off campus with no vehicles have limited access to recycling (think Hillcrest or thunder ridge apartments).	10/28/2013 9:46 AM
26	I would definitely recycle more if grad student housing (Hillside/Jennings) provided a facility for recycling. I recycled everything when I lived in the dorms! In my hometown we have curbside recycling pick up, so it's very easy and convenient.	10/28/2013 9:45 AM
27	The decision to recycle is not a choice. It is the only logical and responsible thing to do. I have been actively recycling for over a decade and when I see the difference it has made I am encouraged that I can make such an impact. When you can see how much waste we as individuals make it's shocking. I am unwilling to contribute so much trash. I am also a mother and my children (6 & 10) have been recycling their entire lives. This makes me proud because they know no other way to live. It feels like a good start. Have and great day and good luck on your project :-)	10/24/2013 11:35 AM
28	I wish that more apartment buildings offered recycling. It is difficult to properly recycle when you have to transport the materials to a recycling facility that will (hopefully) take everything (this including cardboard, all plastics, metal, batteries, etc.). Making a special trip (on a relatively frequent basis) can prove exhausting and lessen the likelihood of recycling by this population.	10/24/2013 1:33 AM
29	Recycling, although it may not seem like a big deal on a personal level, on a nationwide or global level, it is a big deal, along with the many other things we could be doing to help the environment in the process.	10/23/2013 8:40 PM
30	I think students are more likely to recycle when it is more convenient for them. (For example: having recycling bins in the dorms) UNI is very good about providing those services.	10/23/2013 2:25 PM
31	I recycle everything possible! I feel terrible when I have to toss something that could have been recycled at one point but has gotten to the point of destruction. Recycling is a passion of mine that I inform as many others as I can about it! It is also an easy concept that hopefully everyone can someday become a helping hand in the process.	10/23/2013 1:36 PM
32	If it's going to take more effort to recycle than throwing something away, then I will probably just throw the item away.	10/23/2013 9:36 AM
33	Where I live, in a big city, there is no recycling available. 2 minutes away, in a small town, they have recycling options every week! I want to change that.	10/22/2013 7:50 PM
34	It is time consuming and I don't have much space so I recycle the easier things.	10/22/2013 5:51 PM
35	My Mother works for a non-profit organization that employs intellectually challenged individuals. The organization is my home-towns recycling center.	10/22/2013 1:04 PM
36	I recycle beyond my own accounts...I recycle for my roomates & family in town. Yet it is still uncommon for others around me, recycling should be an easier thing for those who do not care or are just too lazy to do via (free) curbside recycling, sorted garbage collections, all plastic deposits required, closer recycling dumpsters,etc...unfortunately.	10/22/2013 11:28 AM
37	There should be a law requiring all homes to recycle, or at least have a curbside recycle service like stated in the survey.	10/22/2013 9:34 AM
38	I have worked for and heard many stories about large corporations who do not recycle and they print thousands of papers a day. Due to the multitude of this I feel that whether I recycle my two pieces of paper a day makes no impact.	10/22/2013 9:14 AM
39	Thank you for doing research on this topic! It is my opinion that this needs to be comfortable and familiar to all our citizens.	10/22/2013 8:13 AM

40	I feel like we the environment is so important yet we, as humans, seem to just keep making it worse and worse. I'm glad that people are concerned, and yet sometimes I feel it is not enough. In school we talked a little but not much. I learned a lot from doing a report on polar bears. In college I have not talked about the environment once. This needs to change, maybe it's my major, and the fact that I transferred in as to way I have not talked about the environment while a student here at UNI.	10/21/2013 8:34 PM
41	waste of time, as it has no significant impact	10/21/2013 8:13 PM
42	I wish it was more convenient to recycle and there were more places for me recycle pop cans and bottles on campus.	10/21/2013 5:09 PM
43	I recycle more often when it is convenient. I know there is a set up in some towns that sort the recycling for you if you separate recyclables from trash before-hand. I think that if towns wish to make recycling more common, they should raise the income from recycling bottles. Another option, that would open job opportunities is that towns could set up the recycling truck as I mentioned earlier. Works just like a garbage truck, but recycling only.	10/21/2013 2:38 PM
44	I know that there are opportunities on UNI's campus to learn about recycling although I have never been able to participate. I currently live off campus and an completing an internship which is also off campus. Because of this, I rarely go to campus where it would be easy to recycle but the process of storing those materials and then transporting them to campus is not convenient. Whereas it is easy to take cans in for redemption because it's available where I buy my food.	10/21/2013 2:36 PM
45	I recycle as often and as much as I can, and often it can become really difficult when you live with someone who does not seem to care or figures he can't make a difference. He doesn't see the value in being sure to recycle one item, so he makes jokes about it instead. It can make it tough to recycle or try to make a difference when you have someone that you feel is undoing everything you work towards.	10/21/2013 2:02 PM
46	I feel that recycling is a very important thing to do. It disgusts me when people throw things away that are perfectly good to be recycled and used again.	10/21/2013 1:11 PM
47	I would love to see curbside recycling in Cedar Falls!	10/21/2013 1:00 PM
48	..	10/21/2013 12:57 PM
49	I think as young people, it is our job to recycle and be productive in reducing the amount of waste we contribute to the world's landfills. However, as someone who lives off campus it isn't very convenient to recycle, because the recycling center is far from my home. I wish I was more familiar with the options on campus, because that is closer to my apartment.	10/21/2013 12:44 PM
50	Recycling is the right thing to do and everyone should recycle as much as possible. We only get one earth so we might as well save it.	10/21/2013 12:04 PM
51	I wish all cities would have recycling available for free. I know that in a city in TN where my family lives, it cost money for them to recycle, so therefore they have chosen not to recycle and when I found that out I was disappointed since I generally do recycle a lot when I am home.	10/21/2013 11:16 AM
52	It is a great idea that can help slow the filling of landfills.	10/21/2013 10:00 AM
53	I don't think UNI is doing enough to make recycling easier on campus.	10/21/2013 9:24 AM
54	Though I answered honestly, I also think that my participation in recycling depends on the day. Some days I recycle everything, and some days I don't recycle at all. I think that affects my answers some.	10/21/2013 12:27 AM
55	I wish Cedar Falls, and especially my apt complex, had curbside pickup and you did not have to drive and sort all the materials	10/20/2013 7:20 PM
56	I think it is a good way to reuse things that we already made and keep them from harming animals/ the environment further.	10/19/2013 2:19 PM
57	Just do it. ~Nike	10/19/2013 10:22 AM
58	I don't know that this pertains to the purpose of this specific survey, but compared to the system of recycling that I had in my hometown, Cedar Falls' is quite a hassle. I would imagine that's the reason most of the people in the area that don't recycle fail to do so. As I said, I'm not sure if that's relevant. Good luck with your work!	10/18/2013 5:02 PM
59	I feel as though more people should recycle, but are too lazy to do so. I believe if students could see the direct consequences of not recycling they would do it more often. Most of the time students don't think that recycling doesn't directly affects them, so they don't care about it.	10/18/2013 2:10 PM
60	I fully support recycling, and I actually hate it when people throw away things that should be recycled. Your survey allowed me to realize my main reason for doing this stems from my family being pro-recycling. Thank you!	10/18/2013 1:23 PM

APPENDIX I

HCC FULL SURVEY RESULTS

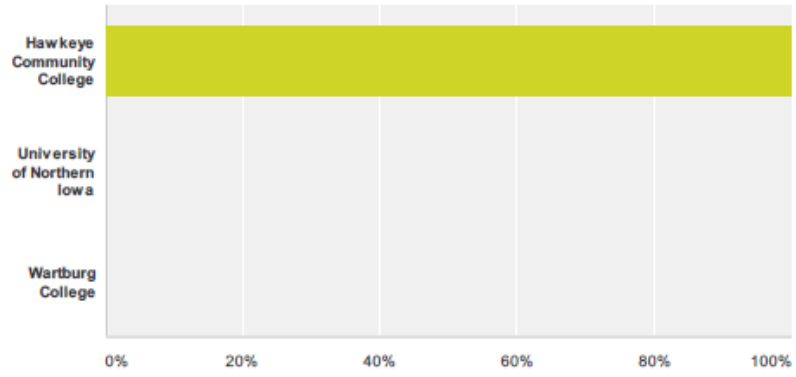
Q1 **Greetings, My name is Mark Wilcox and I am a graduate student at the University of Northern Iowa. I am conducting a study on the attitudes of college students about recycling. I understand that your time is valuable but this study will provide much needed insight that may allow your institution to better meet your recycling needs. This brief internet survey is anonymous and completely voluntary. The survey will take approximately 15 minutes of your time. This study has risks no greater than those of day-to-day life. You may not receive any direct benefit from participating in this study. The results of this study may be shared with interested parties at each of the three institutions being sent this opportunity and you as well may receive the results if you wish. Your confidentiality will be maintained to the degree permitted by the technology used. Specifically, no guarantees can be made regarding the interception of data sent via the Internet by any third parties. If you have any questions or concerns regarding this study please feel free to contact me via email (mark.wilcox@uni.edu). You may also contact Anita Gordon, the UNI IRB administrator by phone: 319-273-6148 or E-mail anita.gordon@uni.edu. If you are willing to share your attitudes about recycling please click the link below and complete the survey. You may exit the survey at any time and your anonymity will be preserved as much as possible. Your participation is very greatly appreciated. Thank you so much for your time. Sincerely, Mark Wilcox Department of Technology University of Northern Iowa**



Answer Choices	Responses	
Participate	99.71%	346
Decline to participate	0.29%	1
Total		347

Q2 Choose your institution.

Answered: 350 Skipped: 0



Answer Choices	Responses	
Hawkeye Community College	100%	350
University of Northern Iowa	0%	0
Wartburg College	0%	0
Total		350

Q3 During the academic year do you live_____?

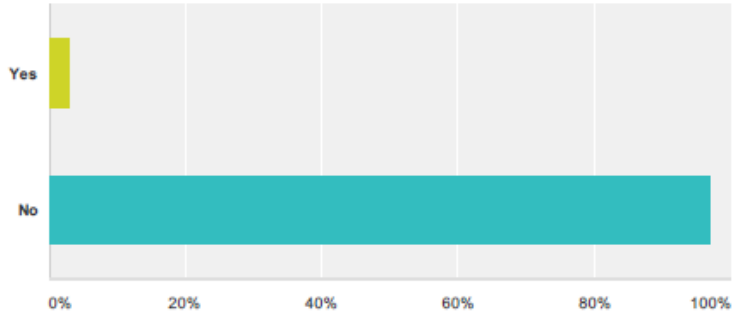
Answered: 0 Skipped: 350

! No matching responses.

Answer Choices	Responses	
On-Campus	0%	0
Off-Campus	0%	0
Total		0

Q4 Do you live on UNI's Campus?

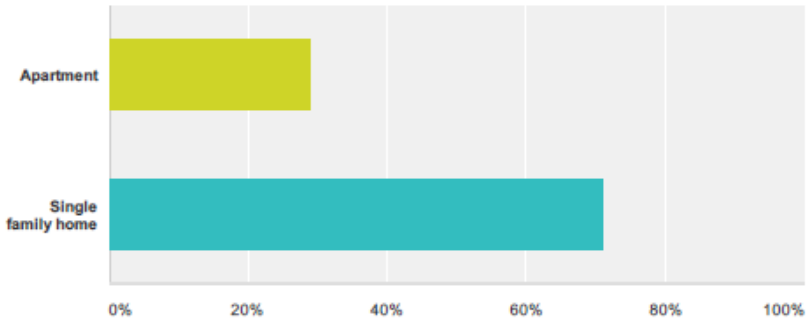
Answered: 348 Skipped: 2



Answer Choices	Responses	
Yes	3.16%	11
No	96.84%	337
Total		348

Q5 Which best describes your place of residence?

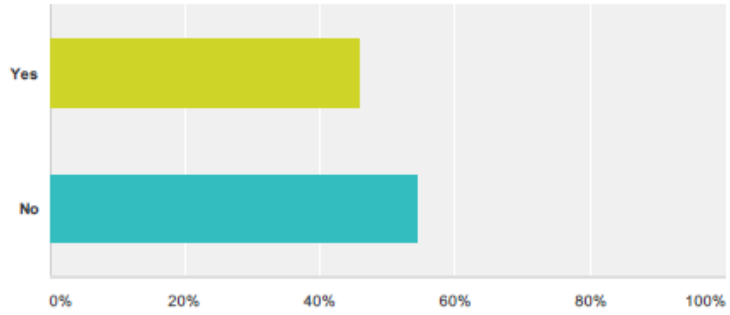
Answered: 349 Skipped: 1



Answer Choices	Responses	
Apartment	28.94%	101
Single family home	71.06%	248
Total		349

Q6 Do you have curbside recycling?

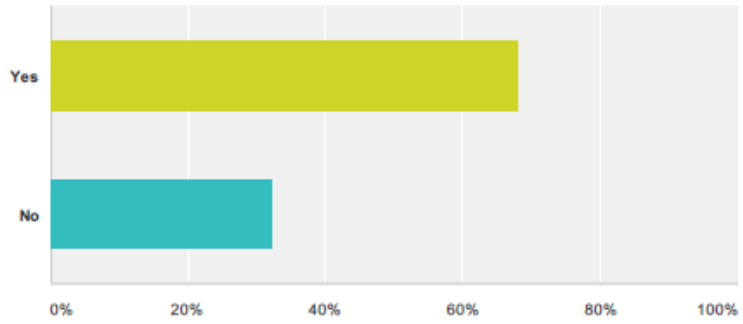
Answered: 247 Skipped: 103



Answer Choices	Responses	
Yes	45.75%	113
No	54.25%	134
Total		247

Q7 Would you be willing to pay a small fee (less than $5 per month) for curbside recycling?

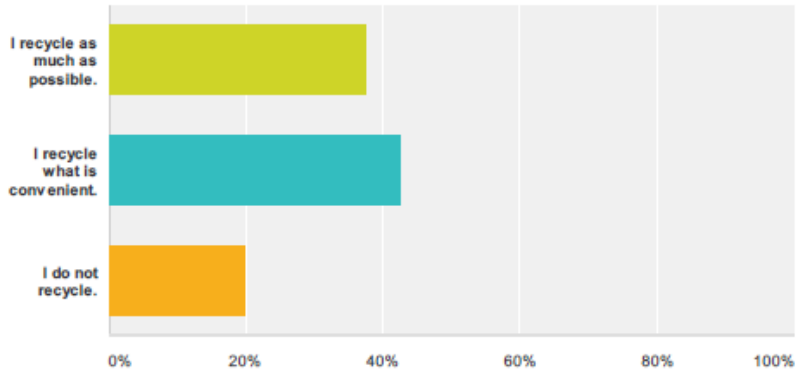
Answered: 134 Skipped: 216



Answer Choices	Responses	
Yes	67.91%	91
No	32.09%	43
Total		134

Q8 Which of the following statements best applies to you?

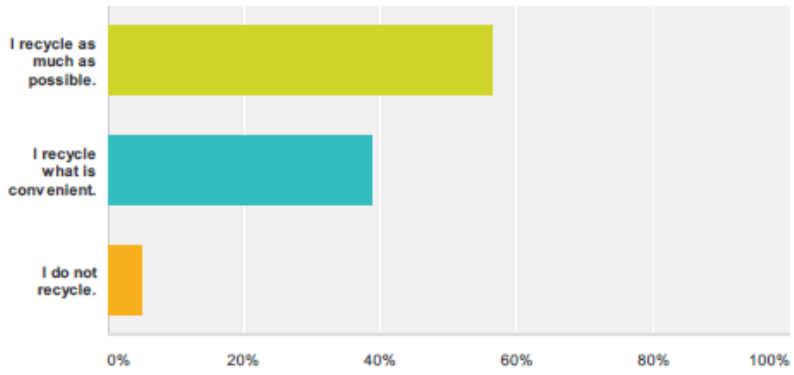
Answered: 101 Skipped: 249



Answer Choices	Responses	
I recycle as much as possible.	37.62%	38
I recycle what is convenient.	42.57%	43
I do not recycle.	19.80%	20
Total		101

Q9 Which of the following statements best applies to you?

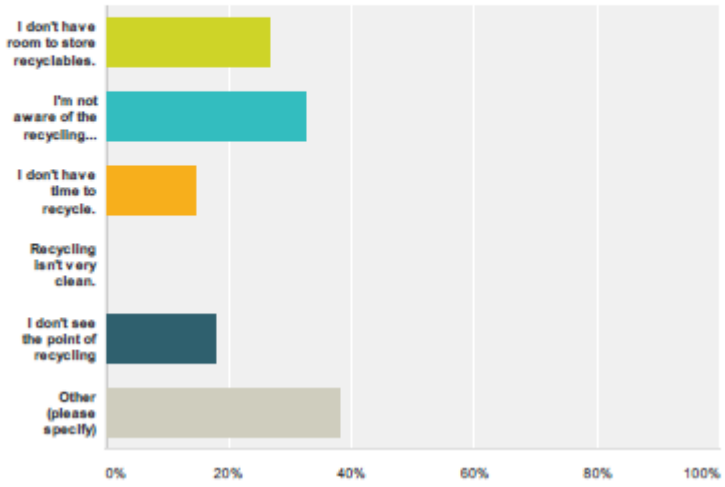
Answered: 247 Skipped: 103



Answer Choices	Responses	
I recycle as much as possible.	**56.28%**	139
I recycle what is convenient.	**38.87%**	96
I do not recycle.	**4.86%**	12
Total		**247**

Q10 Which of the following best describes why you do not recycle? (check all that apply)

Answered: 34 Skipped: 316

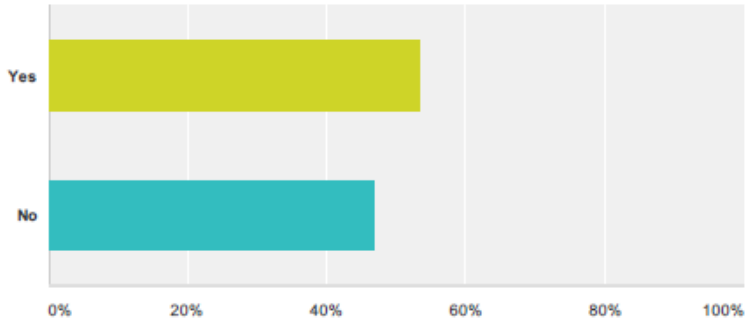


Answer Choices	Responses	
I don't have room to store recyclables.	26.47%	9
I'm not aware of the recycling opportunities available to me.	32.35%	11
I don't have time to recycle.	14.71%	5
Recycling isn't very clean.	0%	0
I don't see the point of recycling	17.65%	6
Other (please specify)	38.24%	13
Total Respondents: 34		

#	Other (please specify)	Date
1	because it sucks...	11/20/2013 11:58 AM
2	my apartment complex (hawkeye village) doesn't offer recycling opportunities	11/18/2013 11:46 AM
3	I burn all waste products	11/18/2013 8:43 AM
4	I don't have a recycle bin and the city should be incorperating it into their city. Dubuque does and thier is no fee.	11/5/2013 8:57 AM
5	Not convienent	10/29/2013 9:59 AM
6	I'm lazy and the trash bin seems simpler then the process of recycling	10/28/2013 11:40 PM
7	I have enough scheduals to keep track of, the citys recycling scheduled is not one I find very important. If it was every week I would have no problem recycling.	10/28/2013 8:46 PM
8	there is no seperate place to but plastics and cardboard at the Village Apartments across from Hawkeye otherwise I would	10/28/2013 9:58 AM
9	None of your apply. I do recycle.	10/28/2013 9:16 AM
10	im a troll so i dont recycle	10/23/2013 9:51 AM
11	the apartments I live in don't have recycling so it hard for me to take my recycling into the recycling center	10/22/2013 8:32 AM
12	my apt complex doesnt have a place for recyclables	10/22/2013 12:41 AM
13	I don't have the funds to purchase the container needed/required.	10/21/2013 5:57 PM

Q11 Do you use on-campus recycling?

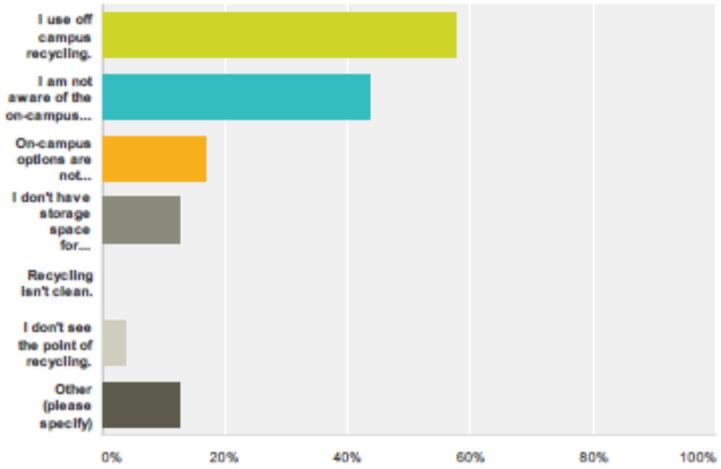
Answered: 344 Skipped: 6



Answer Choices	Responses	
Yes	**53.20%**	183
No	**46.80%**	161
Total		**344**

Q12 Which of the following best describes why you do not use on-campus recycling options? (check all that apply)

Answered: 165 Skipped: 185



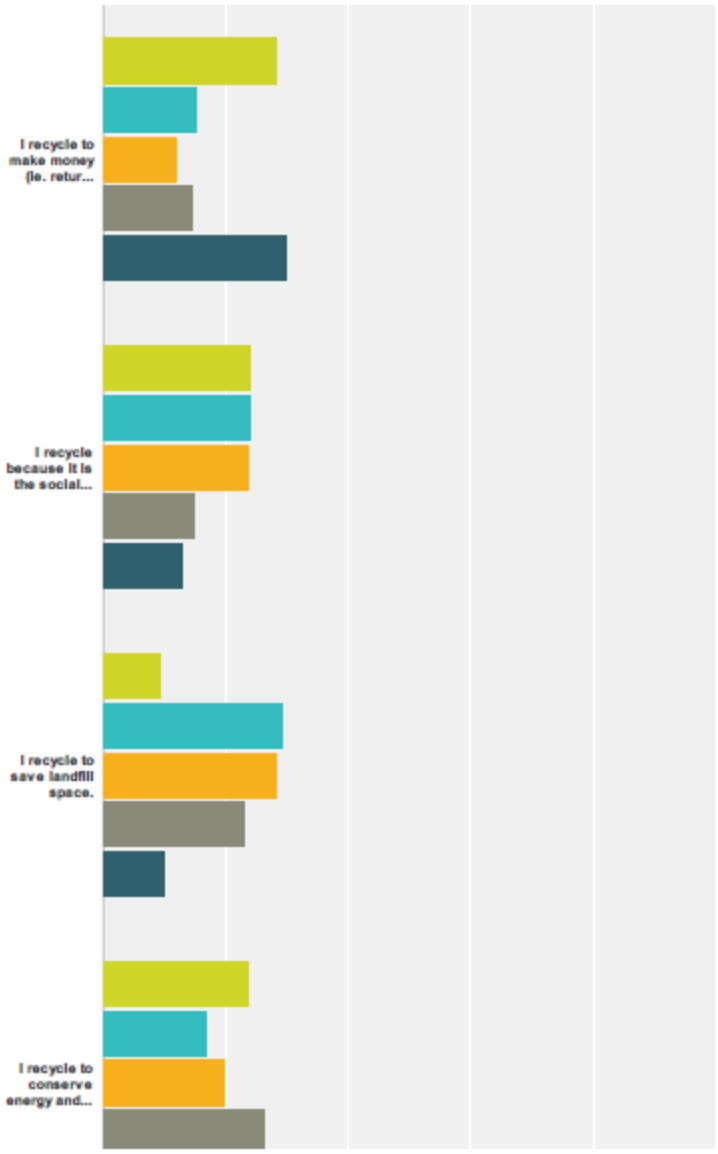
Answer Choices	Responses	
I use off campus recycling.	57.58%	95
I am not aware of the on-campus options.	43.64%	72
On-campus options are not convenient for me.	16.97%	28
I don't have storage space for recyclables.	12.73%	21
Recycling isn't clean.	0%	0
I don't see the point of recycling.	3.64%	6
Other (please specify)	12.73%	21
Total Respondents: 165		

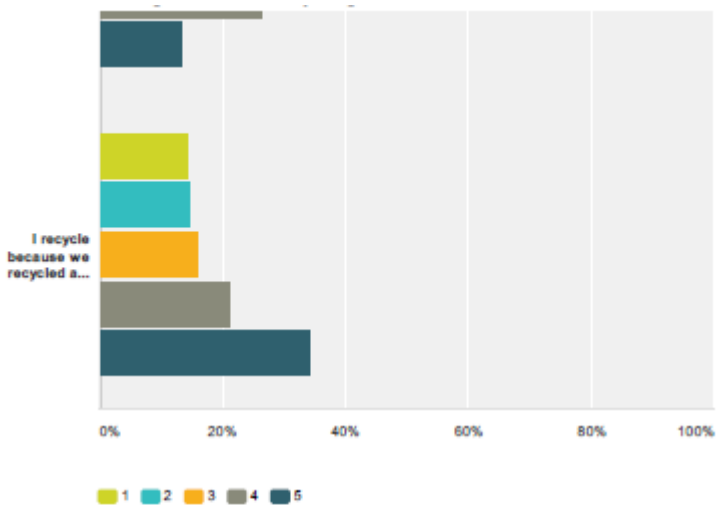
#	Other (please specify)	Date
1	I am never on campus	11/20/2013 10:27 PM
2	I'm to lazy...	11/20/2013 11:58 AM
3	I am an online student	11/19/2013 4:42 PM
4	I don't live close to on campus facilities	11/18/2013 5:09 PM
5	home town recycling sites	11/18/2013 11:26 AM
6	Don't live on campus	11/18/2013 9:31 AM
7	I rarely use the vending machines.	11/6/2013 11:48 AM

8	What I know of recycling the cost goes to the consumor and all the profit is raked in by the company providing the bins or pick up service.	10/31/2013 8:20 AM
9	I don't really think about it	10/29/2013 2:58 PM
10	online classes	10/29/2013 12:30 PM
11	I don't go on campus.	10/29/2013 11:09 AM
12	I live off campus and do not bring my items to campus	10/29/2013 12:48 AM
13	I have nothing to recycle while on campus.	10/28/2013 8:47 PM
14	I do not live on or near campus.	10/28/2013 7:01 PM
15	I don't live on campus	10/28/2013 1:49 PM
16	Campus is to far away	10/28/2013 10:37 AM
17	fuck recycling	10/23/2013 9:52 AM
18	I take my classes online.	10/22/2013 4:22 PM
19	I'm not on campus. I'm a web based student.	10/21/2013 5:57 PM
20	most janitors dont recycle whats in the bin	10/21/2013 3:35 PM
21	I live off campus in a house.	10/21/2013 12:49 PM

Q13 Please rank in order of importance from most important (1) to least important (5) your reasons for recycling.

Answered: 340 Skipped: 10

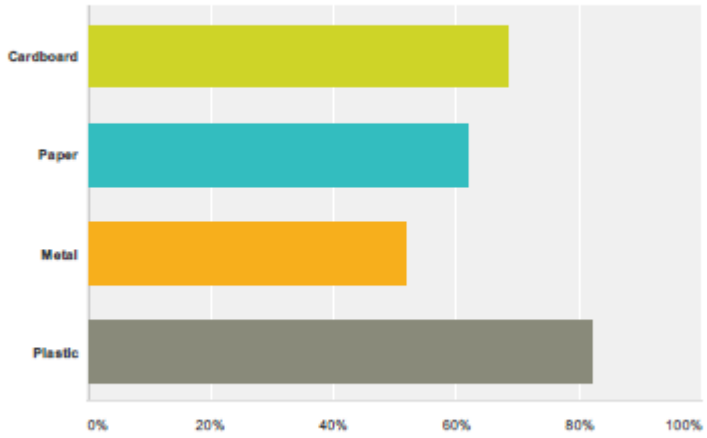




	1	2	3	4	5	Total	Average Ranking
I recycle to make money (ie. return deposit containers)	**28.24%** 96	**15.29%** 52	**12.06%** 41	**14.71%** 50	**29.71%** 101	340	2.98
I recycle because it is the socially responsible thing to do.	**24.12%** 82	**24.12%** 82	**23.82%** 81	**15%** 51	**12.94%** 44	340	3.31
I recycle to save landfill space.	**9.41%** 32	**29.12%** 99	**28.24%** 96	**23.24%** 79	**10%** 34	340	3.05
I recycle to conserve energy and resources.	**23.82%** 81	**16.76%** 57	**20%** 68	**26.18%** 89	**13.24%** 45	340	3.12
I recycle because we recycled at home.	**14.41%** 49	**14.71%** 50	**15.88%** 54	**20.88%** 71	**34.12%** 116	340	2.54

Q14 Which of the following do you recycle on a regular basis? (select all that apply)

Answered: 333 Skipped: 17



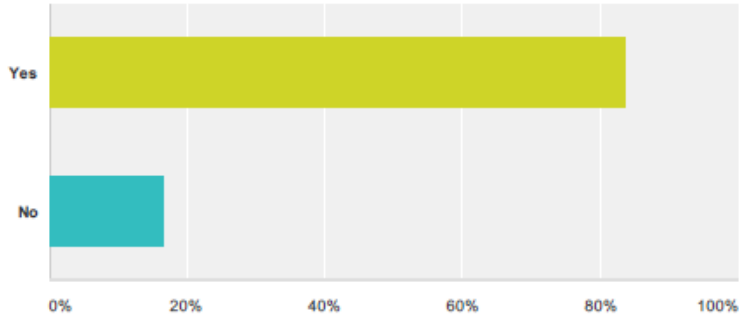
Answer Choices	Responses	
Cardboard	68.47%	228
Paper	61.86%	206
Metal	51.65%	172
Plastic	81.98%	273
Total Respondents: 333		

#	Other (please specify)	Date
1	Pop Bottles	11/19/2013 7:38 PM
2	Glass, Cans, Clothing (Goodwill)	11/19/2013 5:53 PM
3	wood	11/19/2013 4:43 PM
4	glass	11/18/2013 8:45 AM
5	aluminum/tin cans	11/12/2013 7:39 PM
6	lightbulbs, clothing,	11/4/2013 9:19 AM
7	pop cans	11/1/2013 7:56 PM
8	Glass ocassionally	10/31/2013 10:24 AM
9	carbonated/alcoholic drink containers	10/31/2013 8:21 AM
10	glass	10/30/2013 9:05 PM
11	Cans/Bottles	10/30/2013 9:59 AM
12	glass	10/29/2013 5:06 PM
13	glass	10/29/2013 1:22 PM

14	my husband makes me recycle at home.	10/29/2013 1:11 PM
15	glass	10/29/2013 12:49 PM
16	pop cans	10/29/2013 12:13 PM
17	glass	10/29/2013 12:09 PM
18	Paper at school and can at my apartment	10/29/2013 10:01 AM
19	I usually take a load of cardboard to the land fill,	10/29/2013 12:51 AM
20	I make makeshift ashtrays out of old plastic bottles for my car	10/29/2013 12:42 AM
21	cans	10/28/2013 9:26 PM
22	I dont. Theres no convenient way to recycle in waterloo	10/28/2013 8:48 PM
23	Glass	10/28/2013 7:27 PM
24	glass containers	10/28/2013 6:56 PM
25	Glass	10/28/2013 6:56 PM
26	shopping bags	10/28/2013 6:16 PM
27	glass	10/28/2013 5:47 PM
28	Glass Bottles	10/28/2013 5:21 PM
29	Nothing	10/28/2013 4:49 PM
30	boxes, electronics, yard waste	10/28/2013 2:17 PM
31	Pop bottles or cans	10/28/2013 1:50 PM
32	glass	10/28/2013 1:17 PM
33	I buy and sell or give away used office and other furniture when I can.	10/28/2013 11:54 AM
34	Foil	10/28/2013 9:13 AM
35	Glass	10/25/2013 9:58 AM
36	Cans	10/24/2013 3:04 PM
37	cans	10/23/2013 9:59 AM
38	no	10/23/2013 9:52 AM
39	glass	10/23/2013 8:47 AM
40	Glass when possible	10/22/2013 4:23 PM
41	Glass, Appliances, Batteries	10/22/2013 1:22 PM
42	furniture	10/22/2013 9:46 AM
43	car parts :P	10/22/2013 9:03 AM
44	Clear glass, grocery bags	10/22/2013 8:27 AM
45	glass/cardboard	10/22/2013 6:41 AM
46	glass	10/21/2013 10:15 PM
47	Glass	10/21/2013 10:06 PM
48	alumiunm cans	10/21/2013 6:26 PM
49	Pop cans	10/21/2013 5:57 PM
50	glass	10/21/2013 5:09 PM
51	glass	10/21/2013 2:20 PM
52	pop cans	10/21/2013 2:05 PM
53	cans, glass	10/21/2013 12:42 PM
54	pop cans	10/21/2013 10:58 AM
55	Pop bottles	10/21/2013 10:55 AM
56	glas, garden waste	10/21/2013 10:06 AM
57	Aluminum (cans)	10/21/2013 9:25 AM
58	cans / bottles	10/21/2013 8:43 AM
59	glass,	10/21/2013 8:28 AM

Q15 Do you return your deposit bottles and cans for the 5 cent deposit?

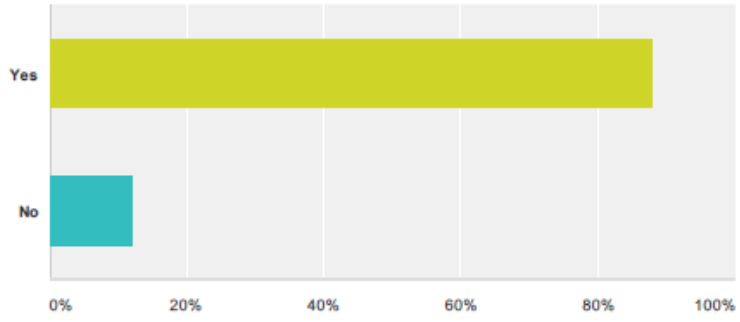
Answered: 340 Skipped: 10



Answer Choices	Responses	
Yes	83.53%	284
No	16.47%	56
Total		340

Q16 Do you support expansion of the Deposit Law to include other beverage containers such as water bottles, sports drinks, etc.?

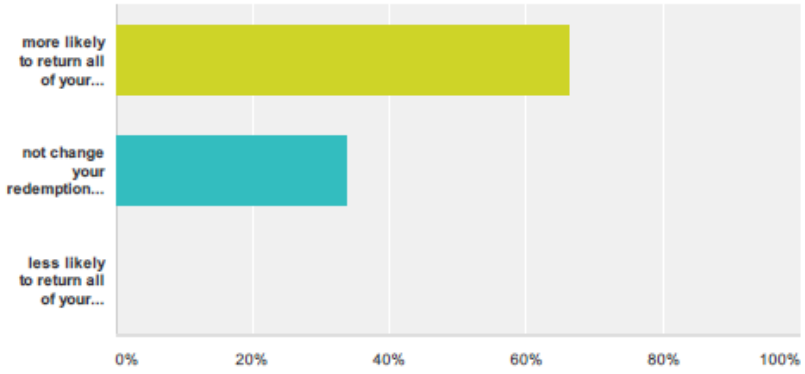
Answered: 339 Skipped: 11



Answer Choices	Responses	
Yes	87.91%	298
No	12.09%	41
Total		339

Q17 A higher deposit of 10 cents per container would make you

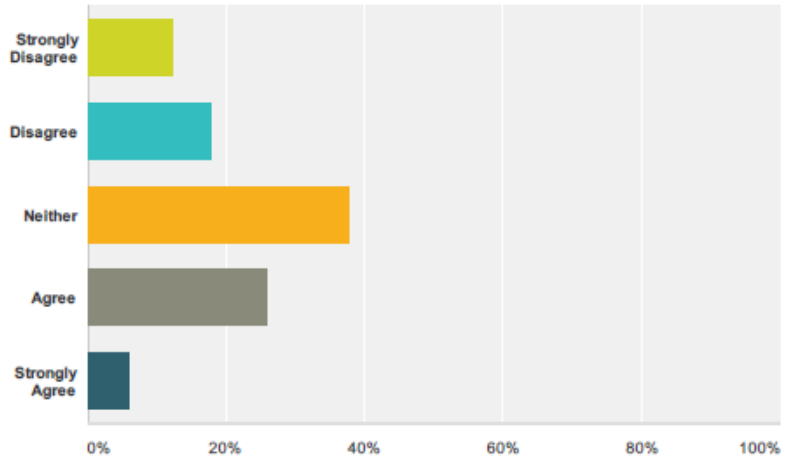
Answered: 340 Skipped: 10



Answer Choices	Responses	
more likely to return all of your containers.	66.18%	225
not change your redemption habits.	33.53%	114
less likely to return all of your containers.	0.29%	1
Total		340

Q18 My participation, or lack thereof, in recycling is most influenced by what I've learned in school.

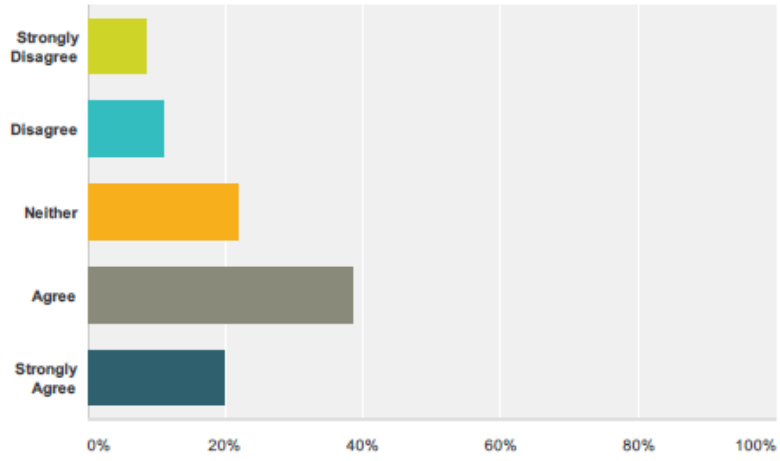
Answered: 339 Skipped: 11



Answer Choices	Responses	
Strongly Disagree	12.39%	42
Disagree	17.70%	60
Neither	37.76%	128
Agree	25.96%	88
Strongly Agree	6.19%	21
Total		339

Q19 My participation, or lack thereof, in recycling is most influenced by my family.

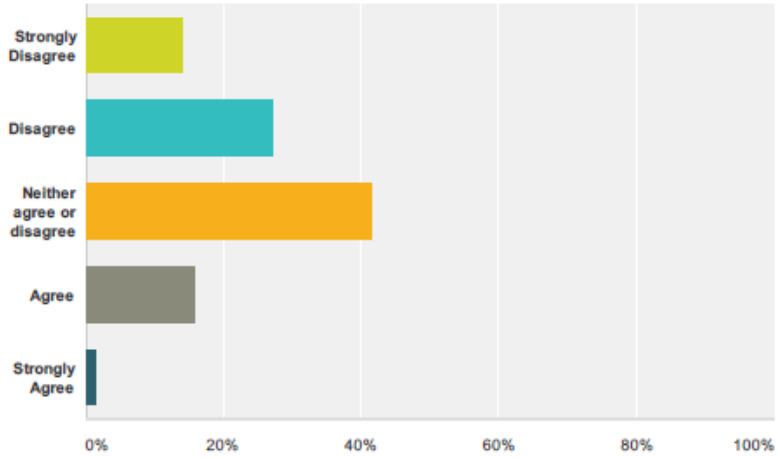
Answered: 337 Skipped: 13



Answer Choices	Responses	
Strongly Disagree	8.61%	29
Disagree	10.98%	37
Neither	21.96%	74
Agree	38.58%	130
Strongly Agree	19.88%	67
Total		337

Q20 My participation, or lack thereof, in recycling is most influenced by my peers.

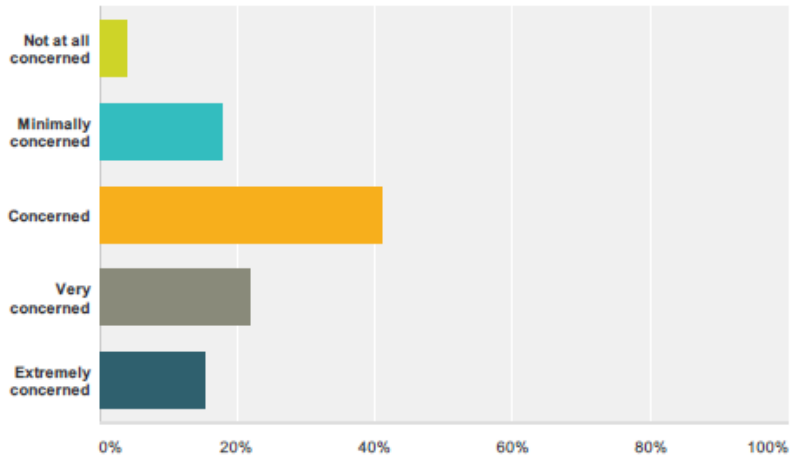
Answered: 339 Skipped: 11



Answer Choices	Responses	
Strongly Disagree	14.16%	48
Disagree	27.14%	92
Neither agree or disagree	41.59%	141
Agree	15.63%	53
Strongly Agree	1.47%	5
Total		339

Q21 How would you rate your level of concern with the current state of the environment?

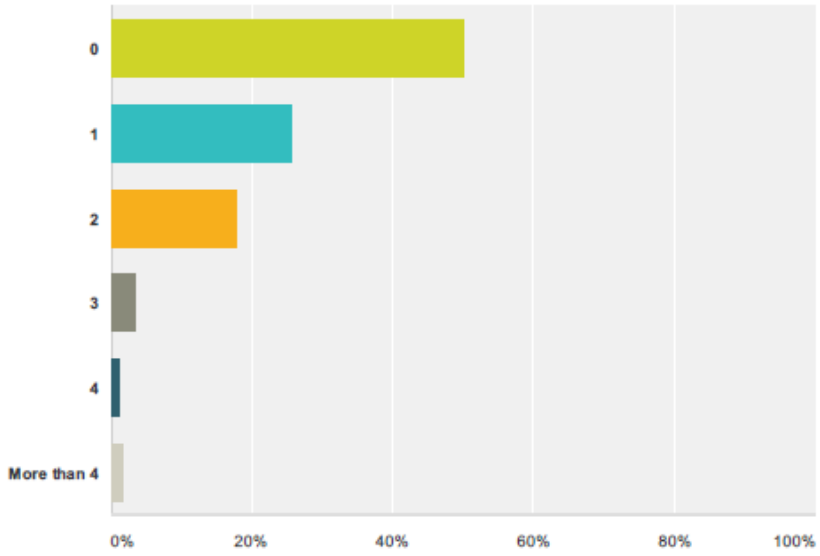
Answered: 340 Skipped: 10



Answer Choices	Responses	
Not at all concerned	4.12%	14
Minimally concerned	17.94%	61
Concerned	40.88%	139
Very concerned	21.76%	74
Extremely concerned	15.29%	52

Q22 Approximately how many classes have you taken where Recycling was a topic?

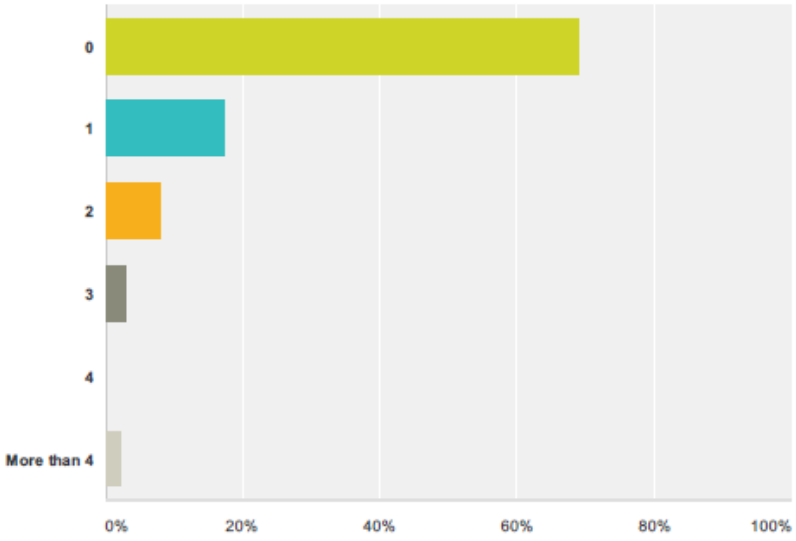
Answered: 340 Skipped: 10



Answer Choices	Responses	
0	50%	170
1	25.59%	87
2	17.94%	61
3	3.53%	12
4	1.18%	4
More than 4	1.76%	6
Total		340

Q23 Outside of class, approximately how many learning opportunities have you participated in about reycling (workshops, seminars, etc.)?

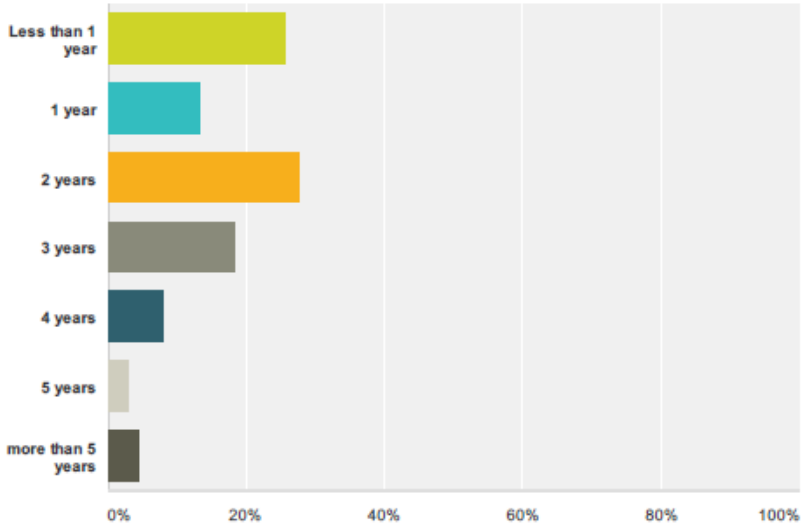
Answered: 340 Skipped: 10



Answer Choices	Responses	
0	69.12%	235
1	17.35%	59
2	7.94%	27
3	2.94%	10
4	0.29%	1
More than 4	2.35%	8
Total		340

Q24 How many years have you been in college?

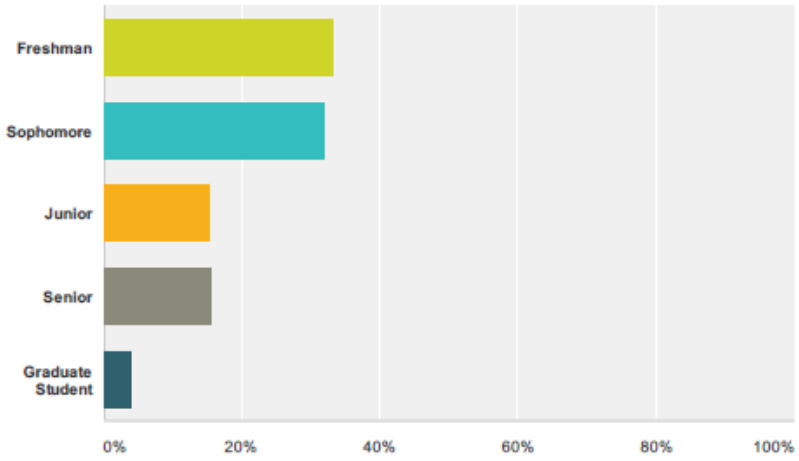
Answered: 340 Skipped: 10



Answer Choices	Responses	
Less than 1 year	25.59%	87
1 year	13.24%	45
2 years	27.65%	94
3 years	18.24%	62
4 years	7.94%	27
5 years	2.94%	10
more than 5 years	4.41%	15
Total		340

Q25 What is your current classification?

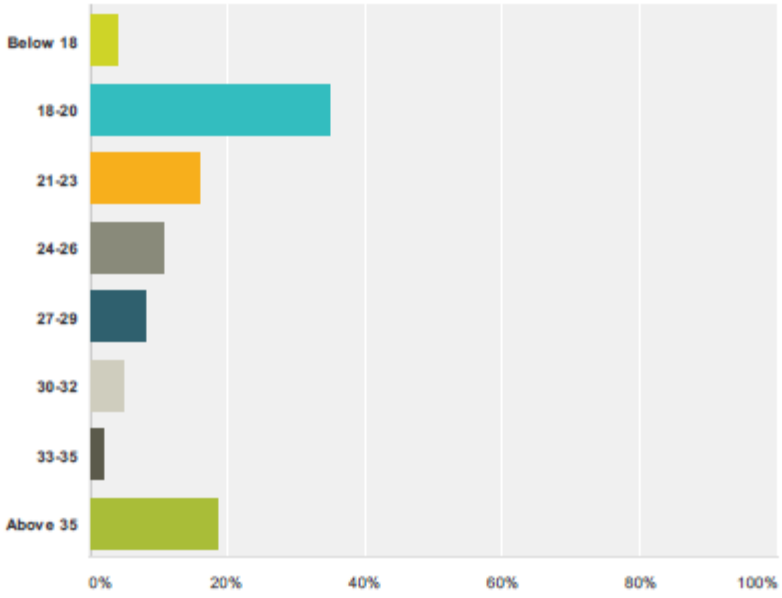
Answered: 334 Skipped: 16



Answer Choices	Responses	
Freshman	33.23%	111
Sophomore	32.04%	107
Junior	15.27%	51
Senior	15.57%	52
Graduate Student	3.89%	13
Total		334

Q26 What is your age?

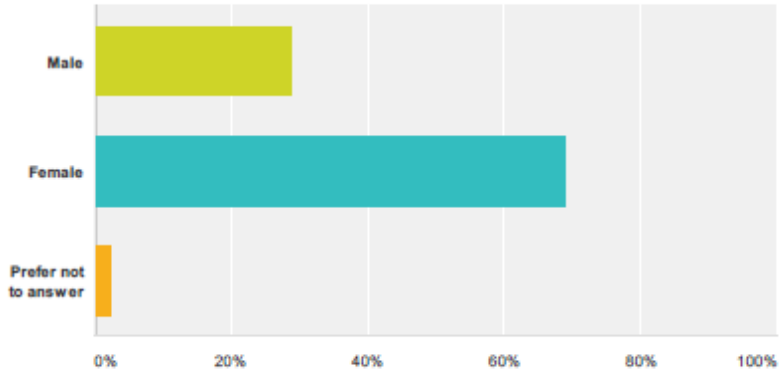
Answered: 340 Skipped: 10



Answer Choices	Responses	
Below 18	4.12%	14
18-20	35%	119
21-23	16.18%	55
24-26	10.88%	37
27-29	8.24%	28
30-32	5%	17
33-35	2.06%	7
Above 35	18.53%	63
Total		340

Q27 What is your gender?

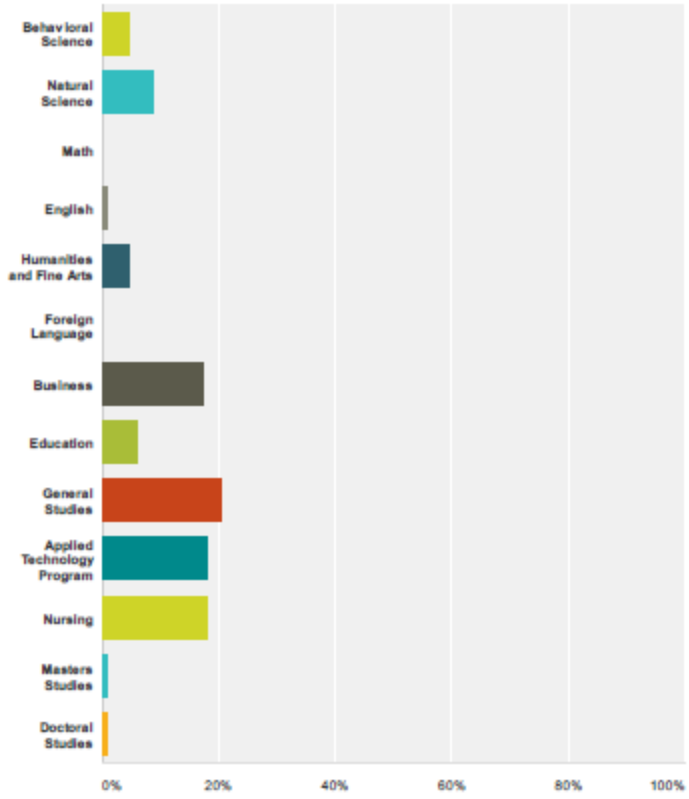
Answered: 340 Skipped: 10



Answer Choices	Responses	
Male	28.82%	98
Female	68.82%	234
Prefer not to answer	2.35%	8
Total		340

Q28 Which of the following most closely represents your major?

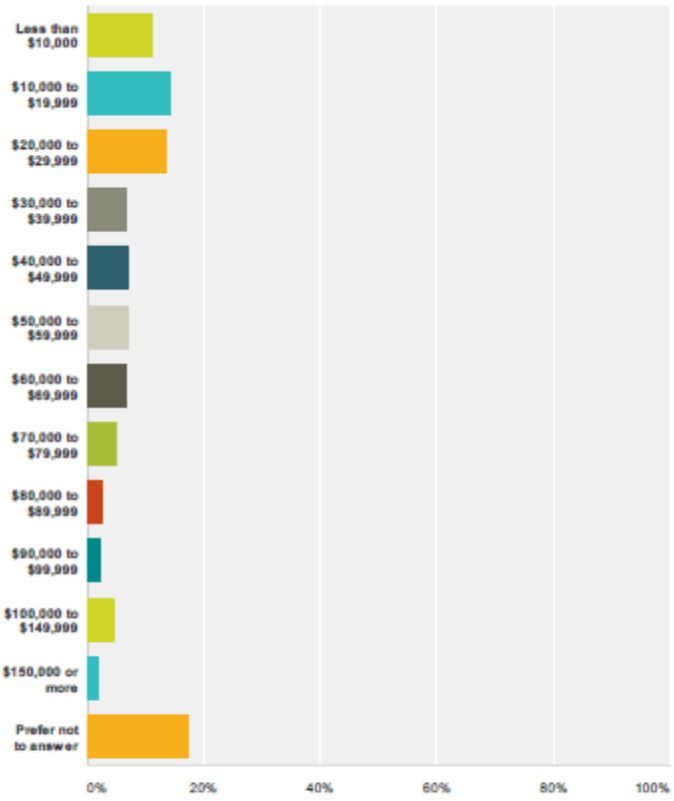
Answered: 336 Skipped: 14



Answer Choices	Responses	
Behavioral Science	4.46%	15
Natural Science	8.63%	29
Math	0.30%	1
English	0.60%	2
Humanities and Fine Arts	4.46%	15
Foreign Language	0.30%	1
Business	17.26%	58
Education	5.95%	20
General Studies	20.24%	68
Applied Technology Program	18.15%	61
Nursing	18.15%	61
Masters Studies	0.60%	2
Doctoral Studies	0.89%	3
Total		336

Q29 What is your approximate family income?

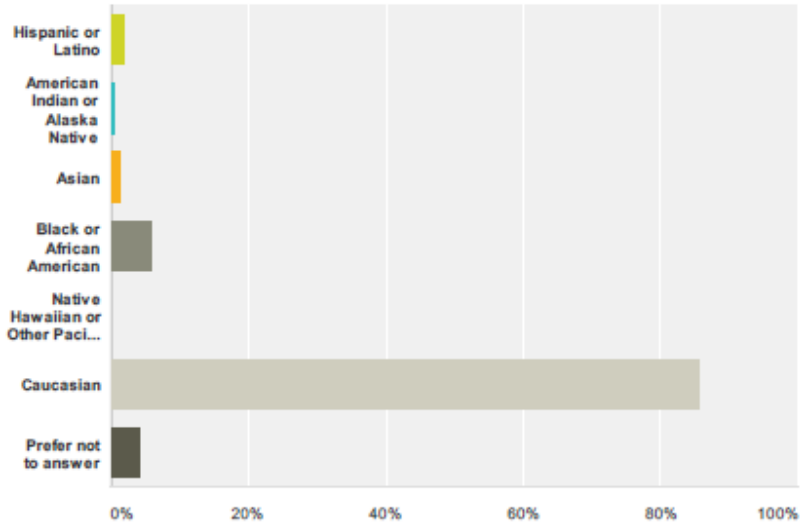
Answered: 340 Skipped: 10



Answer Choices	Responses	
Less than $10,000	11.18%	38
$10,000 to $19,999	14.12%	48
$20,000 to $29,999	13.53%	46
$30,000 to $39,999	6.47%	22
$40,000 to $49,999	7.06%	24
$50,000 to $59,999	7.06%	24
$60,000 to $69,999	6.76%	23
$70,000 to $79,999	5%	17
$80,000 to $89,999	2.65%	9
$90,000 to $99,999	2.35%	8
$100,000 to $149,999	4.71%	16
$150,000 or more	1.76%	6
Prefer not to answer	17.35%	59
Total		340

Q30 What is your race/ethnicity?

Answered: 339 Skipped: 11



Answer Choices	Responses	
Hispanic or Latino	2.06%	7
American Indian or Alaska Native	0.59%	2
Asian	1.47%	5
Black or African American	5.90%	20
Native Hawaiian or Other Pacific Islander	0.29%	1
Caucasian	85.55%	290
Prefer not to answer	4.13%	14
Total		339

Q31 Please share any other comments you have about recycling.

Answered: 115 Skipped: 235

#	Responses	Date
1	N/A	11/19/2013 6:26 PM
2	Cedar falls needs to have a clearly defined space for Styrofoam.	11/19/2013 5:55 PM
3	I believe that recycling is the responsible thing to do. Conservation and efficient use of resources is important. But i do not think it should be an agenda that is assumed cheaper. When private sector companies can make it profitable then the masses will jump on board. As of now it is still a fiscal burden on my municipalities, an agenda pushed by environmentalists; for a conservationalsit would see the need for responsibilitly in resources and finances.	11/19/2013 4:50 PM
4	Should be more laws.	11/19/2013 9:23 AM
5	I wish I could recycle more often, but I do as much as I can! I'm in total favor of recycling.	11/18/2013 10:02 PM
6	It would be nice to see more recycling containers in the classrooms at Hawkeye. I have seen one but for only white paper. There are many times students have tons of recyclable waste from the vending machines that is going into the regular trash. It makes me ill.....	11/18/2013 8:42 PM
7	I would like to see a day, once per month that there is a recycling activity on campus, and a clean up campus day during the fall&summer months. ie: warm months.	11/18/2013 11:43 AM
8	I feel recycling is a good habit to get into	11/18/2013 11:31 AM
9	Recycling education is something I feel should be strongly instilled in our children all through school and encouraged at home.	11/18/2013 9:04 AM
10	At our house, we burn everything because we live outside city limits and it gets quite expensive to pay the city to come out and get our recycling. So, it is safe to say, if the bill would be lower, we would most likely recycle everything we could.	11/18/2013 8:47 AM
11	Recycling is an extremely underutilized source of materials. It should be something that people must participate in, unless I am the only person concerened with the well being of my great great great great great grandchildren... There is a quote that goes a little something like this" If we are alive in 200 years people will not think like we do nor could they afford to do so"	11/14/2013 9:08 AM
12	I believe I was most strongly influenced by my family. I have tried to uphold my commitment to recycling in college but it is harder with lowered access and my roommates not recycling. I've tried to get them to recycle which has been somewhat successful.	11/12/2013 7:43 PM
13	There needs to be more recycling receptacles so people can have more opportunities to recycle.	11/6/2013 12:50 PM
14	Would like to see it happen in our community. I am not aware of any building that exists for recycling if their was people would be more apt to reycycle if they had containers and it was picked up curbside on their garbage day. I am surprised with a town this side with a adjoining community it has not already done so.	11/6/2013 9:02 AM
15	Recycling is a very important topic that needs to be discussed more to our society, especially our youth. They are our future. Programs in schools, teaching life, resources, and preservation.That combined with more effective ways of recycling. Curbside recycling programs. Weekly recycling trucks. I however, will be looking into electronic recycling. Show me the gold and silver. Go Planet!	11/5/2013 3:16 PM
16	I have been recycling with my parents since the 1970's, we were the first in our area that did so. I took Environmental Science last year, and it made me proud of my recycling background, and I learned more about it. Thanks for the great class!	11/4/2013 9:23 AM
17	curbside for residential areas would help people recycle	11/3/2013 7:44 AM
18	Recycling is very important for us and our kids	11/1/2013 11:18 PM
19	I think more effort should be put into unveiling infinite energy and its source, aesthetic, and function	11/1/2013 12:08 PM
20	.	11/1/2013 10:33 AM

21	I live with 3 other roommates currently and we try to recycle as much as possible. We have a big bin for cans and bottles and a big box for cardboard and paper, and my sister and I make a run to the transfer station or redemption center usually when they get pretty full! We also try to save any glass bottles we can, but I think that it's harder to deal with so it's less of a concern for us, but I feel like it should be the most concern since it's glass.	10/31/2013 10:31 AM
22	I grew up in a different country where recycling pick up was free - for paper and plastic - everyone in the large apartment complex participated, not just because this was the right thing to do, but also because it was convenient. If this was offered in our city (free recycling pick up) more people would do it, some just do not have the extra time to drive to the recycling centers that are available	10/31/2013 10:22 AM
23	Cofery waste will take care of your recycling needs... at a cost to you. The consumer pays for the packaging when he/she makes a purchase, then the consumer pays a fee to have the trash picked up, if the consumor wantas to recycle he/she has to pay for containers and additional pick up fees. The consumor takes the time to clean sort and store recycleables. I think the focus should be spent on making the manufacturers change their packaging so less waste material is generated and the manufacturer/producer should share (a significant percentage) of the cost of recycling.	10/31/2013 8:29 AM
24	Everyone should do it!	10/30/2013 9:50 PM
25	I feel people would recycle more if it was more convenient for them, like the city adding curbside recycling services.	10/30/2013 2:24 PM
26	I love and enjoy recycling	10/30/2013 11:06 AM
27	Recycling is something more people need to do	10/30/2013 10:52 AM
28	Its the right thing to do.	10/30/2013 10:26 AM
29	Everyone should be doing it!	10/30/2013 9:05 AM
30	Recycling is healthy for the environment.....	10/29/2013 9:20 PM
31	None at this time.	10/29/2013 5:10 PM
32	I started recycling about 3 years ago. Before that, I only returned cans and bottles for the deposit. Now I recycle all cans and do not bother to take them back. My recycables are picked up every three weeks. I store what I have collected in my basement until it's time to fill my container. It is usually all the way full. I wish I could recycle my glass in there. Some friends that live out of state tell me they have their glass picked up. I end up throwing mine away and it makes me feel bad but I don't like taking it back. At places around town where you can just put it in a recycling container, they take green glass, but not brown. I wish there was an easier way to get rid of my brown glass.	10/29/2013 4:15 PM
33	I think curbside recycling should be a part of our normal garbage pick up and fee	10/29/2013 1:26 PM
34	my husband grew up with recycling as important. I grew up with recycling as not important.	10/29/2013 1:16 PM
35	I think if the government made recycling more of a rewarding action to society more people would be inclined to do so...and to make it easier to recycle..i.e. locations, hours..etc..	10/29/2013 12:15 PM
36	save the earth recycle!!	10/29/2013 9:48 AM
37	I think everyone should recycle because it helps the environment and the animals and basically everyone and everything.	10/29/2013 7:36 AM
38	Recycling is important but I don't always do it	10/29/2013 7:32 AM
39	I do not take my cans or bottle back because of storage and the mess. if they allowed us to crush our cans I would probably start taking those back.	10/29/2013 1:01 AM
40	I visited Seattle, Washington over this past summer and it is law that there is to be multiple "garbage" containers labeled for recyclables, non-recyclables, and leftover food. I think that would be beneficial for multiple states if not the entire United States also the can deposit thing would be phenomenal for more if not all states.	10/29/2013 12:57 AM
41	I take recycling to the recycling thing behind the carpet store, but the stuff store in waterloo when I have time too.	10/28/2013 11:46 PM
42	I know it is a good thing to do and yield pollution with, but I find it easier to throw pizza boxes away than send them to a Recycling center	10/28/2013 11:44 PM
43	I share a dorm with another person and our recycling habits are very different. She doesn't recycle anything and just throws it away whereas I use the recycle bin. I told her that I would take out the bin if she used it but she continues not to. This surprised me because I had never met anyone who wouldn't recycle if it at least was more convenient.	10/28/2013 11:35 PM

44	If Waterloo had a dedicated curbside recycling bin/service I would have no problem recycling.	10/28/2013 8:51 PM
45	It is selfish to not recycle. Too many lazy people in this world.	10/28/2013 8:37 PM
46	Something needs to be done with water bottles I bicycle on the trails an if I could pick up all the bottles I would be rich.	10/28/2013 8:00 PM
47	Help the environment.	10/28/2013 8:00 PM
48	I believe that recycling is a great thing and it should be shared and taught more to our younger generations.	10/28/2013 7:40 PM
49	Recycling is more than just keeping material out of landfills. It saves natural resources, has a positive effect on the environment and community, saves money. It is a positive thing all around and too few people realize the importance in recycling, conserving resources, and caring for the planet that gives us life. We should care and take action, or how long we can live on this planet will be lessened.	10/28/2013 7:33 PM
50	saves money, less garbage and best for our environment a win-win! We do not pay garbage pick up; at home we recycle almost everything we almost do not have garbage. We make a trip to the land field to dispose the left over. Old clothes we take to Salvation Army or Saint Vincent of Paul.	10/28/2013 7:12 PM
51	I believe if recycling of different types of material (glass, other types of plastic, etc.) was more convienent, more people would recycle. In my community, you have to drive to the local recycling drop off point. It is far easier for people to simply toss recyclable material in the trash and move on.	10/28/2013 7:03 PM
52	Its very important and beneficial to the earth. When garbage is dumped in the ocean those plastic things on pop cans get stuck on dolphins and kill them. Also a pop can can be thrown in a dump and sit there from 2011 until 2050 and still look exactly the same these materials don't degrade taking up more space.	10/28/2013 6:20 PM
53	i think more people need to recycle.	10/28/2013 5:39 PM
54	I think Cedar Falls/Waterloo need to have a co-mingled recycling pick up available in housing types (apartments, townhomes, houses, etc). Recycling is not hard and I think a lot of the issues lie with the lack of education people have in regards to it. I'm from CO and I've never paid a deposit for plastic items, and everyone recycled. It is just what I am used to. It was definitely a shock to move out here and see the lack of recycling in the community; heartbreaking really.	10/28/2013 5:30 PM
55	everybody should me made to recycle if we are going to save the world/.	10/28/2013 5:24 PM
56	I respect the environment and do care for some basic human rights	10/28/2013 5:24 PM
57	Recycling is good.	10/28/2013 3:01 PM
58	no comments at this time	10/28/2013 2:31 PM
59	I really wish it was important for others to recycle! I get weird looks for saving plastic from the day(water bottle, plastic baggies etc) to take home and recycle. I know I am making a difference however small it may be. If only we had more opportunities on campus. I am so glad they finally got those little recycling bins for us! I am tired of garbage being thrown all over campus. It is up to us, the students, to make the difference. That is why I am so passionate about recycling! I want my children in the future to know they are living in an environment that is safe for their health. I care about the world around me. It takes one to cause a ripple.	10/28/2013 2:22 PM
60	I am 56 years old and lived in California for 10 years where recycling was part of the community. In large metro areas it becomes a choice between where will you, as a society put your trash, in your streets ,yards, water and air or into your economy. Simple decision really.	10/28/2013 2:12 PM
61	I am actually doing a report in my American Govemment class about a recycling system that should be offered in America. Thought it was a good idea to get the idea out there, and also influence students to try to get more involved with a greener and cleaner environment. If you have any information or suggestions please let me know. My email address is anderdn1@yahoo.com and my name is Drew Anderson. Look forward to hearing back, thanks and good survey!	10/28/2013 1:03 PM
62	I would be more likely to recycle more if it were as easy as putting the items, like plastic, cans, and paper out for pickup and was free or very small fee. I tend to save these items for a long time and then don't know what to do with it.	10/28/2013 12:06 PM
63	I don't know where I can go to recycle. I have very limited space in my apartment to store things to recycle.	10/28/2013 11:17 AM
64	It would be alot easyer if the City of cedar falls would establish a free or and relatively cheap curbside recycling	10/28/2013 10:42 AM

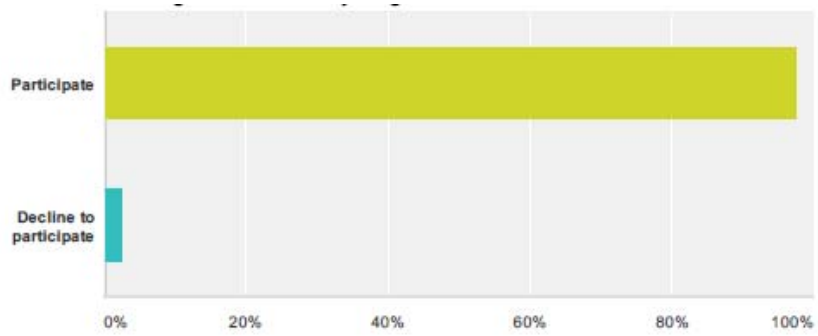
65	I recycle when ever possible and you really don't have my age group listed, so I picked the closes to my age. I am a few years older.	10/28/2013 10:22 AM
66	If there were more opportunities to recycle I would but there is no seperate place to put them where I live (Village Apartments) otherwise I would, so it all just goes together	10/28/2013 10:01 AM
67	I think its pretty cool	10/28/2013 9:16 AM
68	evvrybody should recycle	10/28/2013 9:10 AM
69	When I was a child I did not live in a community where recycling was taught. The one recycling center we had was filled with garbage. I was not taught.	10/28/2013 8:37 AM
70	I think that more people should learn about recycling! It would be really smart if we started really pushing it in high school because then when they continue to college they will already know and teach others about recycling.	10/25/2013 10:37 AM
71	I recycle because I choose too. I wasn't influenced by anyone. I know it's the right thing to do so I do it! (:	10/24/2013 3:07 PM
72	sorta makes me more of a hippie..	10/24/2013 1:42 PM
73	After taking environmental science, my whole aspect on recycling changed. We recycle everything we possibly can and also reduce and reuse as much a possible. Everyone should be required to take a course that discusses serious issues such as: recycling, preserving resources, and protecting our environment.	10/23/2013 8:44 PM
74	Hawkeye should have more opportunities to recycle. If there isn't a $0.05 refund then there isn't a container to place your plastic bottles. My town doesn't have curbside recycling pick up. I have to drive my recycling in to the bins by Stuff in Waterloo. It is a pain. We still do it but it would be nice if it was easier. Thanks!	10/23/2013 8:52 AM
75	I believe recycling is a simple way to save our environment and wish more people would do it.	10/23/2013 8:14 AM
76	In my previous residence, we recycled everything we could. Now that I am back living with my parents, we generally only recycle newspaper and cardboard, plus take back cans and bottles. When I move out into my own household again, I will go back to recycling as much as possible again.	10/23/2013 12:23 AM
77	I always try to encourage others to recycle and pass on the benefits of recycling!	10/22/2013 3:40 PM
78	Recycling would be easier to do if more containers were made available besides a trash can.	10/22/2013 10:43 AM
79	Should be done daily.	10/22/2013 9:49 AM
80	I think that smaller towns such as jesup and independence need to be brought in towards recycling with the bigger cities. If everyone would expannd their thinking and work together we can recycle so much more things, since home waste is not recycled or required to be and I think it should be.	10/22/2013 9:49 AM
81	I wish there were recycling receptacles for paper, plastic and metal products on campus.	10/22/2013 9:21 AM
82	I wish there was a way to encourage others to recycle more. I have many classmates that don't even make the effort to recycle their pop cans.	10/22/2013 8:30 AM
83	we need to make recycling bins available everywhere in the community, and to continue to teach everyone to use them. Good luck with this project.	10/22/2013 6:45 AM
84	Several years ago, I worked for the Department of Natural Resources. The Waste Management Authority Division, one of my budget & grant reporting areas gave grants to local governments to institute recycling & other waste reduction programs.	10/21/2013 11:30 PM
85	I feel that the only thing that is holding back our increase in bottle raises is that everyone is getting to greedy on how much their percentage will be within the process. I feel that everyone should have a morial duty in wanting to help save our environment and a more of an incentive would help our society to help in this process. People today no longer cares about the environment unless they know the real impact it has on them alone as individuals.	10/21/2013 6:32 PM
86	I don't have any regarding recycling but question # 7 will not let you change any of the answers to what you want so you survey will be off.	10/21/2013 6:10 PM
87	Hawkeye is horrible for recycling. There are not enough recycling containers on campus, and the ones we have do not have instructions on what can be recycled. Most the trash can be recycled!	10/21/2013 5:13 PM
88	Go green	10/21/2013 4:15 PM
89	Things needs to change	10/21/2013 3:19 PM

90	I wish more people would get involved with it.	10/21/2013 3:02 PM
91	It needs to be done more often and by more people.	10/21/2013 2:47 PM
92	I live in another town and because the curbside recycling is every other week and it accumulates, I have to bring it down to the Cedar Falls location. They have a wonderful facility and it should be more advertised so people know exactly where it is and the hours. I believe that more people would use it if they only knew how easy it was. Maximum of 5 minutes is all it takes.	10/21/2013 2:37 PM
93	Recycling:Everyone should do it!	10/21/2013 1:35 PM
94	I would recycle a lot more at school if they had recycling bins in every class room. I've only seen them in the library.	10/21/2013 1:32 PM
95	I believe that recycling helps people with be aware of their environment and how they can help the landfills.	10/21/2013 12:54 PM
96	I realize that recycling can a commodity, but how much of what people recycle actually gets recycled? My issue with recycling is that there is not enough to recycle to make a any noticable impact, thus what is the point?	10/21/2013 12:01 PM
97	Most of my recycling habits is determined by convience. I live in the country so for me to recycle I have to make sure I hit the recycling center within business hours which is not always easy when you work full-time and go to school full-time.	10/21/2013 11:25 AM
98	I grew up recycling things. In my country recycling was important and by law, I cannot mix the plastic, cans, glass with other kind of garbage. Also the importance of recycling was taught at schools, and through TV.	10/21/2013 11:14 AM
99	I wasn't aware that HCC had any recycling options, this is new news to me.	10/21/2013 11:11 AM
100	I try to recycle as much as possible but it doesnt always happen. but i try.	10/21/2013 11:01 AM
101	tehe	10/21/2013 10:45 AM
102	I think there needs to be more education presented to people about the topic because people are not aware enough of how much recycling can help benefit our environment and world.	10/21/2013 10:27 AM
103	more programs should be adopted in this state	10/21/2013 10:04 AM
104	REDUCE, REUSE, RECYCLE!!!!!!!	10/21/2013 9:53 AM
105	My wife and I started to recycle to cut down the amount of garbage we had. We went from having to put out our garbage for pickup from every week to every other week.	10/21/2013 9:31 AM
106	I belive recycling is pretty important for our communities to particaipate in. I have been interested in recycling at home for a while now but the information on doing so is not as readily available as it should be.	10/21/2013 9:29 AM
107	I would love to recycle paper and plastic and cardboard. However, there is no at home pick up from my apartment. So, I have to pick what I want to haul to the recycling centers.	10/21/2013 9:26 AM
108	Go Green!	10/21/2013 9:15 AM
109	I think that if more people don't start recycling, the world is going to be in big trouble by the time our kids and grand kids are adults.	10/21/2013 9:12 AM
110	The wife set it up. I do it because it is there.	10/21/2013 8:59 AM
111	There is way to much politics and opinions in the whole recycling, green energy debates. We need to be concerned but to many people are pushing agendas and not truths. Also for recycling to work it must be convenient and cost affective.	10/21/2013 8:47 AM
112	Our family of four does not use the curbside pick up. I drive to the recycling facility and do my own sorting there. We also TerraCycle. I could not get the 1-5 rating to work so all my answers came out in order, 1,2,3,4,5.	10/21/2013 8:33 AM
113	None	10/21/2013 8:32 AM
114	The curb side recycling in Waterloo is not enough. They only pick up once a month I recycle enough I could use two pick ups a month. And I only have a two person household. Larger households should have more need for more pick up.	10/21/2013 8:31 AM
115	My apartment personally uses all bottle and can recycling through the homeless. It is a concern. It would be fantastic if those pesky water bottles had a reward or on the other end of the spectrum a BAN.	10/21/2013 8:28 AM

APPENDIX J

FULL SURVEY RESULTS

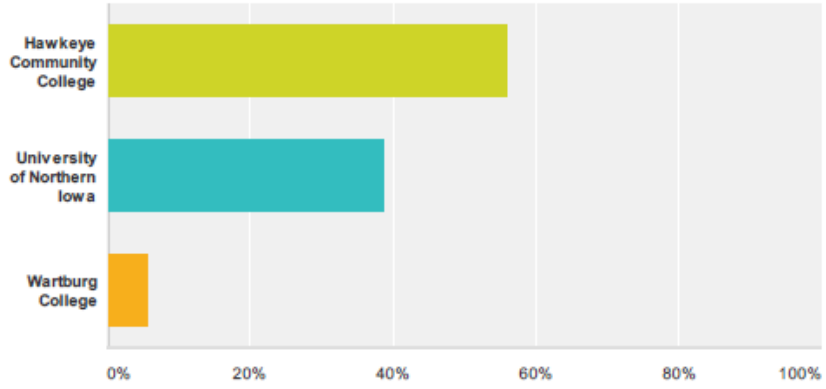
Q1 **Greetings, My name is Mark Wilcox and I am a graduate student at the University of Northern Iowa. I am conducting a study on the attitudes of college students about recycling. I understand that your time is valuable but this study will provide much needed insight that may allow your institution to better meet your recycling needs. This brief internet survey is anonymous and completely voluntary. The survey will take approximately 15 minutes of your time. This study has risks no greater than those of day-to-day life. You may not receive any direct benefit from participating in this study. The results of this study may be shared with interested parties at each of the three institutions being sent this opportunity and you as well may receive the results if you wish. Your confidentiality will be maintained to the degree permitted by the technology used. Specifically, no guarantees can be made regarding the interception of data sent via the Internet by any third parties. If you have any questions or concerns regarding this study please feel free to contact me via email (mark.wilcox@uni.edu). You may also contact Anita Gordon, the UNI IRB administrator by phone: 319-273-6148 or E-mail anita.gordon@uni.edu. If you are willing to share your attitudes about recycling please click the link below and complete the survey. You may exit the survey at any time and your anonymity will be preserved as much as possible. Your participation is very greatly appreciated. Thank you so much for your time. Sincerely, Mark Wilcox Department of Technology University of Northern Iowa**



Answer Choices	Responses	
Participate	**97.49%**	622
Decline to participate	**2.51%**	16
Total		**638**

Q2 Choose your institution.

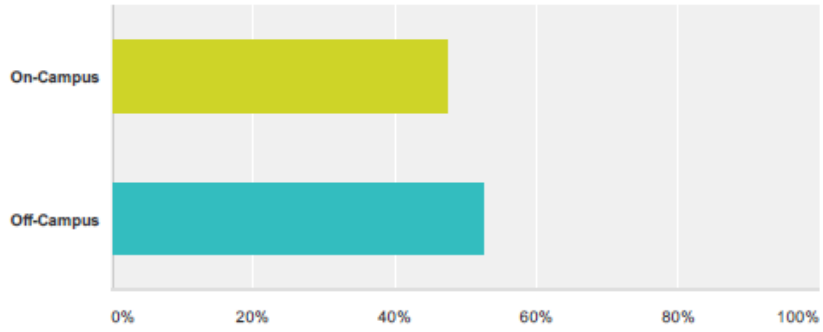
Answered: 626 Skipped: 18



Answer Choices	Responses	
Hawkeye Community College	**55.91%**	350
University of Northern Iowa	**38.50%**	241
Wartburg College	**5.59%**	35
Total		**626**

Q3 During the academic year do you live_____?

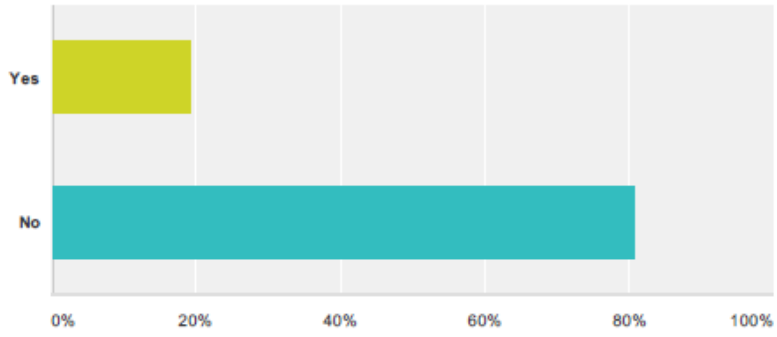
Answered: 272 Skipped: 372



Answer Choices	Responses	
On-Campus	**47.43%**	129
Off-Campus	**52.57%**	143
Total		**272**

Q4 Do you live on UNI's Campus?

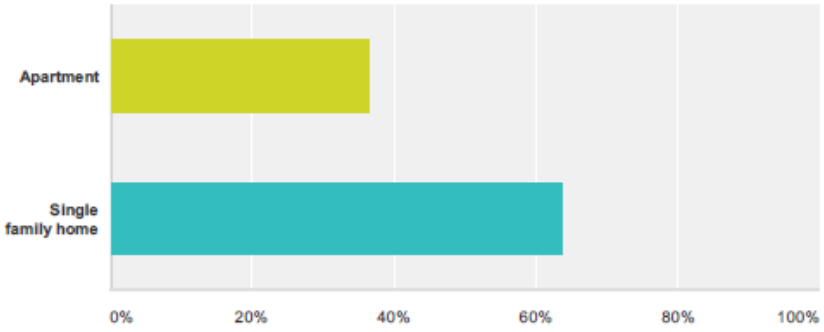
Answered: 618 Skipped: 26



Answer Choices	Responses	
Yes	**19.26%**	119
No	**80.74%**	499
Total		**618**

Q5 Which best describes your place of residence?

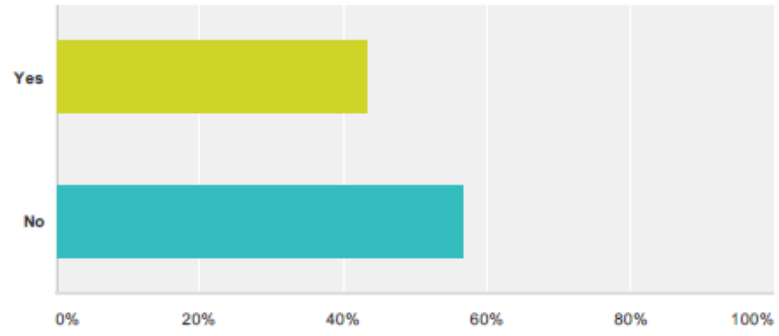
Answered: 493 Skipped: 151



Answer Choices	Responses	
Apartment	36.31%	179
Single family home	63.69%	314
Total		493

Q6 Do you have curbside recycling?

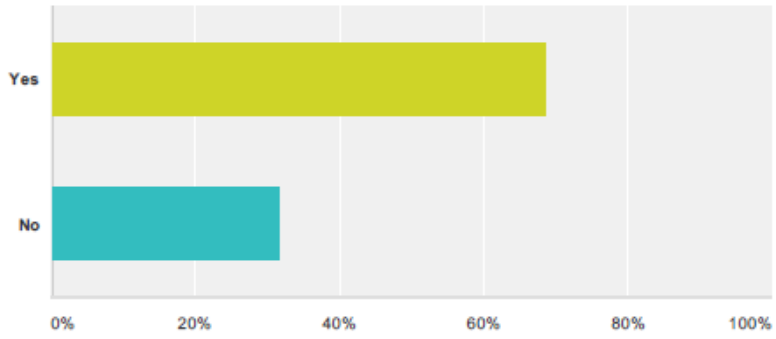
Answered: 313 Skipped: 331



Answer Choices	Responses	
Yes	43.45%	136
No	56.55%	177
Total		313

Q7 Would you be willing to pay a small fee (less than $5 per month) for curbside recycling?

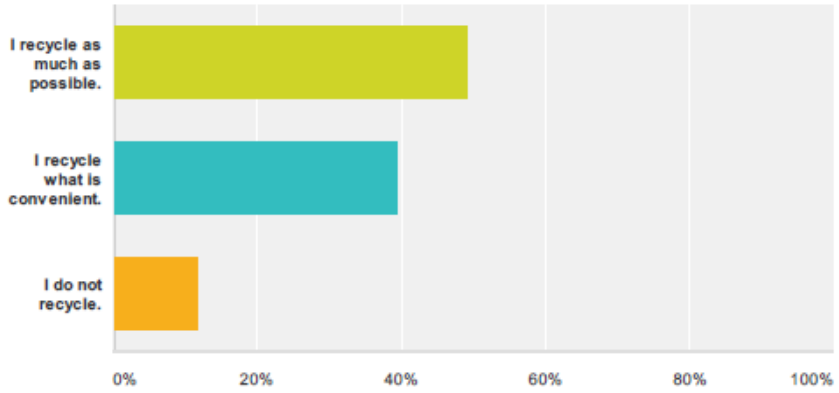
Answered: 177 Skipped: 467



Answer Choices	Responses	
Yes	68.36%	121
No	31.64%	56
Total		177

Q8 Which of the following statements best applies to you?

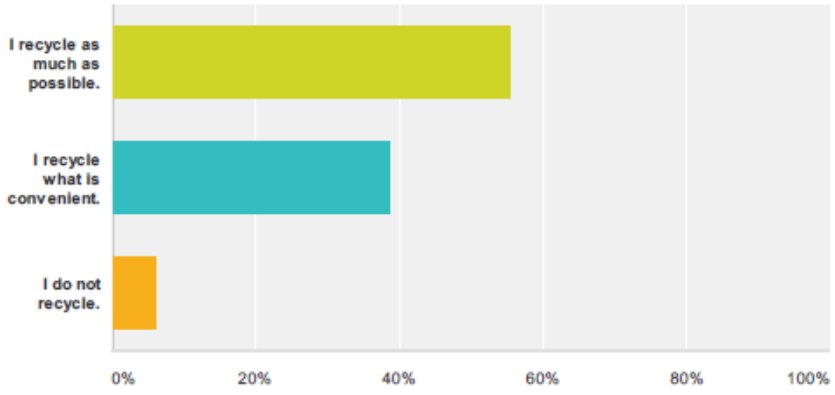
Answered: 308 Skipped: 336



Answer Choices	Responses	
I recycle as much as possible.	49.03%	151
I recycle what is convenient.	39.29%	121
I do not recycle.	11.69%	36
Total		308

Q9 Which of the following statements best applies to you?

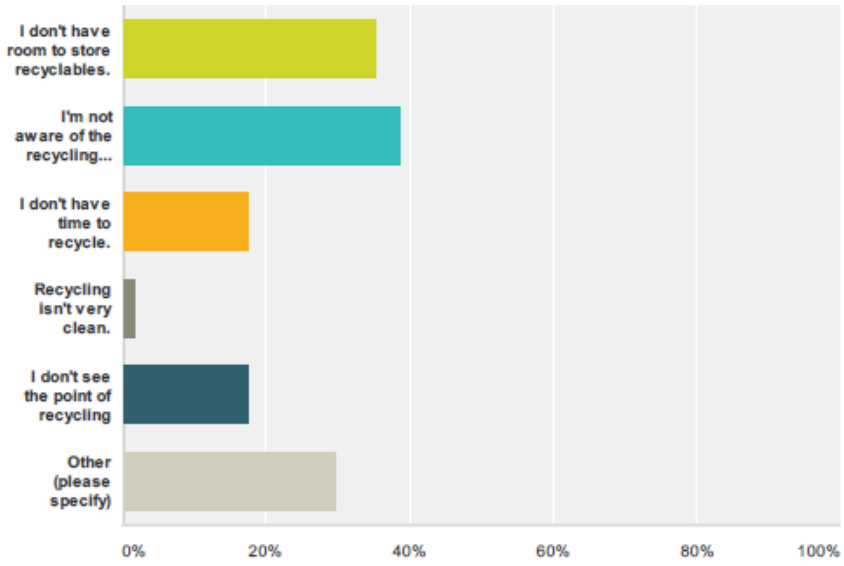
Answered: 314 Skipped: 330



Answer Choices	Responses	
I recycle as much as possible.	**55.41%**	174
I recycle what is convenient.	**38.54%**	121
I do not recycle.	**6.05%**	19
Total		**314**

Q10 Which of the following best describes why you do not recycle? (check all that apply)

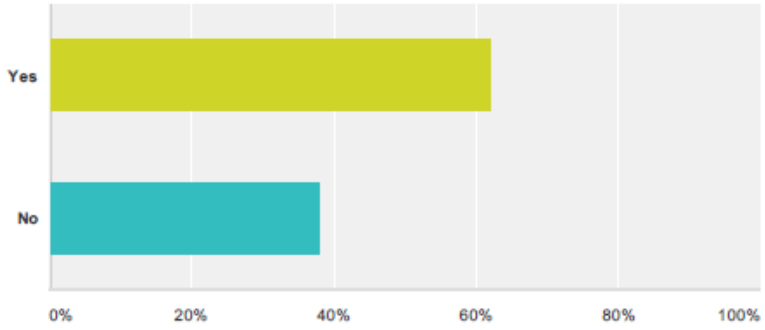
Answered: 57 Skipped: 587



Answer Choices	Responses	
I don't have room to store recyclables.	**35.09%**	20
I'm not aware of the recycling opportunities available to me.	**38.60%**	22
I don't have time to recycle.	**17.54%**	10
Recycling isn't very clean.	**1.75%**	1
I don't see the point of recycling	**17.54%**	10
Other (please specify)	**29.82%**	17
Total Respondents: 57		

Q11 Do you use on-campus recycling?

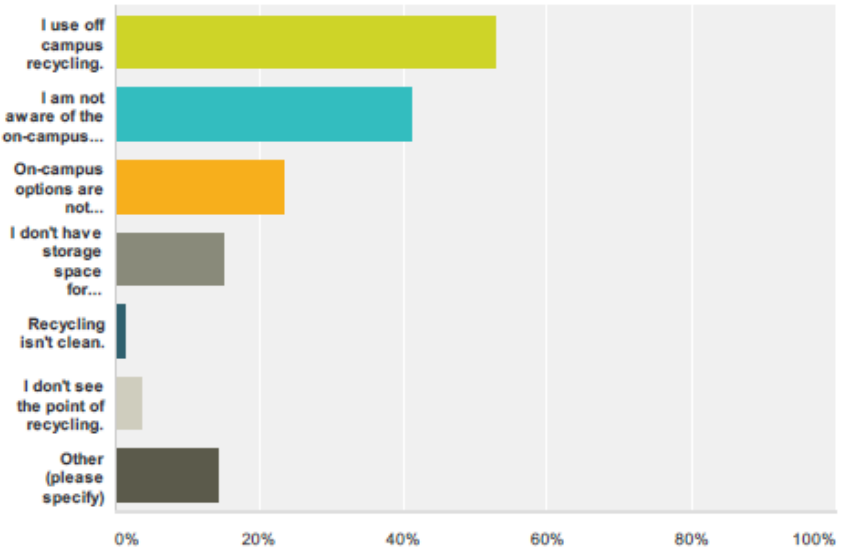
Answered: 614 Skipped: 30



Answer Choices	Responses	
Yes	62.05%	381
No	37.95%	233
Total		614

Q12 Which of the following best describes why you do not use on-campus recycling options? (check all that apply)

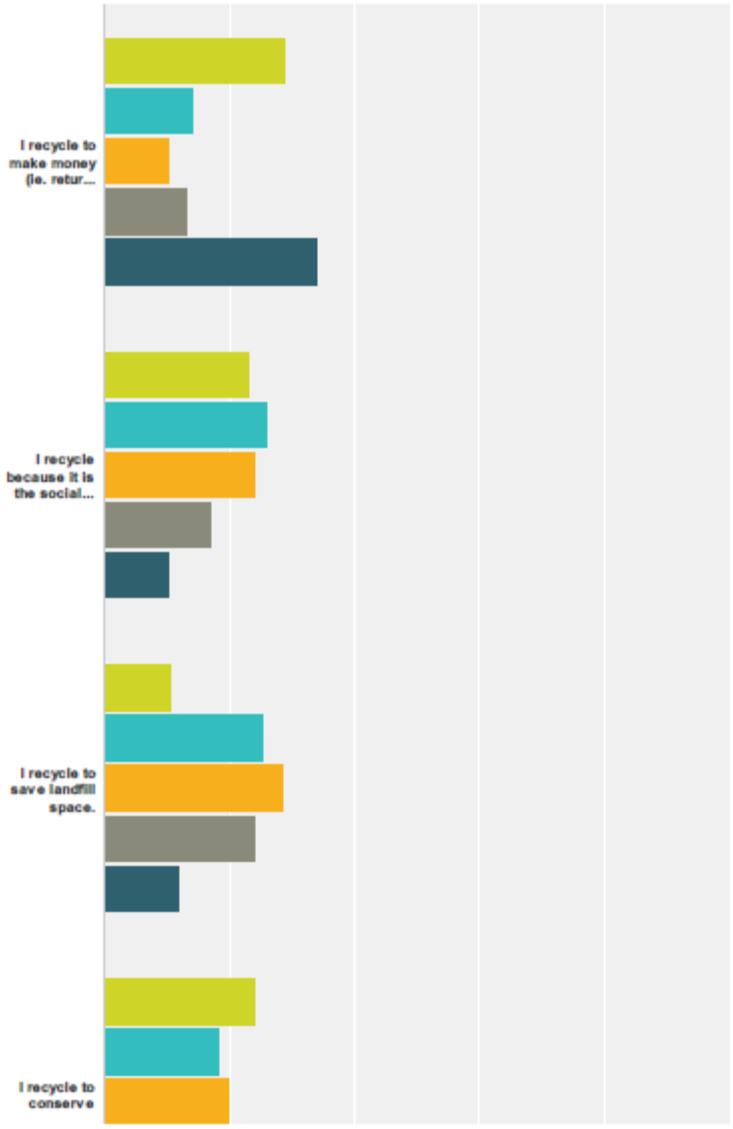
Answered: 239 Skipped: 405

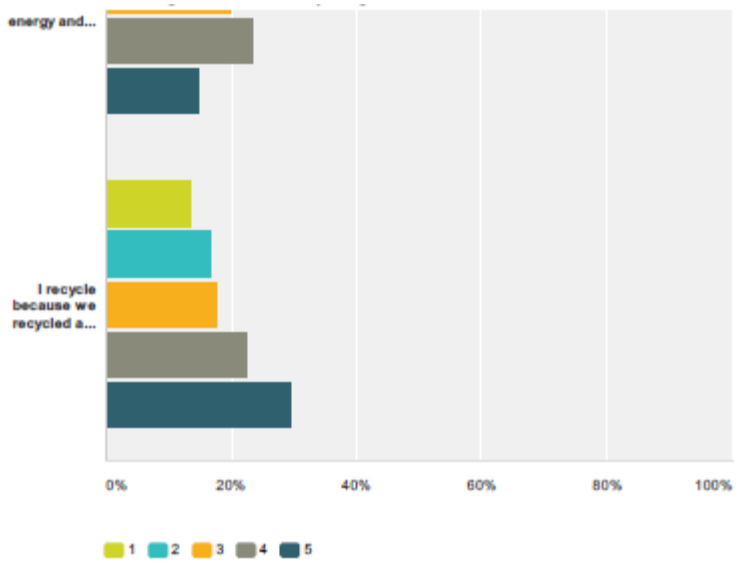


Answer Choices	Responses	
I use off campus recycling.	**52.72%**	126
I am not aware of the on-campus options.	**41.00%**	98
On-campus options are not convenient for me.	**23.43%**	56
I don't have storage space for recyclables.	**15.06%**	36
Recycling isn't clean.	**1.26%**	3
I don't see the point of recycling.	**3.77%**	9
Other (please specify)	**14.23%**	34
Total Respondents: 239		

Q13 Please rank in order of importance from most important (1) to least important (5) your reasons for recycling.

Answered: 611 Skipped: 33

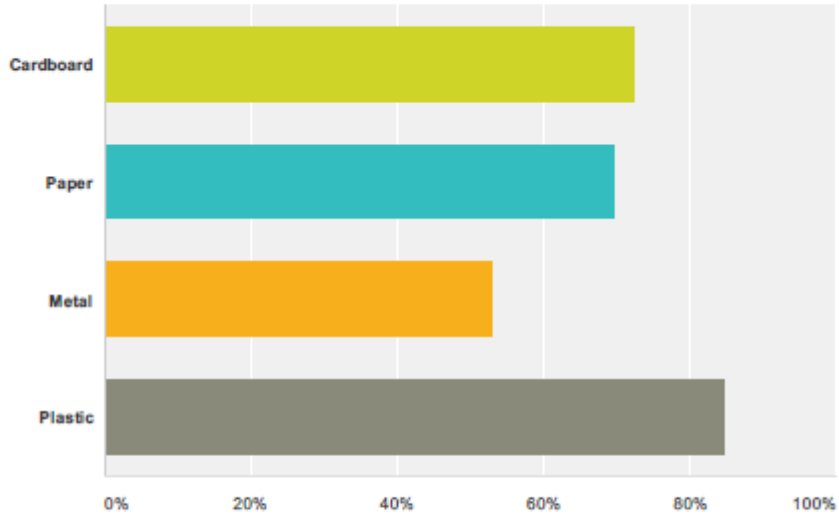




	1	2	3	4	5	Total	Average Ranking
I recycle to make money (ie. return deposit containers)	**28.81%** 176	**14.08%** 86	**10.31%** 63	**13.09%** 80	**33.72%** 206	611	2.91
I recycle because it is the socially responsible thing to do.	**23.08%** 141	**25.86%** 158	**23.90%** 146	**16.86%** 103	**10.31%** 63	611	3.35
I recycle to save landfill space.	**10.47%** 64	**25.20%** 154	**28.64%** 175	**24.06%** 147	**11.62%** 71	611	2.99
I recycle to conserve energy and resources.	**24.06%** 147	**18.17%** 111	**19.64%** 120	**23.40%** 143	**14.73%** 90	611	3.13
I recycle because we recycled at home.	**13.58%** 83	**16.69%** 102	**17.51%** 107	**22.59%** 138	**29.62%** 181	611	2.62

Q14 Which of the following do you recycle on a regular basis? (select all that apply)

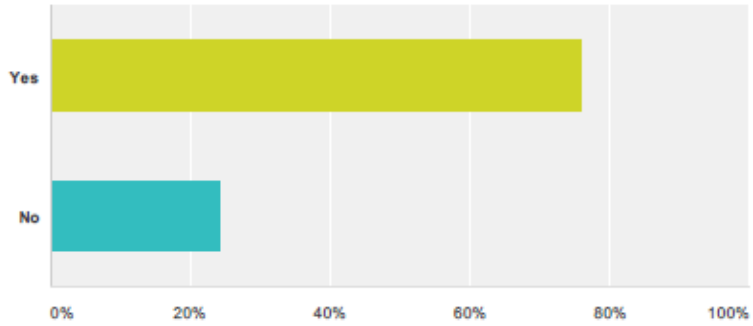
Answered: 590 Skipped: 54



Answer Choices	Responses	
Cardboard	72.20%	426
Paper	69.66%	411
Metal	52.88%	312
Plastic	84.41%	498
Total Respondents: 590		

Q15 Do you return your deposit bottles and cans for the 5 cent deposit?

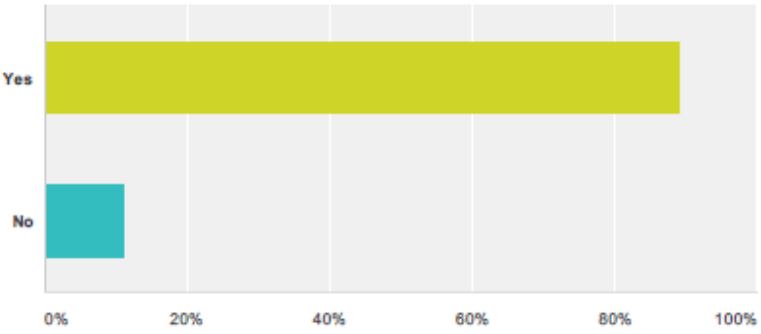
Answered: 607 Skipped: 37



Answer Choices	Responses	
Yes	75.78%	460
No	24.22%	147
Total		607

Q16 Do you support expansion of the Deposit Law to include other beverage containers such as water bottles, sports drinks, etc.?

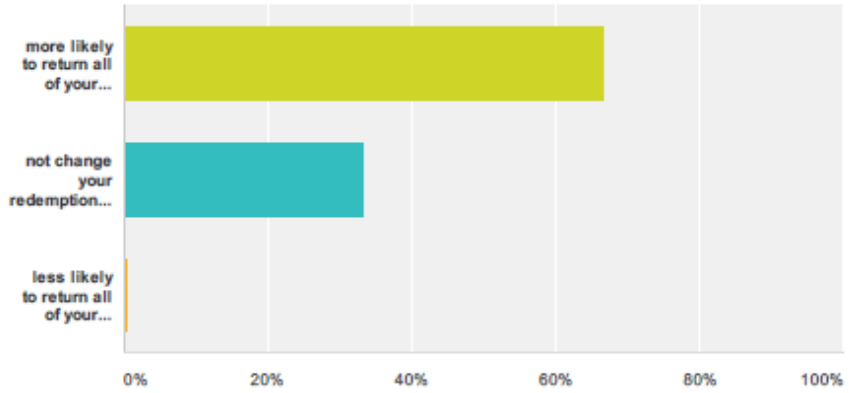
Answered: 605 Skipped: 39



Answer Choices	Responses	
Yes	88.93%	538
No	11.07%	67
Total		605

Q17 A higher deposit of 10 cents per container would make you

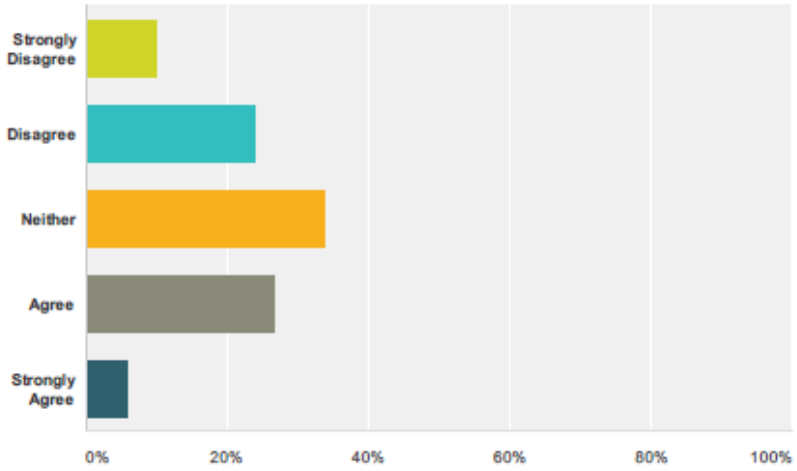
Answered: 607 Skipped: 37



Answer Choices	Responses	
more likely to return all of your containers.	66.39%	403
not change your redemption habits.	33.11%	201
less likely to return all of your containers.	0.49%	3
Total		607

Q18 My participation, or lack thereof, in recycling is most influenced by what I've learned in school.

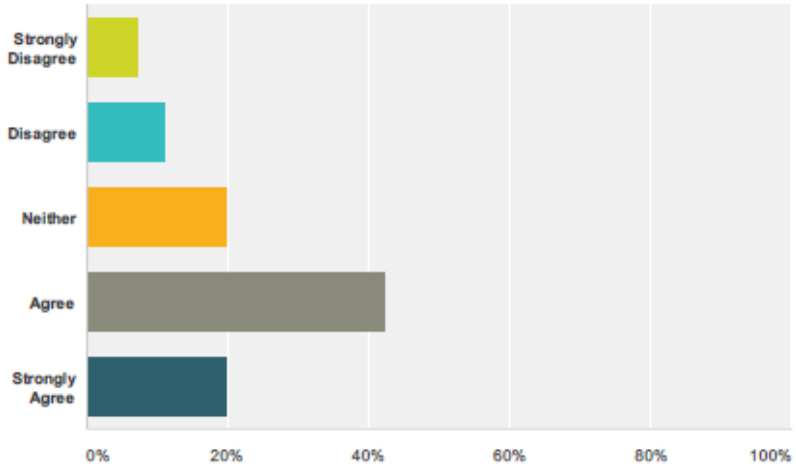
Answered: 605 Skipped: 39



Answer Choices	Responses	
Strongly Disagree	9.92%	60
Disagree	23.97%	145
Neither	33.72%	204
Agree	26.45%	160
Strongly Agree	5.95%	36
Total		605

Q19 My participation, or lack thereof, in recycling is most influenced by my family.

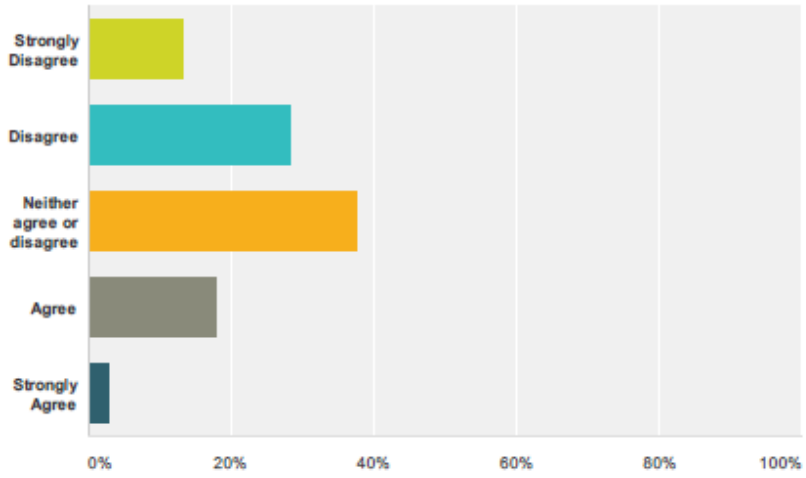
Answered: 602 Skipped: 42



Answer Choices	Responses	
Strongly Disagree	7.14%	43
Disagree	11.13%	67
Neither	19.77%	119
Agree	42.19%	254
Strongly Agree	19.77%	119
Total		602

Q20 My participation, or lack thereof, in recycling is most influenced by my peers.

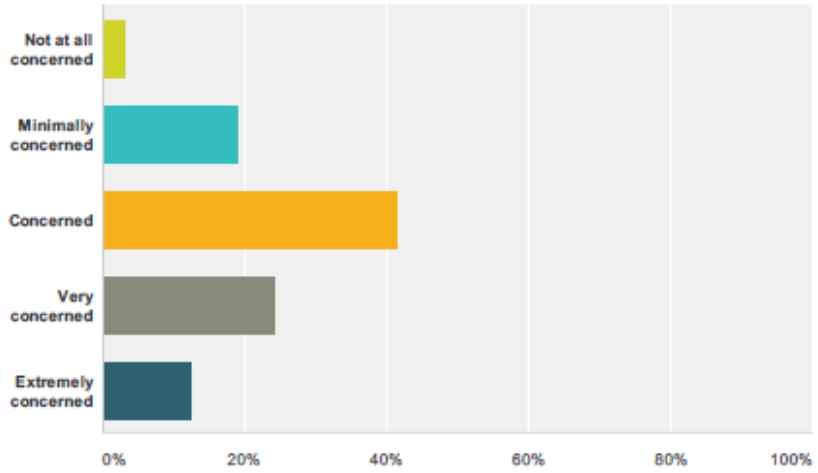
Answered: 606 Skipped: 38



Answer Choices	Responses	
Strongly Disagree	13.37%	81
Disagree	28.22%	171
Neither agree or disagree	37.62%	228
Agree	17.99%	109
Strongly Agree	2.81%	17
Total		606

Q21 How would you rate your level of concern with the current state of the environment?

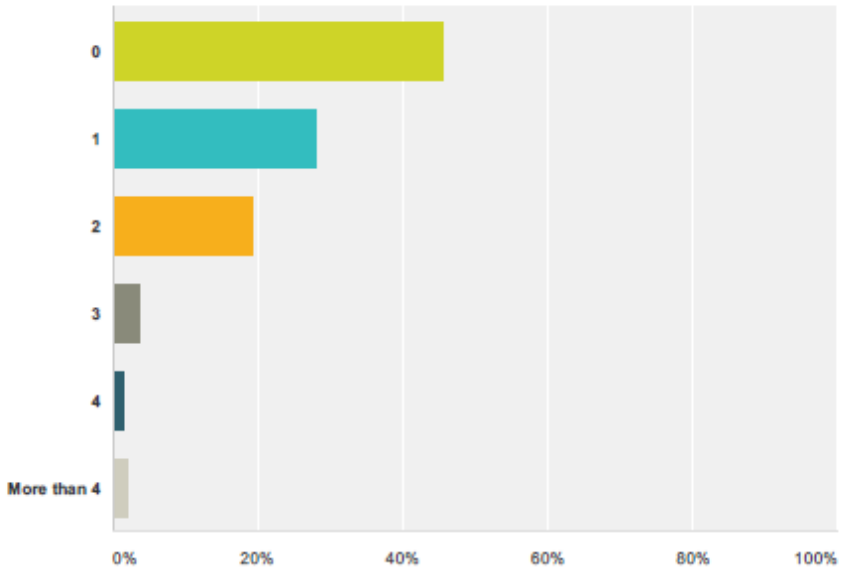
Answered: 607 Skipped: 37



Answer Choices	Responses	
Not at all concerned	3.13%	19
Minimally concerned	18.95%	115
Concerned	41.35%	251
Very concerned	24.22%	147
Extremely concerned	12.36%	75
Total		607

Q22 Approximately how many classes have you taken where Recycling was a topic?

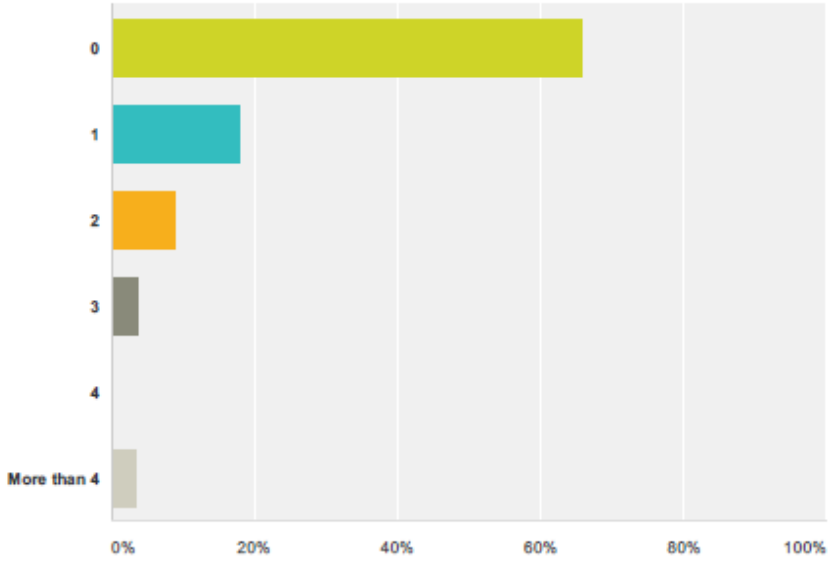
Answered: 607 Skipped: 37



Answer Choices	Responses	
0	45.30%	275
1	28.01%	170
2	19.28%	117
3	3.79%	23
4	1.48%	9
More than 4	2.14%	13
Total		607

Q23 Outside of class, approximately how many learning opportunities have you participated in about reycling (workshops, seminars, etc.)?

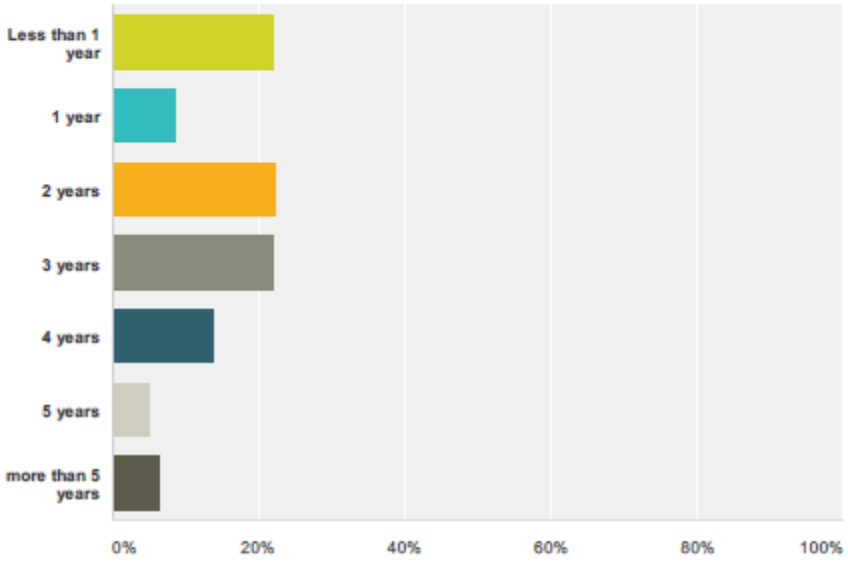
Answered: 607 Skipped: 37



Answer Choices	Responses	
0	65.90%	400
1	17.96%	109
2	8.90%	54
3	3.79%	23
4	0.16%	1
More than 4	3.29%	20
Total		607

Q24 How many years have you been in college?

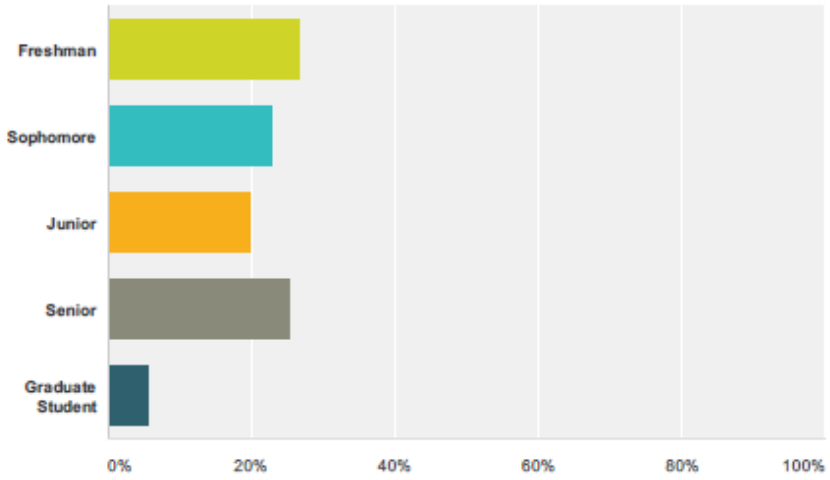
Answered: 605 Skipped: 39



Answer Choices	Responses	
Less than 1 year	21.98%	133
1 year	8.60%	52
2 years	22.31%	135
3 years	21.98%	133
4 years	13.72%	83
5 years	5.12%	31
more than 5 years	6.28%	38
Total		605

Q25 What is your current classification?

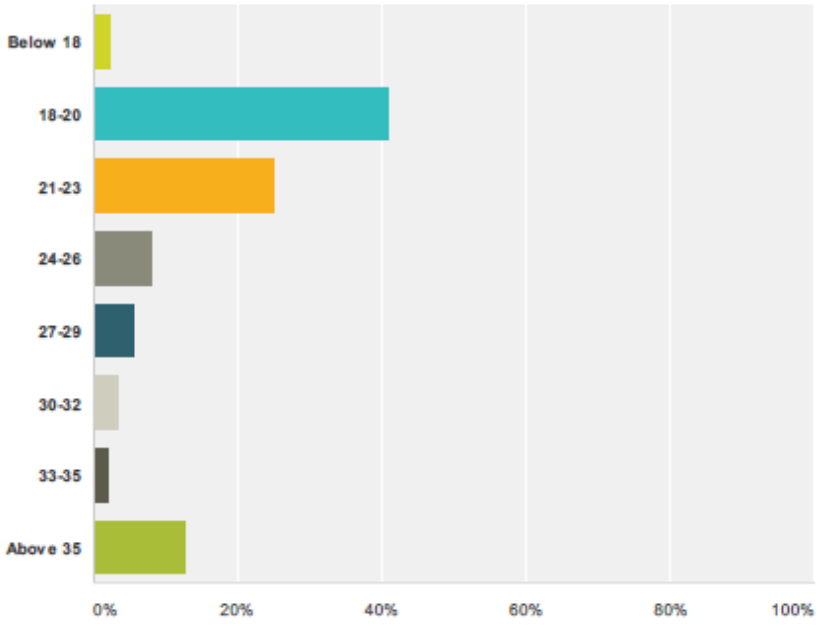
Answered: 596 Skipped: 48



Answer Choices	Responses	
Freshman	26.51%	158
Sophomore	22.82%	136
Junior	19.80%	118
Senior	25.17%	150
Graduate Student	5.70%	34
Total		596

Q26 What is your age?

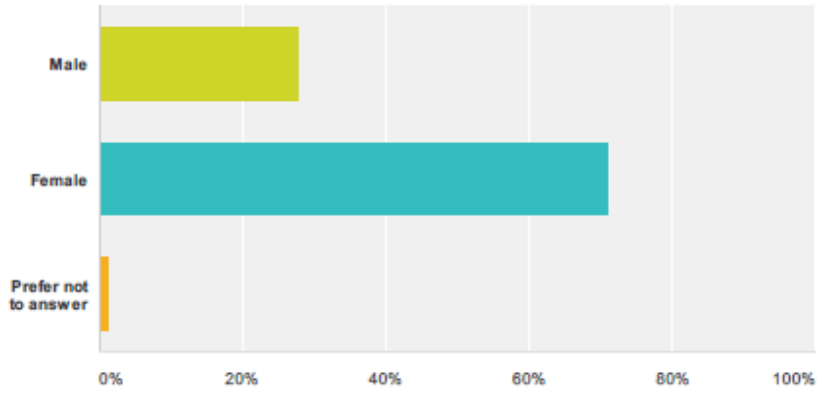
Answered: 605 Skipped: 39



Answer Choices	Responses	
Below 18	2.31%	14
18-20	40.99%	248
21-23	24.96%	151
24-26	8.10%	49
27-29	5.45%	33
30-32	3.31%	20
33-35	2.15%	13
Above 35	12.73%	77
Total		605

Q27 What is your gender?

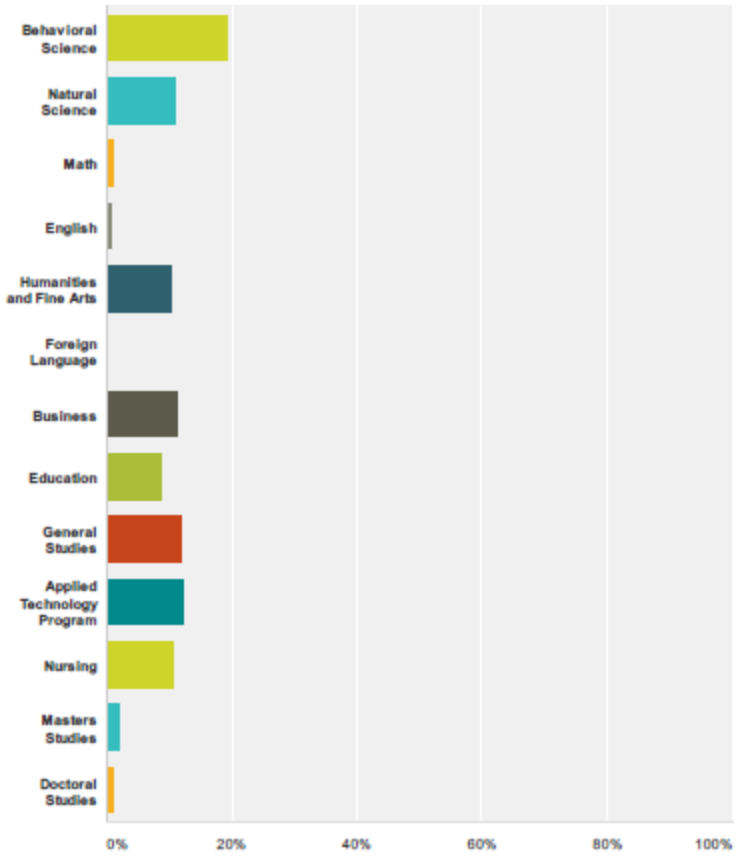
Answered: 605 Skipped: 39



Answer Choices	Responses	
Male	27.77%	168
Female	70.91%	429
Prefer not to answer	1.32%	8
Total		605

Q28 Which of the following most closely represents your major?

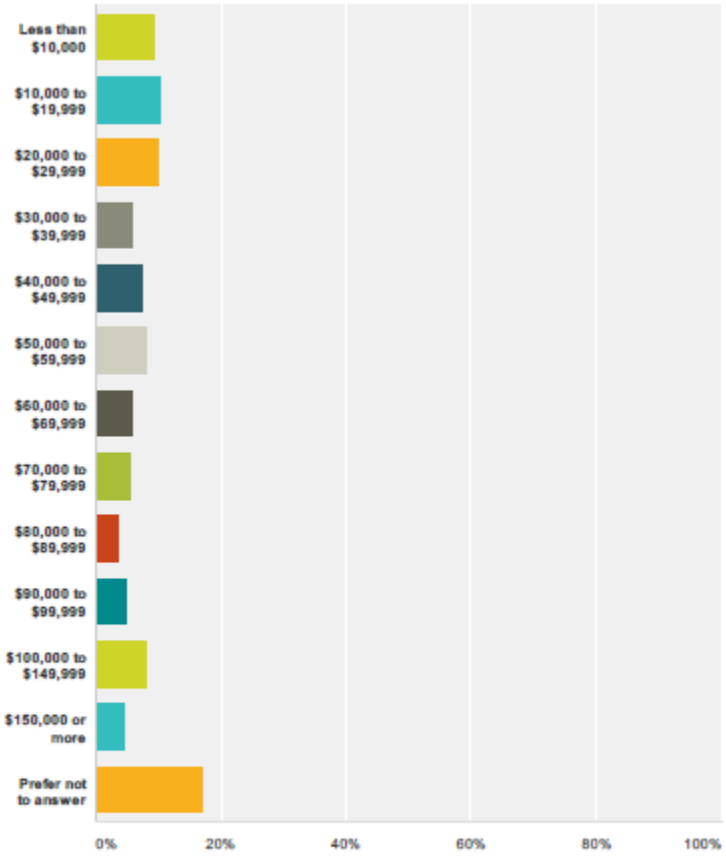
Answered: 598 Skipped: 46



Answer Choices	Responses	
Behavioral Science	19.23%	115
Natural Science	10.87%	65
Math	0.84%	5
English	0.67%	4
Humanities and Fine Arts	10.37%	62
Foreign Language	0.33%	2
Business	11.20%	67
Education	8.70%	52
General Studies	11.87%	71
Applied Technology Program	12.04%	72
Nursing	10.70%	64
Masters Studies	2.01%	12
Doctoral Studies	1.17%	7
Total		598

Q29 What is your approximate family income?

Answered: 604 Skipped: 40

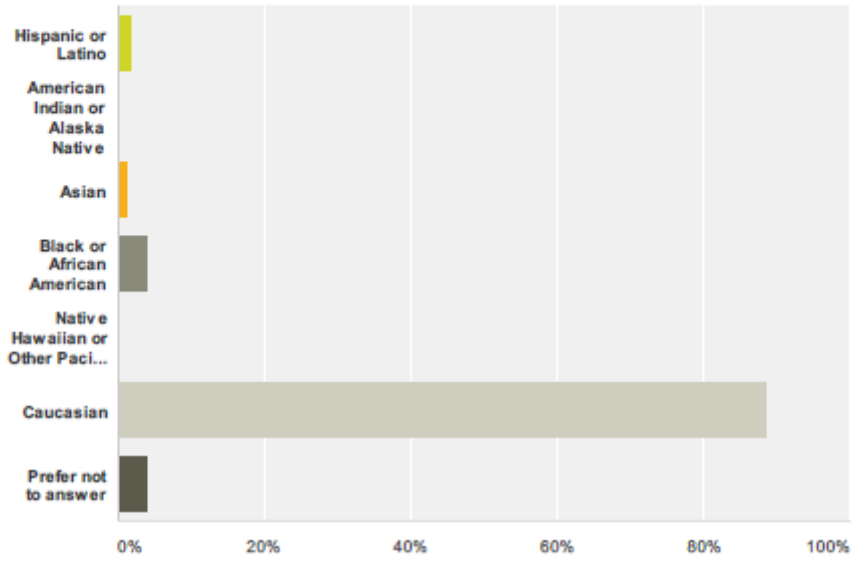


Answer Choices	Responses	
Less than $10,000	9.27%	56
$10,000 to $19,999	10.10%	61
$20,000 to $29,999	9.93%	60
$30,000 to $39,999	5.96%	36
$40,000 to $49,999	7.28%	44

$50,000 to $59,999	7.95%	48
$60,000 to $69,999	5.96%	36
$70,000 to $79,999	5.46%	33
$80,000 to $89,999	3.48%	21
$90,000 to $99,999	4.97%	30
$100,000 to $149,999	7.95%	48
$150,000 or more	4.47%	27
Prefer not to answer	17.22%	104
Total		**604**

Q30 What is your race/ethnicity?

Answered: 603 Skipped: 41



Answer Choices	Responses	
Hispanic or Latino	1.99%	12
American Indian or Alaska Native	0.33%	2
Asian	1.00%	6
Black or African American	3.98%	24
Native Hawaiian or Other Pacific Islander	0.33%	2
Caucasian	88.56%	534
Prefer not to answer	3.81%	23
Total		**603**