

High School Student Opinion Polling on Career Exploration

by

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Abstract

This study examines the use of student learning polls as indicators of student perceptions and influences on career exploration. No Child Left Behind requires schools that fail to make adequate yearly progress for two consecutive years to develop continuous improvement plans. The concept of career preparation for students is included in these plans.

The Career Exploration poll was administered via the Internet in four computer labs within the school. The study consisted of 288 respondents from a rural central Alabama high school. The demographic subgroup of gender was analyzed to determine the significance of each variable.

Analysis of the data reveal results of the polls and provides insights for continuous improvement plans. The use of student voice allows students to directly impact these plans.

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CHAPTER I. INTRODUCTION

The concept of students voicing their opinions is not new to education. Yet a focus on the role of students in school decision-making largely vanished after the mid-seventies (Levin, 2000; Mitra, 2004). Educators and researchers have reported on the significance of using student opinion polling in classroom and school improvement planning (Spires, Lee, Turner, & Johnson, 2008; Mitra, 2004; Struyven, Dochy, & Janssens, 2008). The most valuable resource for educational reform that is available to teachers and administrators could be the students they interact with every day (Spires et al., 2008; Dermo, 2009). Using student opinion polls with both multiple choice and open-ended response items give students a chance to express their opinions freely and anonymously. The data reported can be used by individual schools and districts to formulate the school improvement plan needed to reach the adequate yearly progress, or AYP, of No Child Left Behind.

Secondary schools exist for the purpose of preparing today's students for the working world they will face upon graduation. The mission of high school is not to cover content but to help students become analytical, independent thinkers. These students, in turn, will take classroom learned content into their everyday lives. Teaching students to be able to apply what they have learned helps prepare them for the world beyond school (Wiggins, & McTighe, 2008). Without career exploration opportunities within high schools this goal is more difficult to reach for the individual student (Strom, & Strom, 2009). Unfortunately, the acquisition of content for its own sake is dominating classroom instruction across the United States. For a large number of students, school is failing to achieve its original purpose of "real world" preparation (Wiggins, &

McTighe, 2008). In Alabama and throughout the United States, Career and Technical Education exists to provide the missing link between classroom content and career exploration. Failing to make classroom learned content applicable to real life situations causes content learned to seem disconnected from its original purpose. The purpose of classroom instruction is to learn for the sake of preparation for the working world. Students can acquire the skills and knowledge managing techniques to keep pace with the rapid changes in today's work force. After passing through the career and technical education classroom, students graduate with industry-recognized credentials and preparation for advanced study or employment (Alabama State Department of Education, 2010). A key component of this educational experience is the opportunity to explore different career options. Through inventories, instruction, and hands-on experience students can not only begin to think about life after high school but also begin to envision direction for their lives (Bishop, & Mane, 2004).

Unfortunately, there seems to be a disconnection between the actual career options of students and their perceptions of career opportunities. External influences on the career perceptions of students can alter perceived opportunities despite what is learned in the educational setting. If the purpose of education and career and technical education is to prepare the students for their eventual emersion into the working world, then why not consult the source about the successes and failures which schools are presenting in this preparation? Student polling can gauge these influences and begin to reconstruct approaches based on what the students actually want and need to be taught about life after high school. Career and technical education must provide the stepping stones for students to begin to connect the classroom with the working world. After years of going through a period in which it was considered second-rate to

academia, career and technical education now finds itself center stage in the high school reform arena (Peckham, 2007).

Statement of the Problem

Anxiety and stress are growing amongst adolescents due partly to issues dealing with choice of career, the amount of time needed to wait before examining these career options, and a lack of support for student career exploration. Students have reported encouragement to achieve higher degrees in education but have also reported a lack of direction in knowing how to attain these goals (Cizek & Burg, 2006). In order to fulfill the mission of preparing students for life after high school, career exploration must be available to students within schools (Michelozzi, Surrell, & Cobe, 2004; Millar & Shevlin, 2003). In order to present students with valuable resources and information regarding career choices, we must first understand the influences on the student in regard to career exploration.

Student lack of interest in school is often seen by teachers as an obstacle that prevents them from being motivated to pursue academic endeavors (Baker, 2007). These academic endeavors prepare the student for life after secondary education. Student polling has been used to help identify areas in which students feel schools can improve and positively affect student motivation. Student polling can also be used to gauge the influence on students in regard to career exploration. This type of polling has been shown to deepen student bonds to their schools and thus enhance academic achievement (Kroeger, Burton, Comarata, Combs, Hamm, & Hopkins, 2004).

Purpose of the Study

As students become more disconnected with school they become more disconnected with the purpose of their education. When adults continue to make decisions about the school environment and the type of education which should take place without the input of students, students become increasingly aware that teachers and administrators have little or no interest in what they have to say or where they will go upon graduation (Gewetz, 2004). When students are given a voice in the schools, they acquire ownership and have a voice in the construction of knowledge (Kordalewski, 1999; Mitra, 2004; Spires et al., 2008). Using student opinions in the creation of school improvement plans may be a way to directly measure what is needed for overall student learning environment satisfaction. This, in turn, helps schools reach their goal of preparing students for their working lives. Adolescents are the direct source to express their opinions about what they value and want in schools and identify beneficial experiences which they feel are missing (Girod, Pardales, Cavanaugh, & Wadsworth, 2005; Strom & Strom, 2008).

Across the United States, school improvement plans and school improvement committees are the guiding forces that shape curriculum and atmosphere in schools. The school improvement plan focuses on areas in which a school can make advancement. These plans contain goals and data to support the acquisition of these goals, instructional strategies for meeting the goals and data to support these strategies. School Improvement plans also contain methods of evaluation, a technology component, and a professional development component (Harvey, 2006; Strom, Strom, & Wing, 2008). Including reform in these plans for the way career exploration is presented to students is a key component to improving our schools and the preparation given to the students for life after school.

The No Child Left Behind law requires each state to generate report cards for public view. These reports contain information on the success of individual schools based on each school's adequate yearly progress or AYP (The White House, 2004). Annual measurable goals for grade levels and subgroups within a population create AYP for each individual school. If a school fails to reach these goals, sanctions are imposed. The State of Alabama also requires individual schools to develop a Continuous Improvement Plan to address the needs of students within a school. The Continuous Improvement Plan highlights the needs that are unique to separate schools and districts. These plans impact the learning conditions of the respective schools. They address the areas of curriculum, instruction, assessment, tutoring, and technology. These imposed requirements impact the conditions for learning and affect student motivation and levels of stress (Harriman, 2005). These conditions of learning play a major factor in the success or failure of a school plan.

Research Questions

1. How are student perceptions on search status of a career reported on the Career Exploration poll influenced by gender?
2. How are student perceptions on sources of influence in helping choose a career reported on the Career Exploration poll influenced by gender?
3. How are student perceptions on things to aid in search process of a career reported on the Career Exploration poll influenced by gender?
4. How are student perceptions on knowledge about intended career reported on the Career Exploration poll influenced by gender?
5. How are student perceptions on career values or goals reported on the Career Exploration poll influenced by gender?

Significance of the Study

The purpose of the research is to use a developed student on-line polling system to measure the degree to which students have explored available career opportunities and the influences upon their thoughts. Additionally, the research will examine differences within and between the variables of gender and ethnicity. Analysis of this data will determine if relationships are dependent or independent between responses and the demographic variables.

Before schools can reach their goal of preparing students for the working world, they must first understand the influences and thoughts of students on career exploration. Hopefully, this study will begin the process of teachers and administrators understanding students as individuals. This can lead to an understanding of the individual thoughts and influences on students in the realm career exploration.

Assumptions of the Study

Theoretical assumptions of the study are rooted in a pragmatic world view. Pragmatism seeks to find solutions to a problem with the actual problem being the center of the study. This world view takes real-world practice into account as well as using the consequences of actions as a driving force of the study (Creswell, 2009).

By combining options for student response as well as open-ended response items, the study takes on a mixed method design. Keeping in line with the pragmatic sense of design, the study is not committed to any one system of philosophy and reality. The theoretic lens is one that is reflective of both social justice and political aims. This study is aimed at deepening the understanding of a real world problem that could affect the world on a much larger scope than the present educational state.

Limitations of the Study

The data collection is limited to participants in one school in rural Central Alabama. The polling of students, also referred to as a type of survey research, is a non-experimental research method based on questions (Johnson, & Christensen, 2008). Results are dependent upon student willingness to answer polling items truthfully. The school population consisted of 393 students. All students were invited to respond to the poll. Of the 393 students invited to complete the study, 288 (73.3%) provided completed poll results.

The possibility of blind answering and purposeful incorrect answers by students must be taken into consideration. Though proctors stressed the importance of student voice in the school improvement process the possibility still remains that students did not take their responses seriously. This limitation cannot be controlled by the researcher.

Definition of Terms

Adolescence – the period of time when children are entering and progressing through puberty from age 10 – 18.

Adequate Yearly Progress (AYP) - Required under the federal No Child Left Behind law, AYP provides a way to measure school performance. To meet AYP, a school must meet target goals for each group of students of 40 or more. Target goals are set annually by the state for reading and mathematics at grades 3–8 and grade 10, and for attendance rates or graduation rates as well. AYP is an all-or-nothing model. If a school misses one target, it does not make AYP. The long-term goal of AYP is to have every school at 100 percent student proficiency by 2013-14.

Career/Technical Education - programs that develop the talents and skills of students in classroom settings that are rigorous, progressive and certified to international standards. Students have an opportunity to explore career options in more than 215 courses offered statewide and can earn advanced diplomas and college credit.

Diploma Seeking Type – the type of diploma a student is pursuing, types include advanced diploma, standard diploma, and certificate of attendance

Early Adolescence – the period of time when children are entering and progressing through puberty toward maturity from age 10 years old to 14 years old

High School – a school containing 9th, 10th, 11th, and 12th grade students

NCLB – No Child Left Behind, NCLB is the more recent reauthorization of the Elementary and Secondary Authorization Act and represents a sweeping change in the federal government’s role in local public education. NCLB has a variety of goals, but the most dominant ones are for every school to be at 100 percent proficiency by 2013-14 as measured by student achievement on state tests and for every child to be taught by a “Highly Qualified” teacher. The new law emphasizes new standards for teachers and new consequences for Title 1 schools that do not meet student achievement standards for two or more consecutive years.

Polling – Asking a sample of the population how they feel about a particular topic

School Improvement – used to describe whether a school or school system has met its accountability goals over time

Student Voice – the use of students’ opinions, comments, and ideas in planning for instructional purposes

Technology - Electronic or digital products and systems considered as a group

Title I School – a school with 40% or more of students from poverty designated families

CHAPTER II. LITERATURE REVIEW

Polling

A poll is defined as “a systematic, scientific, and impartial way of collecting information from a subset, or sample, of people that is used to generalize to a greater group, or population, from which the sample was drawn” (Lake, 1987). Many researchers will use the terms surveys and polls as distinguished entities, while others use them interchangeable. Polls are generally categorized into four distinct types: public opinion polls, market research, descriptive statistical surveys, and social research surveys (Young, 1992). At the point of administration, a poll can examine the thoughts and feelings of an individual on a specific topic. Polls are designed to gauge perspective on individual’s feelings that can be generalized from the sample to the entire population that is defined. The intention of a poll is not to persuade an individual to believe or think a certain way, but to examine the way one feels and give insight into the perceptions of the population (Bradburn, 1988).

Polls were popularized by George Gallup as a successful statistical method of survey sampling for measuring public opinion in the 1930s and 1940s. Due to Gallup, this system of polling soon became an acceptable form of inquiry. These polls gave the public a voice and support democracy by allowing the common man to participate in dialogue regarding policy (Strom, & Strom 2009). In 1936, his organization achieved national recognition by correctly predicting, from the replies of only 5,000 respondents, that Franklin Roosevelt would defeat Alf Landon in the U.S. Presidential election. This was in direct contradiction to the widely

respected *Literary Digest* magazine whose poll, based on over two million returned questionnaires, predicted that Landon would be the winner. Not only did Gallup get the election right, he correctly predicted the results of the *Literary Digest* poll as well. He did so using a random sample smaller than theirs but chosen to match it. Today the Gallup, Harris, and Roper organization assess public opinion on numerous topics of interests that confront the nation (Erickson, & Tedin, 2004).

Polls have recently been brought to the spot light by numerous “reality television” programs that elicit the votes of the viewers in determining television outcomes. Polls are also used by major television networks who partner with media conglomerates to conduct polling. Examples of these type polls are: CBS News with the *New York Times*, ABC News with the *Washington Post*, CNN with *USA Today* and NBC News with the *Wall Street Journal*. The viewer is no longer passive, but actively involved in the decision making process and the outcome of the television show (Gewertz, 2004). Television shows, such as *American Idol* and *America’s Got Talent*, have taken polls into the entertainment realm. As viewers become more involved in the process of elimination and deciding the ultimate outcome of the show, they become more motivated to voice their opinion and to hold stake in the process presented by the television program (Liu, 2005).

Commonly used in the social science fields, in recent years polls have begun to find their place in educational research. Despite recent attention, early surveys used in education date back to the 1890s (Creswell, 2002). Today, educators use polls as a means to develop policy as well as assist in everyday decision making (Rose, 2006). Polls can include items catered to tracking educational trends and exploration of opinions on emerging educational issues. By knowing

opinions upfront, policy makers can save time, energy, and resources before implementing plans that could confront public opposition (Rose, 2006).

Polling Issues

The setting in which a poll takes place can have impact on the outcome of the poll (Lane & Sears, 1964; Rea & Parker, 2005). The influences of group status, external opposition, and alternative groups are present when dealing with polling. Group status is described as the higher the status of a group the more pressure there is to conform. External opposition is described as when a group perceives an external threat the pressure to conform increases. Alternative groups exist when there are few differing opinions to meet the various needs and the pressure to conform increases (Lane & Sears, 1964).

Sampling techniques are also a major area of concern when considering polling issues. Researchers must be careful to sample a group that is representative of the population from which the opinions are being sought. Effects of sample size and sampling error must be reported in the data. Questions of validity must also be answered (Creswell, 2002).

Errors in polls can arise from sampling or non sampling error (Young, 1992). Two factors contribute to sampling error: sample size and sampling method. The administrator of the poll and the researcher can control these types of sampling error. Non sampling error can occur when items are worded poorly, contain grammatical errors, misreporting is present, coding errors occur, as well as tabulation errors (Young, 1992).

Polling in the Schools

Online polling in schools has the potential of minimizing or possibly eliminating many of the concerns regarding polling. Sampling error can be reduced or even eliminated depending on the percentage of participants. Using technology can also reduce non-sampling errors related to tabulation and clerical errors. As local school decision-makers use polling data, they can make decisions about its reliability within the school context based on the percentage and composition of the students who participate in the poll.

The following articles contain examples of polling in educational settings. Not only were the polls successful but themes have emerged from the body of work. Students want and need a voice. Polling is an outlet that can be used.

In a recent mixed method study by Strom, Strom, and Wing (2008), 8 rural Title 1 schools in Arizona were chosen as a field test site for gathering student observations and evaluating polling procedures. Five of the participating schools had been placed on improvement status by No Child Left Behind. Students were brought into a computer lab at a designated time and given password protected, anonymous codes for submitting polling results. This method insured student anonymity and that no student could vote more than once. Each school had a completion rate of seventy five percent or higher. Results of the Internet learning poll showed a significant relationship to the variables of gender, grade, ethnicity, and school environment. Sixty-nine percent of responses showed dependent relationships with one or more variables. The school variable recorded the highest response relationships at 46%, followed by gender (35%) and then grade level (23%). Ethnicity recorded the lowest numbers of significant relationships at 17%. The findings of this study suggest that local school context should be the

main consideration for the assessment and implementation of changes to influence conditions of learning.

In the study “The Significance of Students: Can Increasing “Student Voice” in Schools Lead to Gains in Youth Development?”, Mitra (2004) examines the construct of using “student voice” as a means for improving the success of school reform efforts. Student voice is defined by Mitra as consisting of the most basic level of youth sharing their opinions of problems and potential solutions and young people collaborating with adults to actually address the problems in their schools. This qualitative study provides an in-depth explanation of a school that did contain strong student voice efforts. The school studies included half English language learners and half free or reduced priced lunch program students. The families of these students represent a population who are rarely given a voice in American schools. Two random groups were formed at the school to involve students more directly in reform efforts happening at the school. The data were collected for more than 2 years. The data consisted of interviews, observations of meetings and conversations, and written documents from both groups. The students who participated in the groups showed evidence of marked increases in the very personal and social assets that youth development researchers assert are necessary for students to succeed in society. This was noted by a strong increase in agency, belonging, and competence across those participating in student voice efforts (Mitra, 2004).

“Student Voice and Critical Reflection” cites the breaking of the bond between students and schools as one of the reasons for higher dropout rates among students with learning difficulties (Kroeger et al., 2004). Researchers engaged in an open dialogue with 6 high school drop outs about their experiences as students. This qualitative study was exploratory in nature and took shape as researcher understanding increased. Data consisted of open-ended interviews

and Photo-voice. Photo-voice is a research strategy in which individuals of a community create and share photographs as a means of personal development and needs assessment. This study found profound evidence that students want and need a connection with their school in order to excel. It was stated that “When, as teachers, we reach that place where we no longer understand the struggling student, when we hear ourselves saying, I’ve tried everything, it is then that we need to take a step back and listen” (Kroeger et al., 2004).

In Susan Black’s article “Listening to Students”, she references Carole Gallagher of Indiana University as saying most school dropouts have been “systematically silenced,” not only in curriculum but also in how their schools were run. Her qualitative case study of four Indiana dropouts reveals that as high school students, they each felt alienated. A recurring theme in their complaints was that no one listened. All four students went on to become high school drop-outs citing they had no voice in their school (Black, 2005).

Struyven, Dochy, and Janssen (2008) examine the consequences for students’ perceptions of the learning environment in a recent quantitative study. The investigation was quasi-experimental in design and included 578 students in their first year of elementary teacher training. Students were divided into 5 experimental groups with each group receiving different combinations of lesson delivery and assessment. Data were collected using a Likert scale questionnaire and a questionnaire with multiple choice answers at the completion of the course. Student likes and dislikes in relation to perceptions of the learning environment were measured using the data collected. Outcomes suggest that the more positively students perceive the teaching methods they experience, the more positive their perceptions are of the learning environment.

In a 1993 study, Eccles, Midgley, Wigfield, Buchanan, Reuman, Flanagan, and Iver, examined the relationship between adolescents and their learning environment. This qualitative study looked at the effect of differences in perceived teacher support before and after the transition to junior high school on the value that early adolescents attach to mathematics. The sample consisted of 1,300 students. The students who moved from elementary teachers they perceived to be low in support to junior high school math teachers they perceived to be high in support showed an increase in the value they attached to math. The early adolescents who moved from teachers they perceived to be high in support to teachers they perceived to be low in support showed a decline in the value they attached to math. Evidence was found to support the notion that students are at risk when they are in low facilitative classroom environments.

In 2004, Catherine Gewertz surveyed 6,350 high school students in a quantitative study in the areas of Chicago, Houston, Oakland, Philadelphia, and St. Louis. The survey was created by teachers and students in the St. Louis area. The results of the study suggest that students need stronger relationships with members of the school staff. Students who took part in the survey and the creation of the survey reported a boost in self-confidence, interest in school, and the belief that they are valued members of the school community. Students involved in the creation of the survey presented results to their school communities in varying ways, from discussing them at a retreat with the principal and the staff, to rewriting the findings as rap lyrics and performing them to a backdrop of hip-hop music. Nearly 90 percent of students surveyed said they really wanted to learn. But mismatches emerged between students' needs and their perceived support. Sixty eight percent reported that their teachers never or only rarely talk to them and ask for input. Twenty seven percent said there was no adult in the school building

they could talk to if they had a problem. Eighty two percent of the students reported having thoughts of dropping out (Gewertz, 2004).

In 2005, De La Ossa invited 20 Puget Sound Area public alternative high schools to participate in a qualitative study. Students were divided into focus groups with a mix of ethnicity, sex, and age in each grouping. A total of 78 students participated in this study with an average of 8 from each site. The focus group was seen as a powerful format for eliciting responses by multiple members of each group. Guiding questions used in the focus groups were based on the research of characteristics of public alternative schools. The data collection and analysis were ongoing processes throughout the study. Each written transcript was examined for recurring themes. Four major themes emerged regarding the perceptions of the students of their educational experience: school size, class size, personal attention/relationships, and negative public perception. Students reported that personal relationships with teachers had positive influence in their educational experience. They stated that these relationships affected them both personally and academically. When the teacher listened to what they had to say, they valued their educational experience much more.

In a qualitative study, “By Teens, for Teachers: A Descriptive Study of Adolescence”, Girod, Pardales, Cavanaugh, and Wadsworth (2005) collected data from 464 short essays written by adolescents about issues specific to the experiences of today’s teens. The participants of the study chose from thirteen different writing prompts composed from an extensive literature review to reflect issues in adolescent development. An overwhelming 20.9% of participants choose to write on the topic of what teachers can do to be more helpful to students. Themes emerging from the essays written on teachers becoming more helpful included: teen interest in improving the everyday experience of schooling and student need for more autonomy and

independence in the classroom. Results suggest students want more of a voice in the classroom decision making process.

In a 2005 study, Caroline Lodge explored the value of student voice to school improvement. She suggests several dimensions to how student voice is perceived. These include passive, active, community and functional. This qualitative study involved three primary schools and three different classrooms. Teachers engaged in open conversation with students in regard to ideas involving school improvement issues. The study suggests that students need comfort and trust in order to voice opinions freely. Comfort issues were the prominent recurring theme in responses by students prompted to name barriers to communication.

The use of student polling in Strom, Strom, and Wing's 2008 study gives reason to consider the school environment to have the most effect on how students feel about their learning conditions. In addition, it is suggested that students feel the most satisfied with their learning conditions if they have a voice in the school (Mitra 2004, Kroeger et al., 2004). Students report having a need to belong and a need to bond with their schools (Kroeger et al., 2004). Studies suggest the repercussions of silencing the students can result in a higher drop out rate (Black, 2005). Students report personal relationships with teachers where they are able to talk freely about their needs and wants as having positive influence on their personal and academic lives (De La Ossa, 2005). It is also suggested that in order to voice opinions about the school environment, students need a high level of comfort (Lodge, 2005).

Technology in the Classroom

Many researchers concern about online polling lie in the issues of Internet access as well as knowledge and comfort of using a computer (Creswell, 2002). Research suggests that adolescents are more comfortable with computer-assisted polling than adults (Wright, Aquino, & Supple, 1998). Today's students are part of the "Digital Generation." According to Larry Rosen, author of *Me, Myspace, and I*, over 94% of teenagers between the ages of 16 and 17 are online. They spend about three hours a day at least five days a week surfing the Internet. While there is still a divide between racial groups and Internet access, The Kaiser Family Foundation reports that there has been an increase of 40 percentage points in Internet access from home amid students whose parents have a high school education or less. The following articles address the issues of student need for technology in the classroom, teacher lack of technology use, and our technological rich society.

In his 2007 article, Thomas states that learning to effectively use technology is a vital life skill for today's students. As society has shifted from an industrial society to one that is knowledge-intensive these type skills become increasingly important. He examines the notion that students must have the technical knowledge and skills that enable them to either enter the work force or help them to complete higher-level degrees. Furthermore, he places the responsibility of students receiving these type skills in the hands of teachers. This article focuses on a key component in staff development for teachers as using technology across the curriculum to understand that it is not just about learning the technology, but also about the learning process and pedagogical concepts that it entails (D. Thomas, 2007).

Spires, Lee, Turner, and Johnson (2008) reference Marc Prensky's coined phrase as referring to today's children as "digital natives." In their recent mixed method study, they discuss the challenges of meeting the needs of children living in a world of communications-related digital technologies. The study included 4,000 middle school students who attended an after-school program in North Carolina. Stratified random sampling was used based on geographic region, race, gender, grade level and family income. Quantitative data resulted from students completing one of two questionnaires. Qualitative data resulted from focus group session discussions. Quantitative analysis of the study suggests that students are significantly more likely to use the Internet rather than a book to find information. Students significantly rated using computers and doing research on the Internet as their favorite school activity and significantly rated listening to teachers explain things and doing worksheets as their least favorite activities. Qualitative analysis of the study resulted in more than 50 codes and 10 emergent themes. The 10 themes were merged into four broad themes for research reporting purposes. The four interpretive themes that emerged from the student perspectives were: "Do U Know Us?" "Engage Us," "Prepare Us for Jobs of the Future," and "Let's Not Get Left Behind." These themes give possible insight into the students' need to be heard in the school.

In her 2008 study, DeGennaro suggests that today's youth learn differently as a result of their pervasive social interactions during technology-mediated activities. The Internet, interactive simulations, Instant Messenger, and text messaging are a natural part of the lives of youth functioning in today's society. She uses these facts to drive her research to show support of the fact that teachers need to develop learning designs that unite youth technology practices with effective learning practices in order to motivate students to learn. When youth engage in these practices, their learning is socially constructed and situated within the broader community

of practice with their peers. This qualitative study explores the use of student-initiated use of technology, and Instant Messenger (IM). This form of technology use has proven to be popular among not only teens, but all technology users. In this case study students chose to use IM for student-teacher communications in an after-school lab management club. The study was conducted over a six month period. The participants included four students, upper middle class white boys from a suburban private all-boys school outside of Philadelphia and their teacher. The boys wanted to extend help and communication time with their teacher and initiated IM interactions outside of the classroom. The data collected were in the form of IM transcripts, semi-structured interviews, journals, and a time stamp of the technologies used to communicate with the teacher. Emergent themes were examined. These themes included negotiated goals, co-constructed problem solving, and supportive argumentation. Final analysis of the study showed that the themes which emerged were those of “real world” situations. Students communicated wants, needs, and thoughts more freely by using IM. This study suggests that using technologies such as IM, with which students are comfortable, allows for a more open, student-centered, learning environment.

In a quantitative study, Norris, Sullivan, Poirot, and Soloway (2003), examined how teachers utilize classroom technology and the Internet. The study sample consisted of 3,665 teachers. The data were collected through teacher surveys. The sample was geographically diverse: representing four U.S. states (California, Florida, Nebraska, and New York). There was a mixture of rural and urban respondents. Teachers whose primary assignment involved teaching technology-related courses were excluded from the analysis. Study results showed that only 14% of teachers surveyed made any use whatsoever of computers for instructional purposes. Nearly half (45%) of the teachers surveyed used the technology available with their

students less than 15 minutes per week. Only 18% reported using computers for instructional purposes more than 45 minutes per week. The smallest percentage reported, 1.4% of the teachers surveyed, made extensive use of the Internet for instructional purposes. More than a quarter of teachers surveyed did not use the Internet for instructional purposes at any time.

Despite the reported low knowledge and use of technology amongst teachers, there have been steps taken by higher education institutions to fix the gap between teacher technology knowledge and student technology knowledge. In 2003, a major university's college of education, implemented an Assessment of Technology Competencies (ATC) exam for all education students enrolled in an Introduction to Education course. Although students were not required to pass the exam, it did affect their final grade in the course. This performance-based assessment evaluates word-processing, presentation, spreadsheet, graphic/drawing, and Internet skills. The research explored the impact this assessment had on the students' use and development of technology in subsequent courses. Student perceptions of the ATC and its impact were elicited through a self-reported survey administered in a junior-level education course. Results indicate that the ATC has facilitated technology use among the participants. Respondents also revealed that their high school experiences with technology adequately prepared them for passing the ATC, despite the fact that most students are unable to pass the ATC in the first attempt.

Mullen and Wedwick (2008) explored the impact of Internet learning on a middle school classroom in a rural, Midwestern K-8 school. Rebecca, a middle school language arts teacher, begins to explore different Internet websites for school usage. She observed that students became actively engaged and increasingly motivated in the activities. Qualitative in design, the article is exploratory in nature. Rebecca and her students began to experiment with sites such as

YouTube, Digital Stories, and Blogs. On YouTube students watch a Vietnam War documentary, a *Mythbuster* clip, and a tour of Anne Frank's Secret Annex. Students memorize songs from clips of *Schoolhouse Rocks!* Parents report students singing *Schoolhouse Rocks!* in the home and students beginning to search for educational material through home PC use. Eighth grade students brainstorm topics for digital stories and present writing assignments with a new end product. Rebecca set up a classroom Blog where she and her students begin to discuss book recommendations, current events, and comment on postings. The article presents the challenge for educators to rise up and close the growing digital divide in education.

In 2007, Herrington and Kervin explored many practical uses of technology in the classroom. Their research shows that many teachers incorporate technology use into their classrooms for numerous wrong reasons. Teachers reported feeling peer pressure, pressure from administration, pressure to entertain students, and the need for convenience. The authors argue that technology, if used properly in the classroom, can present the opportunity to employ powerful cognitive tools that can be used by students to solve complex and authentic problems. This article suggests 10 theoretically sound ways in which students, not teachers, can use technology in the classroom to meet these goals. These ten ways, when used effectively and meaningfully in the classroom, show increase in student learning and achievement.

Marc Prensky (2005/2006) described the role of educators as follows:

As 21st century educators, we can no longer decide for our students; we must decide with them, as strange as that may feel to many of us. We need to include our students in everything we do in the classroom, involving them in discussions

about curriculum development, teaching methods, school organization, discipline, and assignments. (p.11)

His article “Listen to the Natives” examines the 21st century classroom’s access to technology and the role students play with the advancement of school-wide technologies. From computers to calculators to MP3 players to camera phones, his ideas about the utilization of technologies in the classroom are notable. He refers to today’s students as “the natives” when it comes to these technologies. Students of the 21st century have grown up with these technologies and will use them in everyday life.

In her 2007 article “The End(s) of Testing”, Eva Baker seeks to evoke change in today’s education system. The call for reform is rooted in our present accountability system, NCLB. Questions of concern are: “Can we offer students options better suited to a new and changing work environment?”, “Can we offer students options better suited to a life in a real-time society with amped-up connectivity?”, and can students find themselves in the real and virtual worlds? She sets a goal for current educators to begin educational reform with balance in the revitalization of schools which will develop generations of students to be prepared for what is to come.

Robert Kenny (2007) approaches the issue of technology in the classroom from a quantitative stand point. Pointing out the current deficiency in the field of lack of empirical evidence, Kenny attempts to support the notion that today’s students learn differently than those of generations past. This study seeks to find if and which learner perspectives have changed using the Familiar Figures Test (FFT). The Familiar Figures Test was developed by Jerome Kagan at Harvard University. This instrument, found to be valid, was developed over thirty

years ago. It was used to measure cognitive tempo on an impulsive-reflective axis. It has since been adapted into a twenty-question version named the MFFT-20. This preliminary study is an attempt to begin the empirical verification process of using cognitive tempo as a relevant assessment tool. Two groups of K-12 students from different eras were investigated to determine if comparing cognitive tempos between subjects who took the original MFFT-20 to those who live in the current media centric society provides any insights as to possible differences in the visual cognitive processing skills and preferences. Reporting statistical significance was not valid due to the fact that the subjects studied 20 years earlier were studied on the basis of proving the newly developed instrument as valid. A comparison of the median scores shows that, in the twenty plus years since the time Kagan developed their instrument, the median time it took participants to make their first choice reduced by approximately 48 percent and the median number of errors reduced by almost 32 percent. This study is careful to not make claims but only point out possibilities. The results of the evaluations of the two administrations of the MFFT-20 indicate that something interesting may be happening with regards to a propensity for and ability to accurately grasp and identify fast-paced, multi-processed visual information on the part of today's youth. These results add a quantitative aspect to a claim that has been solely based on anecdotes, observations, and opinions until this study was completed.

Identity Development in Adolescents

Having a well-defined role in society helps individuals establish a favorable sense of identity throughout life. Such is true in the context of adolescent development. During this stage of life the pursuit of identity emerges as the most common goal amongst peers. Adolescents begin to search for their significant place in society. This need to belong extends the parameters of traditional development as society evolves. As our society evolves in the technical realm

establishing this identity has become increasingly difficult for adolescents. Being stuck between childhood and adulthood, many adolescents find themselves longing to belong in society (Strom, & Strom, 2009).

James Marcia is perhaps best known for his extensive research and writings on psychological development, with specific attention focused on adolescent psychosocial development and lifespan identity development. Erik H. Erikson had suggested that the normative conflict occurring in adolescence is the opposition between identity achievement and identity confusion. Marcia elaborated on Erikson's ideas by suggesting this stage consists neither of identity resolution nor identity confusion as Erikson claimed, but is better understood as the extent to which one has both explored and committed to an identity in a variety of life domains including politics, occupation, religion, intimate relationships, friendships, and gender roles. He stated that "Two crucial areas in which the adolescent must make such commitments are ideology and occupation" (Marcia, 1966).

His theory of identity achievement states that there are two distinct parts contributing to the achievement of adolescent identity: a time of choosing or crisis, and a commitment. He defined a crisis as a time of upheaval where old values or choices are being reexamined and new alternatives are explored – "times during adolescence when the individual seems to be actively involved in choosing among alternative occupations and beliefs" (Marcia, 1966).

The adolescent period in life is characterized by changes due to pubertal development, social role redefinition, cognitive development, school transitions, and the emergence of sexuality. Between 15% and 30% of adolescents in the United States, depending on the ethnic group, drop out of school before completing high school. Adolescence carries the highest rate of

arrest of any of the age groups. An increasing number of adolescents consume alcohol and other drugs on a regular basis each year (Eccles, Midgley, Wigfield, Buchanan, Reuman, Flanagan, & Iver, 1993). Research suggests that the early adolescent years mark the beginning of a downward spiral for some individuals that leads to academic failure and school dropout (Simmons, & Blyth, 1987).

Many explanations have been provided to account for the declines in early adolescents' school-related motivational orientations. Work in a variety of areas has documented the impact of classroom and school environmental characteristics on motivation. In a study by Midgley and Feldlaufer (1987) junior high students as well as teachers reported less opportunity for students to participate in classroom decision making than previous years in school. As students cross over into the high school years, changes such as these are likely to increase social comparison, concerns about evaluation and competitiveness amongst peers. This may also result in teachers using more normative grading criteria and more public forms of evaluation, both of which could have a negative impact on many early adolescents' self-perceptions and motivation (Eccles et al, 1993).

Forming an identity, working toward acceptance as an adult with an individual sense of meaning, purpose, and direction emerge during adolescence (Bergh & Erling, 2005; Temple, 2006). Technology skills are the tools that are needed for learning in the future. These specific set of skills represent a credible criterion for identity. Adolescents find themselves searching for identity through screen names, blogs, and instant chats. Activities such as these must be considered when trying to understand an adolescent's search for identity (Strom, & Strom, 2009).

Career/ Occupational Identity in Adolescents

Career development during the adolescent years has been a recognized stage of development by theorists for many years (Wallace-Brosious, Serafica, & Osipow, 1994). Career development is intimately related to self-concept (Super 1957). Erik Erickson (1959) indicates that forming an occupational identity is critical to resolving the identity crisis during adolescence. In 1968, Erikson proposed his psychosocial development stage theory including his model of adolescent development. This model has proven highly relevant to current concepts of career educational development. Erickson is quoted as characterizing adolescence as a period of “moratorium for the integration of identity elements”. The individual must cope simultaneously with coming to terms with societal demands, earning respect from peers, finding guidance, and fulfilling the desire to make something work. The maturing individual seeks both a place in the economic structure and the governing philosophy of life. According to Erikson, the lack of special aptitudes, makes adapting to adult society more difficult.

Erikson is credited with coining the term "Identity Crisis". Each stage presented in Erikson's Psychosocial development stage theory has its own form of crisis. The transition from childhood to adulthood is marked by one of the “Identity Crisis”. This passage is necessary because "Throughout infancy and childhood, a person forms many identifications. But the need for identity in youth is not met by these". This turning point in human development seems to be the reconciliation between “the person one has come to be” and “the person society expects one to become”. This emerging sense of self will be established by combining past experiences with anticipations of the future (Erickson, 1956).

Adolescents are face with the need to re-establish themselves in the world. This is often challenging since commitments are being asked for before particular identity roles have formed. At this point, one is in a state of “identity confusion”, but society normally makes allowances for youth to "find themselves," and this state is called the moratorium (Erickson, 1956).

Traditionally, education has been the instrument of society which initiates the young into its established structures and institutions. In recent years this function of education is no longer sufficient. A new concept of career education has become a primary issue in education. Generally, this concept is based on the recognition that change is a major factor in modern life and individuals must be prepared for changes as well as for roles in adult life. At least in theory, the traditional dichotomy between academic preparation and vocational training is rejected. Work is viewed as a part of life for everyone, and career education programs attempt to increase student awareness of the choices and decision they will be facing throughout their lifetime (Ciminillo, & Aderlman, 2001).

Career and technical education has evolved and responded to the employers’ growing knowledge and skill demands by changing the types of courses offered. The enrollments in the traditional career and technical fields such as auto mechanics and material production have declined. Computer-related and occupational courses have sextupled (Levesque, 2003). The once staples of the high school curriculum, typing and keyboarding, are now mostly learned in the earlier grade school years. Courses in specific occupation skills have seen a gradual incline since 2000 (NCES, 2003).

Giving students the option of choosing career-technical courses in high school will help retain some students in high school. This in turn would mark an increase in the graduation rate

and induce some to continue their occupational preparation in college. Students who start preparing for an occupation in high school are more successful in the labor market both in the short and long run. They are more likely to find a job, more likely to enter the occupation of their choice and they end up earning more (Bishop, & Mane, 2004).

A uniform curriculum at the secondary level sets many students up for failure. Forcing students to take all academics or all career and technical courses robs the student of experiencing all aspects of the educational experience. The following quote from the Report of the Advisory Committee for the National Assessment of Vocational Education makes the case:

Career and technical education empowers students by providing a range of learning opportunities that serve different learning styles. CTE relies on a powerful mode of teaching and learning that cognitive scientists call “contextual” or “situated” learning, both in classrooms and in workplaces. For many students, applying academic and technical skills to real-world activities, using computers and other tools, and being able to see how their learning is related to the world of work make CTE classes more interesting and motivating, and more educationally powerful than standard academic classes. A career focus often gives students a sense of direction and motivates them to achieve and to stay in school. Practically inclined students can be hooked on academic learning through CTE study. This is especially important for young people who learn best by doing, a group that includes disproportionate numbers of disadvantaged and special education students. Just having the option of being able to concentrate in CTE in high school results in more young people staying in school because more individually

relevant choices are available to them (Advisory Committee for the National Assessment of Vocational Education, 2003).

School Improvement

Across the United States, school improvement plans and school improvement committees are the guiding forces that shape curriculum and atmosphere in schools. The school improvement plan focuses on areas in which a school needs to improve. These plans contain goals and data to support these goals, instructional strategies for meeting the goals and data to support these strategies, methods of evaluation, a technology component, and a professional development component (Harvey, 2006; Strom, Strom, & Wing, 2008).

The No Child Left Behind law requires each state to generate report cards for public view. These reports contain information on the success of individual schools based on each school's adequate yearly progress or AYP (The White House, 2004). Annual measurable goals for grade levels and subgroups within a population create AYP for each individual school. If a school fails to reach these goals, sanctions are imposed. The State of Alabama also requires individual schools to develop a Continuous Improvement Plan to address the needs of students within a school. The Continuous Improvement Plan highlights needs that are unique to separate schools and districts. These plans impact the learning conditions of the respective schools. They address the areas of curriculum, instruction, assessment, tutoring, and technology. These imposed requirements impact the conditions for learning with students and affect motivation and levels of stress (Harriman, 2005). These conditions of learning play a major factor in the success or failure of a school plan.

When adults continue to make decisions about learning conditions and the type of education which should take place without the input of students, students become increasingly aware that teachers and administrators have no interest in what they have to say (Gewetz, 2004). When students are given a voice in the process of school planning, they acquire ownership and have a voice in the construction of knowledge (Kordalewski, 1999; Mitra, 2004; Spires et al., 2008). Using student opinions in the creation of these plans may be a way to directly measure what is needed for overall student learning environment satisfaction. Adolescents are the direct source to express their opinions about what they value and want in schools and identify beneficial experiences they feel are missing (Girod, Pardales, Cavanaugh, & Wadsworth, 2005; Strom & Strom, 2008).

Career and Technical Education

At the beginning of the 20th century, Latin was a required subject, vocational classes were unknown and only 6% of the age cohort received a diploma. By 1928 vocational courses were three times more popular than Latin and 27% of the age cohort was graduating from high school. Many explain the growth of vocational education as a response to public pressure to open upper-secondary education to children from immigrant and working class families. Without the vocational option many believe few immigrant and working class children would have made it into and through high school. Vocational education in turn contributed to the growth of high schools in America (Bishop, & Mane 2004).

Career and Technical Education is important to both secondary and postsecondary education. As early as junior high school, students should begin formulating a career path.

Waiting until high school graduation can sometimes be too late. Career and Technical Education is not only important to those searching for their first careers but also their second, third, and those who are seeking to improve upon their current skill base (Clemons, 2003).

When students enter a Career and Technical Education classroom they are presented with problems that can be solved by using core content skills. Though many classroom teachers know their content well, many fail to point out that the content they teach are used in many everyday fields and used in everyday life. Students in turn try to memorize information provided in hopes that some day they will see a practical use. The Career and Technical Education classroom provides a stepping stone for the student to make the transition between content knowledge and application (Morgan, & Parr, 2009).

As the face of America changes to a more diversified “melting pot” society, the need for diversified education increases. Teaching methods must be adapted to meet the needs of all students. As college enrollment increases, demands for skilled labor and technical labor also increases (Reese, 2005). Non-college bound students need direction. Career and Technical Education can provide this direction for both college and non-college bound students. The cost for a college education is becoming inaccessible to many. Many may have the mental ability for college but cannot or do not wish to spend the money on a 4 year degree before getting a job.

Career academics have had both strong and positive effects on the engagement of high-risk students. This has been measured by higher attendance, lower drop-out rates, and more credits earned in both academic and career or technical courses. Teachers and students have reported a “family-like” atmosphere in these courses stating that collaboration and personalized attention have been present (Kuo, 2010).

The stated purpose of Alabama's Career and Technical Education is that to provide the missing link between classroom content and career exploration. After passing through the career and technical education classroom students graduate with industry-recognized credentials and preparation for advanced study or employment (Alabama State Department of Education, 2010). Student's can acquire the skills and knowledge managing techniques to keep pace with the rapid changes in today's work force. A key component of this educational experience is the opportunity to explore different career options. Through inventories, instruction, and hands-on experience student's can not only begin to think about life after high school but also begin to envision direction for their lives (Bishop, & Mane, 2004).

Secondary Education Purposes

Many define the purpose of secondary education as that of preparing today's students for the world of work they will face upon graduation. The mission of high school is not to cover content but to help students become analytical independent thinkers who can be productive with content. Teaching a student to be able to apply what they have learned helps prepare them for the world beyond school (Wiggins, & McTighe, 2008). Without opportunities within our high schools this goal is more difficult to reach for the individual student (Strom, & Strom, 2009). Unfortunately, the acquisition of content for its own sake is dominating classrooms across the United States. For a large number of students, school is failing to achieve its original purpose (Wiggins, & McTighe, 2008).

As educational reform evolves secondary schools are in a constant state of change. Researchers see the next stage of reform as presenting continued opportunities to provide better

chances for America's youths to meet the demands of careers and colleges. Educational policy trends have recognized the need for this type of support for today's students (Kuo, 2010). The success of the American high school student after secondary education is not only important from a national standpoint but from a world-wide stand point as well.

Gender in Education

A hot topic in education for years has been based on gender differences in the classroom. The debate as to whether students should be educated in single sex classrooms has generated controversy and emotional debate (Cooper, & Weaver, 2003). Teachers and researchers alike have proposed that separation of the sexes could, at various levels of education, result in higher academic achievement. Single-sex education, also known as single-gender education, is the practice of conducting education where male and female students attend separate classes or in separate buildings or schools. The practice was predominant before the mid-twentieth century, particularly in secondary education and higher education. Single-sex education in many cultures is advocated on the basis of tradition, as well as religion and is practiced in many parts of the world. In the past several decades in the United States, experimentation with single sex education has been largely confined to private schools (Cooper, & Weaver, 2003). These ideas have largely been based on the fact that many careers present gender bias

Present day barriers to the equity of education directly impact both male and female genders. For girls these barriers could include teachers showing preference to boys while ignoring the needs of girls in the classroom, a lack of girls being pushed to excel in upper level math and science classes, textbooks that favor male biases, sexual harassment, pressure to have a perfect appearance, a lack of females in administrative roles, and ending up in lower paying

careers despite receiving higher report cards and grades (Sadker, 2000). Much like girls, boys experience difficulties as well. This include but are not limited to reading comprehension difficulty, greater discipline problems, lack of male role models in the early years of education, lower report card grades, more likelihood to be placed in special education classes, higher drop-out rates, and self-esteem problems due to failure to live up to athletic and other male role expectations (Sadker, 2000).

In an article published in June of 2011, Austin and Totaro explore how Internet usage affects high school students' absenteeism differently for males and females. This study also examines to what degree the intensity of Internet use affects male versus female absenteeism. These research questions deal directly with gender differences in education and technology usage. The research suggests that there is evidence that absenteeism on the part of both male and female high school students is elevated when additional venues of Internet access are utilized. While part of this use can be for academic purposes, the research assumes that a large portion of Internet use is for recreation (e.g., myspace, music downloading). Students may indeed be missing school to "surf the 'net." Also, this study adds to a line of research that has revealed gender differences in academic outcomes. One major finding is that female high school students who intensely use the Internet actually incur more days of absenteeism than do males. Though there is no empirical evidence offered, it is hypothesized that female Internet use, most likely via social networking, is more time intensive thus engendering more absenteeism.

Many single sex schools have received much media attention in recent years. Notably the Young Women's Leadership School of East Harlem, The Seattle Girls' School, and Western High, an all girls school in Baltimore, have had success with single sex schooling. In 2001,

Western High had an average SAT score 100 points higher than their district wide average. Students at Western High took more Advanced Placement examinations than any other school in their district and over 90% of the class of 2001 attended college directly after high school graduation. At the Young Women's Leadership School, New York City's first single-sex school since the 1970's, 100% of the students passed the English part of the New York Regents exam in 2002. In comparison, only 42% of New York City students passed this portion of the exam overall. All but one student in the class of 2001 was accepted into a 4-year college despite the fact that 90% of the class was the first members of their family to attend college (Cooper, & Weaver, 2003).

Some studies suggest that women who attend single-sex middle or high schools show interest in different types of careers than those who attend co-educational schools. Women who attend such institutions are 13% more likely to consider going to law school. Analyses also indicate that young women who attended single sex high schools appear to be more professionally ambitious than the young women who attended co-educational secondary schools (Cooper, & Weaver, 2003).

The area of physics is confronted with the highest gender gap in the academic world (Sadker and Sadker, 1994). It is also reported that females drop out of physics-related majors at a higher rate than do males (Garratt, 1986). Despite impressive gains in their professional lives since the 1970's, women have not entered into the field of engineering and physical science at the same rate (Misa, 2010). In the past decade women have made up half or more of all graduate or professional students in both law and medical schools as well as most fields in the social and biological sciences. In the mid 1980's women began the rapid decline into entering

computing professions. This has continued to decline all the way until the present. No other professional field has ever experienced such a decline in the proportion of women in its ranks (Misa, 2010).

CHAPTER III. METHODS

Introduction

Educators and researchers have reported on the significance of using student opinion polling in classroom and school improvement planning (Spires, Lee, Turner, & Johnson, 2008; Mitra, 2004; Struyven, Dochy, & Janssens, 2008). Using student opinion polls that possess multiple choice and open-ended response items can give students a chance to express their opinions openly and anonymously. Internet polling can give educators a tool to gauge the opinions of students on their present opinions on career exploration while using technology as a current teaching tool. The data reported can be used by individual schools and districts to formulate the school improvement plan's technology component needed to reach No Child Left Behind's adequate yearly progress or AYP.

Student lack of interest in curriculum is often seen by teachers as an obstacle that prevents students from being motivated to pursue academic endeavors (Baker, 2007). Student polling has been used to help identify areas in which students feel schools can improve and positively affect student motivation. This type of polling has been shown to deepen student bonds to their schools and thus enhancing academic achievement (Kroeger, Burton, Comarata, Combs, Hamm, & Hopkins, 2004).

When adults continue to make decisions about learning conditions and the type of education which should take place without the input of students, students become increasingly aware that teachers and administrators have no interest in what they have to say (Gewetz, 2004).

When students are given a voice in the process of school planning, they acquire ownership and have a voice in the construction of knowledge (Kordalewski, 1999; Mitra, 2004; Spires et al., 2008).

Purpose of the Study

The purpose of the study was to further the knowledge base in the use of polling to engage student voice in the continuous improvement process by examining the degree to which their perceptions differ based upon gender.

Research Questions

1. How are student perceptions on search status of a career reported on the Career Exploration poll influenced by gender?
2. How are student perceptions on sources of influence in helping choose a career reported on the Career Exploration poll influenced by gender?
3. How are student perceptions on instruments to aid in search process of a career reported on the Career Exploration poll influenced by gender?
4. How are student perceptions on knowledge about intended career reported on the Career Exploration poll influenced by gender?
5. How are student perceptions on career values or goals reported on the Career Exploration poll influenced by gender?

Design

The research is mixed method in nature. The quantitative portion of results was developed from the data collected from multiple choice items. The qualitative portion of results was developed from the open-ended option response following the multiple choice items 1, 3, 4, 5, 6, 7, 9, 10, 13, 14, and 15. Patterns and trends were examined within these responses. Differences in responses per item were examined for each item. Items were placed into groups dealing with the same subject matter. Group 1 is identified as the search status group. This can also be referred to as identity status. Responses identify a student as still searching, not searching, or decided. Items included in this group are items 8, 11, and 12. Group 2 is identified as the sources of influence in helping choose a career group. Items included in this group are items 2, 3, and 10. Group 3 is identified as the things to aid in search process group. Items included in this group are items 5, 9, and 14. Group 4 is identified as the knowledge about intended career group. Items included in this group are items 6, 13, and 15. Group 5 is identified as the career values for career or conditions of career group. Items included in this group are items 1, 4, and 7. The group numbers coincide with the research question number for which each group explores.

Instrumentation

The on-line poll was examined by a peer group for readability and is published and copyrighted on the website www.learningpolls.org. To establish the reliability of the polls they were examined by teachers and students in Arizona. Polls were also examined for Fleisch-Kinkaid readability. The items present on the polls were devised by Strom and Strom (2007) and are backed by literature. Permission to use this poll for this study was granted by the author. The sampled group consisted of ninth through twelfth grade students in a rural Alabama high school.

Strom and Strom also piloted the polling process to representatives of the targeted respondents during the developmental phase to examine feedback used to revise the items. Construct validity is addressed with principal interviews in order to seek the usefulness of the poll in creating school change.

Results of the poll were formulated and presented to the administration of the school and used for school improvement purposes. Demographic data were collected on the participating students for analysis of dependent and independent relationships. Polling results provide information on student perceptions of career exploration at their school and the influences they experience on their respective lives. Results of the poll allow the researcher to make generalizations about the entire school population (Creswell, 2009). The external validity of the poll deals with only the population which is being studied. This is the school itself. Internal validity is secure in the fact that the polls are designed to gauge only the opinions of the students which will be taking the polls.

Research suggests the use of polls as a useful methodology while conducting research in the school setting (Baggaley, Kane, & Wade, 2002). Eleven polls were available from the developers. The career interest poll was chosen based on the research questions. The career interest poll also addresses the interests of the administration of the school.

Population

The population is a rural high school in central Alabama. Results of the student polls can be used to generalize information about the entire population of the school. The following information presented in charts illustrates general information about the population of the school.

Student Enrollment Per School Year

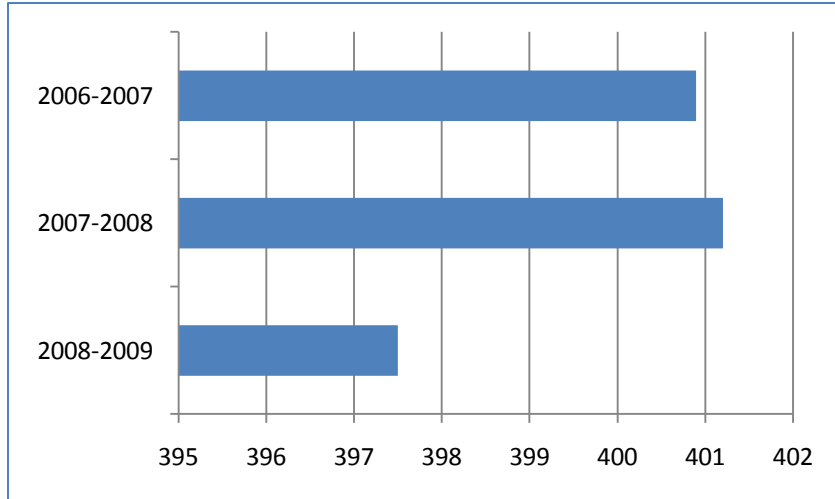


Figure 1.

Students Eligible for Free and Reduced Price Meals
State Comparison

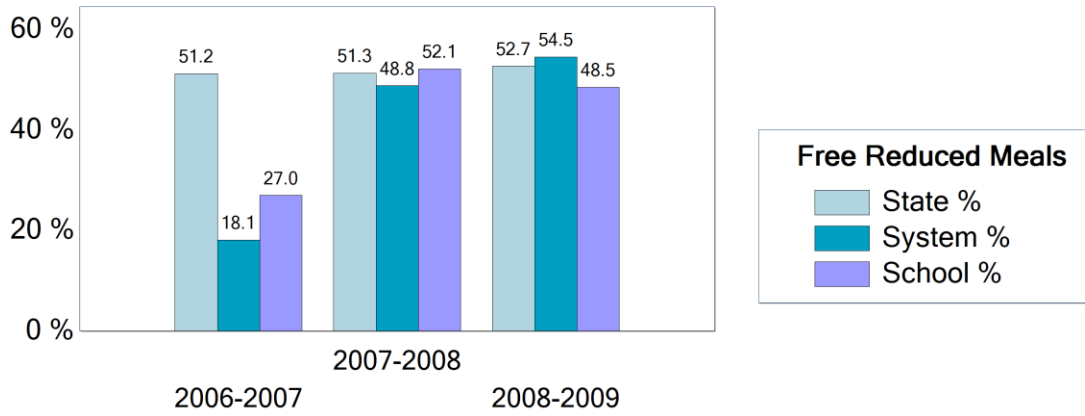


Figure 2.

Sample

The study includes students in the ninth through twelfth grade ($n = 288$) in a rural high school in central Alabama in the United States. The demographic information on the poll consists of four areas: age, grade level, gender, and ethnicity. The age of students ranges from 14 – 19 years of age. The average age of the sample for this study is 16.17. The study is comprised of a male to female percentage of 49% to 51%. The majority of students self-identified as White (55%). The remaining participants identified as Black (27%) and Other (18%).

Table 1 presents the distribution of the students participating in this study by age. Table 2 presents the distribution of the students participating in this study by grade. Table 3 presents the distribution of the students participating in this study by gender. Table 4 presents the distribution of the students participating in this study by ethnicity.

Table 1

Distribution and Percentage of Participants by Age

Age	N	%
14	29	10
15	78	27
16	63	22
17	60	21
18	43	15
19	12	4

N = 288

Table 2

Distribution and Percentage of Participants by Grade

Grade	N	%
9	95	33
10	55	19
11	72	25
12	66	23

N = 288

Table 3

Distribution and Percentage of Participants by Gender

Gender	(N)	%
Male	141	49
Female	147	51

N = 288

Table 4

Distribution and Percentage of Participants by Ethnicity

Ethnicity	(N)	%
Black	78	27
White	158	55
Other	52	18

N = 288

Instrumentation

The Conditions of Learning Polls created by Strom and Strom (2002) include a Career Poll which can be used to assess student perceptions on career exploration and influences. All items used within the poll have been reviewed, revised, piloted, and tested for reliability.

To address the subject of content validity, the poll provides open-ended items. These were established to allow students to respond if they did not feel their views were expressed in the multiple choice items. Data from the open-ended response items were collected for qualitative analysis. In a 2009 study by Dillman, Smyth, and Christian, evidence suggested that people provide better open-ended responses containing more information in web-based surveys than in the traditional pen and paper survey.

The poll was completed by students via the Internet. It included 15 items that surveyed the student's perceptions of career and four items which will provide demographic information regarding gender, age, grade level, and ethnicity. For many of the items students were allowed to select more than one answer per item. Students were allowed to insert written, open-ended responses on a line marked "other" on 12 of the 15 items.

Procedures

The research examines the responses on the career poll of ninth, tenth, eleventh, and twelfth graders in a rural high school located in central Alabama. The researcher trained poll administrators to accurately administer the poll to students. There were four administrators of the poll including the researcher. Each administrator was an instructor in a computer lab classroom. The polling process served as an outreach program for the designer of the polls to assist the school administration in gathering information for the purpose of school improvement within the continuous improvement plan.

Polls were completed by students on the Internet in the computer labs within the school. URL links were provided on each computer under the “Favorites” tab in Windows Internet Explorer. This allowed students to easily access the link and eliminate confusion. Students were provided with a pass code to enter into their respective school’s data set. The poll was administered over the period of 1 school day. Approximately 40 students were polled by each of the 3 trained proctors. The researcher polled approximately 70 students in her classroom and 100 students pulled from elective classes throughout the day. These students entered into the computer lab as groups of 10 to 20 and were given the time needed to complete the poll. Students not completing the polls in the computer labs were given the opportunity to complete a paper poll located in the front office. The principal of the school announced the availability of the poll over the intercom to all students.

Data were collected from students that completed the online poll. Students were also given the option to select the “other” response and provide qualitative data. The purpose of the poll was to gather information about students’ perceptions on variables which affect career

exploration. This study was submitted and approved by the Auburn University Human Subjects Internal Review Board as a study using pre-existing data.

Study Variables

Information on the demographic variables of student gender, grade level, ethnicity and, age were collected during the polling process. The variable of gender is examined in this study.

Data Analysis

Students were given the opportunity to choose more than a single option for 10 of the items. Each of the 10 items was presented on a nominal scale with 4 options per item. Non-parametric Chi-square tests of independence were used to identify whether responses were dependent or independent based on gender for items numbered 1, 3, 4, 5, 7, 9, 10, 13, 14, and 15. Item 6 allowed for a single student response. This item was tested with the Chi-square test of independence was used to identify whether the singular response was dependent or independent based on gender.

Four of the items on the poll were presented on a Likert-type scale. An independent samples t-test was used to assess the difference between the responses for males and females on items 2, 8, 11, and 12. The Bonferroni adjustment to control for family-wise Type 1 error rate was calculated and each item was assessed at the .0125 alpha level (Hogg, McKean, and Craig, 2005).

The box marked “other” on the polling instrument was used to collect qualitative data for items 1, 3, 4, 5, 6, 7, 9, 10, 13, 14, and 15. Data were examined for emerging trends. Patterns and themes were established and presented in concept maps.

Summary

This research was conducted to gain perspective on the perceptions of high school students in regards to career exploration. Data could be used to help improve school career exploration opportunities within the population. An Internet learning poll for career explorations (www.learningpolls.org) was used to collect data. Data were collected from the sample population and all data are anonymous. Polls were completed by students in computer labs via the Internet. Demographic information, multiple choice items, and open-ended items were collected from the polls.

CHAPTER IV. FINDINGS

Introduction

The purpose of the research was to examine the usefulness of Internet polling in the collection of data from high school students about career exploration. Results of the research may be used for the school's continuous improvement plan to help better meet the needs of the individual student. The purpose of the Internet poll was to provide a means for the students to voice their opinion freely and anonymously. Gaining the students' perspectives on influence and thought can help the school provide a more complete school improvement plan. Demographic data were collected on gender, age, grade level, and ethnicity. The area analyzed for influence is gender. The school population consisted of 393 students. All students were invited to respond to the poll. Of the 393 students invited to complete the study, 288 (73.3%) provided completed poll results.

An independent samples t-test was conducted on items 2, 8, 11, and 12 that included a scaled response. There were four of these items on the career poll. Each item posed four Likert-type possible responses. Table 5 presents the descriptive statistics for those variables.

Table 6 shows the significance level and the t statistic for the independent samples t-test having a significant difference using a two-sided test with a p value of $<.0125$. The t-test is used to evaluate the differences in means between two groups. Normality and equality of variances are assumed. The p value reported with a t-test represents the probability of error involved in

accepting the research hypothesis about the existence of a difference. Items 2, 8, 11, and 12 were examined using this method.

Table 5

Descriptive Statistics for Scale Items

Item		N	Mean	Std.Deviation
(2) How influential will relatives be in helping you choose a career?	Male	142	2.06	.99
	Female	146	2.07	1.04
(8) How often do you think about your future career?	Male	142	1.37	.60
	Female	146	1.25	.48
(11) How stressful is it for you to choose a career?	Male	142	2.40	.99
	Female	146	2.20	.93
(12) How certain are you about a particular career?	Male	142	1.82	.77
	Female	146	1.60	.59

Table 6

Relationships Between Career Poll Responses and Gender (N = 288)

Item	t	p
(2) How influential will relatives be in helping you choose a career?	.44	.97
(8) How often do you think about your future career?	1.87	.06
(11) How stressful is it for you to choose a career?	1.79	.07
(12) How certain are you about a particular career?	2.65	.01

A Pearson Chi-square test was conducted on items that included a nominal response. There were eleven of these items examined from the Internet poll. With the exception of item 6, each possible answer option becomes its own item. There were 40 possibilities for the ten items examined plus one possible response for item 6. The “other” option has been omitted in this portion of the research. The other option was used to create concept maps located in the qualitative results section.

Table 7 shows the significance level and the Pearson Chi-square statistic. A two-sided test with a p value of $<.05$ was used for significance testing. Higher Chi-square statistics indicate a stronger relationship between the response and variable. Items 1, 3, 4, 5, 6, 7, 9, 10, 13, 14, and 15 were examined using this method.

Table 7

Relationships Between Career Poll Responses and Gender (n = 288)

Question and Responses	Pearson Chi-square Statistic	p
1. Which factors will you consider in choosing your career?		
A. amount of job stress	.72	.40
B. salary and benefits	.91	.34
C. reasonable hours	.62	.43
D. work satisfaction	.12	.73
3. Which of these sources do you talk to about possible careers?		
A. family	.20	.65
B. friends	2.00	.16
C. teachers	8.30	.00
D. mentors	1.30	.25
4. When you dream about a career, what kinds of things do you imagine yourself doing?		
A. helping others	22.35	.00
B. being a manager	.59	.44
C. becoming wealthy	1.44	.23
D. being my own boss	2.69	.10
5. What steps have you taken to explore a possible career?		
A. talked to people in a job I like	.00	1.00
B. conversations with my relatives	.14	.71
C. web search of job requirements	10.85	.00
D. have not taken any steps so far	.64	.42
6. How much education is required to enter the career that you want? (only one response allowed)		
A. a high school diploma	8.51	.13
B. vocational or trade school		
C. 4 year college degree		
D. I do not know		

(table continues)

Table 7 (continued)

Questions and Responses	Pearson Chi-square Statistic	p
7. What advice have relatives or friends given you about career choice?		
A. choose a high paying job	.13	.72
B. get a job with low stress	.07	.79
C. find a job that is satisfying	2.73	.10
D. follow someone's footsteps	.08	.77
9. What career exploration help would you like from your school?		
A. guidance about web investigation of careers	1.33	.25
B. orientation nights at school with speakers from different jobs	1.09	.30
C. scheduled observations of people on the job	2.33	.13
D. chances to interview workers online/phone	3.37	.07
10. What experiences have influenced your career choice so far?		
A. characters on television, Internet, movies	.00	.97
B. talking to people who work in the field	.35	.56
C. advice from faculty at my school	.17	.68
D. advice from parent and other relatives	3.14	.08
13. What obstacles do you anticipate with your career choice?		
A. the job I want does not have a high salary	1.20	.27
B. the job I want calls for being gone a lot	.17	.68
C. the job I want requires higher education	.48	.49
D. the job I want means relocating my home	2.02	.16
14. When I think about a possible career exploration program at school		
A. I would like to have my parents participate with me	2.76	.10
B. I would like to attend these meetings with classmates	1.10	.29
C. I would like to come to these meetings by myself	.10	.75
D. I do not have any interest in being a participant	16.84	.00
15. How do you suppose the career you choose will change over time?		
A. there will be a need for continuous education	.83	.36
B. job requirements will stay much the same	.01	.95
C. demand for this work will increase salaries	.08	.77
D. status of people in this field is bound to grow	.87	.35

Research Question 1

How are student perceptions on search status of a career reported on the Career Exploration poll influenced by gender?

Items 8, 11, and 12 are in the group for search status. All items explore the students' search status in terms of a career.

Item 8: How often do you think about your future career?

An independent samples t-test was conducted to assess differences between males and females on the amount of time spent considering a future career. Results indicated no statistically significant differences based on gender on the amount of time spent considering a future career ($t_{(286)} = -1.87, p = .06$). Males had a mean score of 1.37 with a standard deviation of .60; females had a mean score of 1.25 with a standard deviation of .48.

Item 11: How stressful is it for you to choose a career?

An independent samples t-test was conducted to assess differences between males and females on the perceived stress associated with choosing a career. Results indicated no statistically significant differences based on gender on the perceived stress associated with choosing a career ($t_{(286)} = 1.79, p = .07$). Males had a mean score of 2.40 with a standard deviation of .99; females had a mean score of 2.20 with a standard deviation of .93.

Item 12: How certain are you about a particular career?

An independent samples t-test was conducted to assess differences between males and females on the perceived certainty on deciding upon a particular career. Results indicated statistically significant differences based on gender on the perceived stress associated with

certainness on deciding upon a particular career ($t_{(286)} = 2.65, p = .01$). Males had a mean score of 1.82 with a standard deviation of .77; females had a mean score of 1.60 with a standard deviation of .60.

Research Question 2

How are student perceptions on sources of influence in helping choose a career reported on the Career Exploration poll influenced by gender?

Items 2, 3, and 10 explore the source of influence in helping a student choose a career.

Item 2: How influential will relatives be in helping you choose a career?

An independent samples t-test was conducted to assess differences between males and females on the influence of relatives in helping them to choose a career. Results indicated no statistically significant differences based on gender on the influence of relatives helping to choose a career ($t_{(286)} = .44, p = .97$). These results suggest that responses of males and females were almost identical. Males had a mean score of 2.06 with a standard deviation of .99; females had a mean score of 2.07 with a standard deviation of 1.04.

Item 3: Which of these sources do you talk to about possible careers?

A total of 288 participants responded to the item related to consulting family about choosing a possible career. Twenty-nine males and 33 females did not select family as a source of conversation when choosing a career. One hundred and thirteen males and 113 females responded that they would consult family when choosing a career.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on consulting family when choosing a career. The Pearson Chi-square statistic was .20 with $df = 1$, $p = .65$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to consulting friends about choosing a possible career. Fifty-five males and 45 females did not select friends as a source of conversation when choosing a career. Eighty-seven males and 101 females responded that they would consult friends when choosing a career.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on consulting friends when choosing a career. The Pearson Chi-square statistic was 1.99 with $df = 1$, $p = .16$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to consulting teachers about choosing a possible career. Ninety-two males and 70 females did not select teachers as a source of conversation when choosing a career. Fifty males and 76 females responded that they would consult teachers when choosing a career.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on consulting teachers when choosing a career. The Pearson Chi-square statistic was 8.3 with $df = 1$, $p = .00$, indicating that responses were dependent upon gender. Females appear to be more likely to consult a teacher when choosing a career.

A total of 288 participants responded to the item related to consulting mentors about choosing a possible career. One hundred and ten males and 121 females did not select mentors as a source of conversation when choosing a career. Thirty-two males and 25 females responded that they would consult mentors when choosing a career.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on consulting mentors when choosing a career. The Pearson Chi-square statistic was 1.33 with $df = 1, p = .25$, indicating that responses were independent of gender.

(10) What experiences have influenced your career choice so far?

A total of 288 participants responded to the item related to characters on television, Internet, or movies influencing career choice. Ninety-six males and 99 females did not select characters on television, Internet, or movies as having an influence on career choice. Forty-six males and 47 females responded that characters on television, Internet, or movies do have an influence on career choice.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on characters on television, Internet, or movies influencing career choice. The Pearson Chi-square statistic was .00 with $df = 1, p = .97$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to talking with people who work in the field as influencing career choice. Sixty-eight males and 75 females did not select talking with people who work in the field as having an influence on career choice. Seventy-four males and 71 females responded that talking with people who work in the field does have an influence on career choice.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on talking with people who work in the field as influencing career choice. The Pearson Chi-square statistic was .35 with $df = 1, p = .56$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to talking with faculty at my school as influencing career choice. One hundred and ten males and 116 females did not select talking with faculty at my school as having an influence on career choice. Thirty-two males and 30 females responded that talking with faculty at my school does have an influence on career choice.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on talking with faculty at my school as influencing career choice. The Pearson Chi-square statistic was .17 with $df = 1$, $p = .68$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to talking to a parent or other relative as influencing career choice. Eighty males and 67 females did not select talking with a parent or other relative as having an influence on career choice. Sixty-two males and 79 females responded that talking with a parent or other relative does have an influence on career choice.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on talking with a parent or relative as influencing career choice. The Pearson Chi-square statistic was 3.14 with $df = 1$, $p = .08$, indicating that responses were independent of gender.

Research Question 3

How are student perceptions on things to aid in the search process of a career reported on the Career Exploration poll influenced by gender?

Items 5, 9, and 14 explore the perceptions of students on things to aid in the search process of choosing a career.

Item 5: What steps have you taken to explore a possible career?

A total of 288 participants responded to the item related to talking to people in a job of interest as a step that has been taken to explore a possible career. Sixty-nine males and 71 females did not select talking to people in a job of interest. Seventy-three males and 75 females responded that talking to people in a job of interest is a step taken to explore a possible career.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on talking with people in a job of interest as a step taken to explore a possible career. The Pearson Chi-square statistic was .00 with $df = 1, p = 1$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to conversations with relatives as a step that has been taken to explore a possible career. Seventy-eight males and 77 females did not select talking to relatives. Sixty-four males and 69 females responded that talking with relatives is a step taken to explore a possible career.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on talking with relatives as a step taken to explore a possible career. The Pearson Chi-square statistic was .14 with $df = 1, p = .71$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to searching the web for job requirements as a step taken to explore a possible career. Seventy-seven males and 51 females did not select that they had searched the web for job requirements. Sixty-five males and 95 females responded that they had searched the web for job requirements as a step in exploring possible careers.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on not searching the web for job requirements as a step in exploring career possibilities. The Pearson Chi-square statistic was 10.85 with $df = 1$, $p = .00$, indicating that responses were dependent upon gender.

A total of 288 participants responded to the item related to not taking any steps so far to explore a possible career. One hundred and twenty-two males and 130 females did not select that they had not taken any steps so far. Twenty males and 16 females responded that they had not taken any steps so far to explore a possible career.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on not taking any steps so far to explore a possible career. The Pearson Chi-square statistic was .64 with $df = 1$, $p = .42$, indicating that responses were independent of gender.

Item 9: What career exploration help would you like from your school?

A total of 288 participants responded to the item related to the want to receive guidance about web investigation of careers by their school. Ninety-three males and 86 females did not select that they want guidance about web investigation of careers from their school. Forty-nine males and 60 females responded that they would like to receive guidance about web investigation of careers from their school.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on the want to receive guidance about web investigation of careers by their school. The Pearson Chi-square statistic was 1.33 with $df = 1$, $p = .25$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to the want to attend orientation nights with speakers from different jobs at their school. Ninety-four males and 88 females did not select that they want to attend orientation nights with speakers from different jobs at their school. Forty-eight males and 58 females responded that they would like to attend orientation nights with speakers from different jobs at their school.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on the want to attend orientation nights with speakers from different jobs at their school. The Pearson Chi-square statistic was 1.09 with $df = 1$, $p = .30$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to the want to have scheduled observations of people on the job provided by their school. Seventy-five males and 64 females did not select that they want scheduled observations of people on the job provided by their school. Sixty-seven males and 82 females responded that they would like to have scheduled observations of people on the job provided by their school.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on the want to have scheduled observations of people on the job provided by their school. The Pearson Chi-square statistic was 2.33 with $df = 1$, $p = .13$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to the want to have chances to interview workers online or by phone provided by their school. One hundred and sixteen males and 106 females did not select that they want the chance to interview workers online or by phone provided by their school. Twenty-six males and 40 females responded that they would like to have chances to interview workers online or by phone provided by their school.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on the want to have chances to interview workers online or by phone provided by their school. The Pearson Chi-square statistic was 3.37 with $df = 1, p = .07$, indicating that responses were independent of gender.

Item 14: When I think about a possible career exploration program at school...

A total of 288 participants responded to the item related to having parents participate in career exploration. One hundred and fourteen males and 105 females did not select, "would prefer that parents participate in career exploration opportunities with them." Twenty-eight males and 41 females responded that they would like for parents to participate in career exploration opportunities with them.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on the want to have parents participate in career exploration opportunities with them. The Pearson Chi-square statistic was 2.76 with $df = 1, p = .10$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to having classmates participate in career exploration. Seventy-two males and 65 females did not select, "would prefer that classmates participate in career exploration opportunities with them." Seventy males and 81

females responded that they would like for classmates to participate in career exploration opportunities with them.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on the want to have classmates participate in career exploration opportunities with them. The Pearson Chi-square statistic was 1.10 with $df = 1, p = .29$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to having no one participate in career exploration with them. Ninety-four males and 94 females did not select they would prefer that no one participate in career exploration opportunities with them. Forty-eight males and 52 females responded that they would like for not one to participate in career exploration opportunities with them.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on the want to have no one participate in career exploration opportunities with them. The Pearson Chi-square statistic was .10 with $df = 1, p = .75$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to having interest in career exploration. One hundred and fourteen males and 140 females did not select they were not interested in participating in career exploration. Twenty-eight males and 6 females responded that they would like to participate career exploration opportunities.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on the want to participate in career exploration opportunities. The Pearson Chi-

square statistic was 16.84 with $df = 1, p = .00$, indicating that responses were dependent upon gender.

Research Question 4

How are student perceptions on knowledge about intended career reported on the Career Exploration poll influenced by gender?

Items 6, 13, and 15 explore the perceptions of students on the knowledge they possess about their intended career choice.

Item 6: How much education is required to enter the career that you want?

A total of 288 participants responded to the item related to student knowledge on how much education is required to enter into a desired career. Twenty males and 18 females responded that they did not know the amount of education required. Ten males and 4 females responded that a high school education is required for the desired career. Sixty seven males and 86 females responded that vocational or trade school is needed for the desired career. Thirty one males and 22 females responded that a 4-year college degree is needed for the desired career.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on knowledge about how much education is needed for the desired career. The Pearson Chi-square statistic was 8.51 with $df = 5, p = .13$, indicating that responses were independent of gender.

Item 13: What obstacles do you anticipate with your career choice?

A total of 288 participants responded to the item to a job not having a high paying salary as an obstacle to career choice. One hundred and eleven males and 106 females did not select

the lack of a high salary as an obstacle to career choice. Thirty-one males and 40 females responded that they believed that the lack of a high salary is an obstacle for career choice.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on low salary being an obstacle for career choice. The Pearson Chi-square statistic was 1.20 with $df = 1, p = .27$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to the amount of travel required for a job as being an obstacle for career choice. Ninety-nine males and 105 females did not select that travel would be an obstacle for career choice. Forty-three males and 41 females responded that they believed the amount of travel away from home to be an obstacle to career choice.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on the amount of travel required for a job as being an obstacle for career choice. The Pearson Chi-square statistic was .17 with $df = 1, p = .68$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to higher education required for a job as being an obstacle to career decision. Seventy-two males and 80 females did not select that higher education would be a factor in choosing a career. Seventy males and 66 females responded that they believed the amount of higher education needed for a career would affect their career choice.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on the amount of high education required for a job as an obstacle for career choice.

The Pearson Chi-square statistic was .48 with $df = 1$, $p = .49$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to relocating ones home as an obstacle to career choice. One hundred and seven males and 120 females did not select that relocation would be an obstacle for career choice. Thirty-five males and 26 females responded that they believed the relocation to be an obstacle to career choice.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on the effect relocation would have on career choice. The Pearson Chi-square statistic was 2.02 with $df = 1$, $p = .16$, indicating that responses were independent of gender

(15) How do you suppose the career you choose will change over time?

A total of 288 participants responded to the item related to feeling there will be a need for continuous education associated with their career choice. Eighty-five males and 95 females did not select they believed there would be a need for continuous education in their career of choice. Fifty-seven males and 51 females responded that they believed there would be a need for continuous education in their career of choice.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on the item of if a selected career would require continuous education. The Pearson Chi-square statistic was .83 with $df = 1$, $p = .36$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to feeling that job requirements will stay much the same with their career choice. Ninety-one males and 93 females did not

select they believed job requirements would stay much the same in their career of choice. Fifty-one males and 53 females responded that they believed that job requirements would stay the same in their career of choice.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on the item of if job requirements would stay the same with their career of choice. The Pearson Chi-square statistic was .01 with $df = 1$, $p = .95$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to the change in demand and increase of salaries in the job of their choice. Ninety-six males and 101 females did not select they believed there would be a change in demand that would affect salaries in their career of choice. Forty-six males and 45 females responded that they believed there would be a change in the demand that would increase salaries in their career of choice.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on the item of if there would be a change in demand that would affect salaries in their career of choice. The Pearson Chi-square statistic was .08 with $df = 1$, $p = .77$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to the status of individuals in their career of choice. Ninety-five males and 90 females did not select they believed there would be an increase in the status of individuals in the career of their choice. Forty-seven males and 56 females responded that they believed there would be an increase in the status of individuals in their career of choice.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on the item of if there would be an increase in the status of individuals in the career of their choice. The Pearson Chi-square statistic was .87 with $df = 1, p = .35$, indicating that responses were independent of gender.

Research Question 5

How are student perceptions on career values or goals reported on the Career Exploration poll influenced by gender?

Items 1, 4, and 7 explore the perceptions of the career values about their intended career choice.

Item 1: Which factors will you consider in choosing your career?

A total of 288 participants responded to the item related to considering job stress when choosing a career. One hundred and twelve males and 109 females did not select amount of job stress as a consideration when choosing a career. Thirty males and 37 females responded that the amount of job stress was a consideration when choosing a career.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on selecting or not selecting the amount of job stress when choosing a career. The Pearson Chi-square statistic was .72 with $df = 1, p = .40$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to considering salary and benefits when choosing a career. Thirty-nine males and 33 females did not select amount of job

stress as a consideration when choosing a career. One hundred and three males and 113 females responded that the amount of job stress was a consideration when choosing a career.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on selecting or not selecting the consideration of salary and benefits when choosing a career. The Pearson Chi-square statistic was .91 with $df = 1$, $p = .34$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to considering reasonable working hours when choosing a career. Ninety-one males and 87 females did not select reasonable working hours as a consideration when choosing a career. Fifty-one males and 59 females responded that reasonable working hours was a consideration when choosing a career.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on selecting or not selecting the consideration of reasonable working hours when choosing a career. The Pearson Chi-square statistic was .62 with $df = 1$, $p = .43$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to considering work satisfaction when choosing a career. Sixty-nine males and 68 females did not select work satisfaction as a consideration when choosing a career. Seventy-three males and 78 females responded that work satisfaction was a consideration when choosing a career.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on selecting or not selecting work satisfaction when choosing a career. The Pearson Chi-square statistic was .12 with $df = 1$, $p = .73$, indicating that responses were independent of gender.

Item 4: When you dream about a career, what kinds of things do you imagine yourself doing?

A total of 288 participants responded to the item related to helping others in a career. Eighty-one males and 43 females did not select they dream about helping others in a career. Sixty-one males and 103 females responded that they do dream of helping others in a career.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on “the want to help others in a career.” The Pearson Chi-square statistic was 22.35 with $df = 1, p = .00$, indicating that responses were dependent upon gender.

A total of 288 participants responded to the item related to being a manger in a career. One hundred and nineteen males and 127 females did not select they dream about being a manager in a career. Twenty-three males and 19 females responded that they do dream of being a manager in a career.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on the want to be a manger in a career. The Pearson Chi-square statistic was .59 with $df = 1, p = .44$, indicating that responses were not dependent of gender.

A total of 288 participants responded to the item related to becoming wealthy in a career. Sixty one males and 73 females did not select they dream about being wealthy in a career. Eighty one males and 73 females responded that they do dream of being wealthy in a career.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on the want to be wealthy in a career. The Pearson Chi-square statistic was 1.44 with $df = 1, p = .23$, indicating that responses were not dependent of gender.

A total of 288 participants responded to the item related to being my own boss in a career. Eighty-one males and 97 females did not select they dream about being their own boss in a career. Sixty-one males and 49 females responded that they do dream of being their own boss in a career.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on the want to be their own boss in a career. The Pearson Chi-square statistic was 2.69 with $df = 1, p = .10$, indicating that responses were not dependent of gender.

Item 7: What advice have relatives or friends given you about career choice?

A total of 288 participants responded to the item related to relatives or friends giving the advice of choosing a job with a high paying salary. Seventy-five males and 74 females did not select that friends or family gave the advice of choosing a job with a high paying salary. Sixty-seven males and 72 females responded that family or friends had given the advice of choosing a job with a high paying salary.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on relatives or friends giving the advice of choosing a job with a high paying salary. The Pearson Chi-square statistic was .13 with $df = 1, p = .72$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to relatives or friends giving the advice of choosing a job with low stress. One hundred and thirteen males and 118 females did not select that friends or family gave the advice of choosing a job with low stress. Twenty-nine males and 28 females responded that family or friends had given the advice of choosing a job with low stress.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on relatives or friends giving the advice of choosing a job with low stress. The Pearson Chi-square statistic was .07 with $df = 1, p = .79$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to relatives or friends giving the advice of choosing a job that is satisfying. Forty males and 29 females did not select that friends or family gave the advice of choosing a job that is satisfying. One hundred and two males and 117 females responded that family or friends had given the advice of choosing a job that is satisfying.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on relatives or friends giving the advice of choosing a job that is satisfying. The Pearson Chi-square statistic was 2.73 with $df = 1, p = .10$, indicating that responses were independent of gender.

A total of 288 participants responded to the item related to relatives or friends giving the advice of choosing a job that would follow in someone's footsteps. One hundred and thirty males and 135 females did not select that friends or family gave the advice of choosing a job that would follow in someone's footsteps. Twelve males and 11 females responded that family or friends had given the advice of choosing a job that would follow in someone's footsteps.

A Pearson Chi-square test was conducted to assess independence of responses for males and females on relatives or friends giving the advice of choosing a job that would follow in someone's footsteps. The Pearson Chi-square statistic was .08 with $df = 1, p = .77$, indicating that responses were independent of gender.

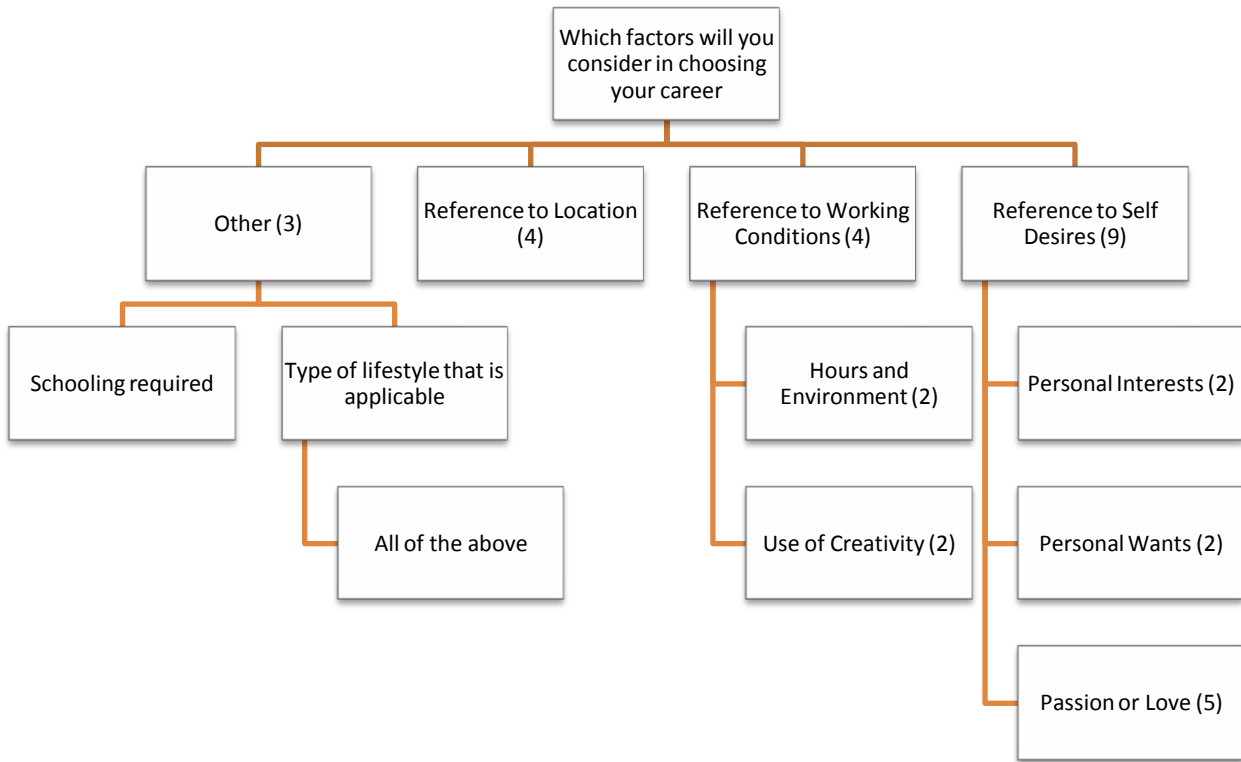
Qualitative Data Results

Items 1, 3, 4, 5, 6, 7, 9, 10, 13, 14, and 15 on the Career Exploration Poll allowed students to submit open-ended responses to provide a more in-depth explanation of their individual perceptions. Upon completion of polling, the actual responses to these open-ended items were compiled into an Excel document for analysis. The concept maps on the following pages report general areas of responses that may be compared to the quantitative data for the development of patterns that can be aligned with the multiple choice responses. When compared to the multiple choice responses given for each item, there were frequent similarities among the open-ended responses.

When the open-ended responses were compared to the multiple choice responses, there were eleven items which demonstrated parallels with the open-ended response items. It is demonstrated through this that students exhibited consistency with responses throughout the polling process. An observation should be made that on item 4 there were 16 open-ended responses stating that personal satisfaction was what was looked for in a career. This response was not included in a category that was available in the multiple choice responses.

This type of information can and should be used by administrators and the school improvements teams to understand the perceptions of students in the school improvement process. Relationships in student responses could indicate influences and thought processes of the students in relation to career exploration. Therefore, the similarities in the responses to multiple choice items and open-ended items could be a strong indicator of specific areas that need to be addressed.

Item 1:

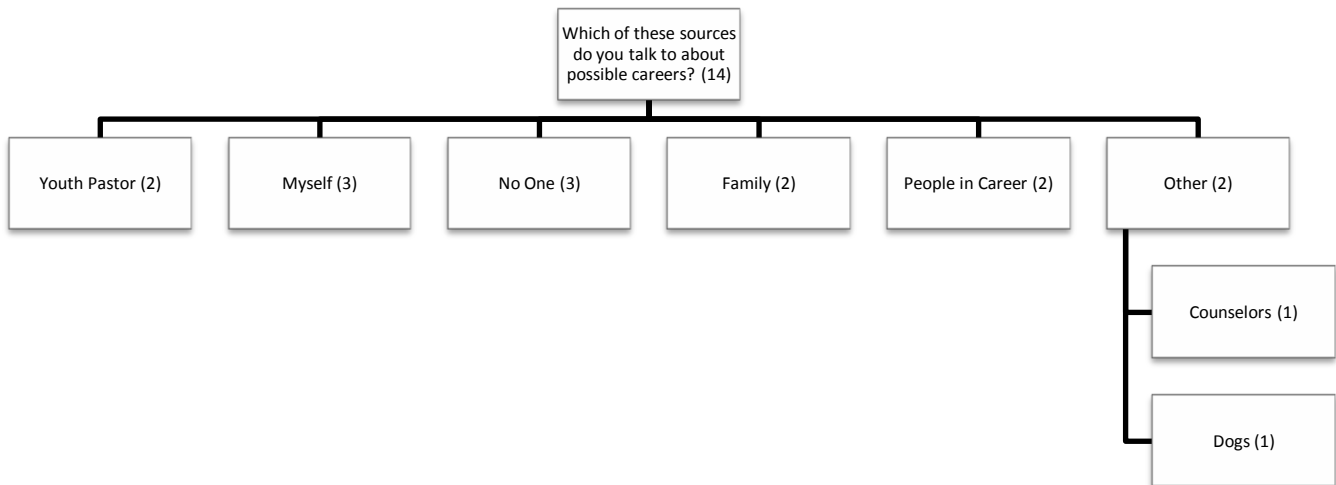


There were four general categories prevalent in student responses to item 1: (1) reference to self, (2) reference to working conditions, (3) reference to location, and (4) other. Within the reference to self category, students gave answers such as “something I love to do”, “personal interests”, “if it is a job that I want and will enjoy”, and “do I love what I will be doing”. Within the reference to working conditions category, students gave answers such as “work environment”, and “fun and creative”. Within the reference to location category four students gave the same response of “location”. Within the other category students gave the responses of “all of the above”, “type of lifestyle that is applicable”, and “schooling required”.

The response of “work satisfaction” from the multiple choice items overlapped ideas associated with the reference to self desires category drawn from the Excel spreadsheet. The

multiple choice answers “reasonable hours” and “salary and benefits” also overlapped main ideas presented in the reference to working conditions. Both of these results show consistency in answers provided by students and multiple choice selections.

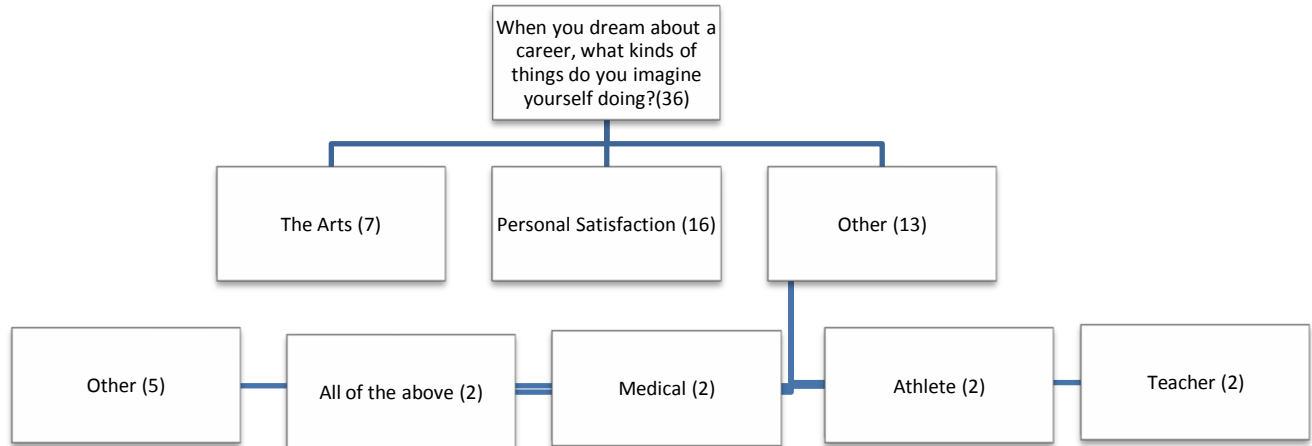
Item 3:



There were six general categories prevalent in student responses to item 3: (1) youth pastor, (2) myself, (3) no one, (4) family, (5) people in career, and (6) other. Within the other category, students gave answers such as “counselors” and “dogs”.

The response of “mentors” from the multiple choice items overlapped ideas associated with “youth pastor” drawn from the Excel spreadsheet. Family was both a category in multiple choice response and qualitative analysis. Both of these results show consistency in answers provided by students and multiple choice selections.

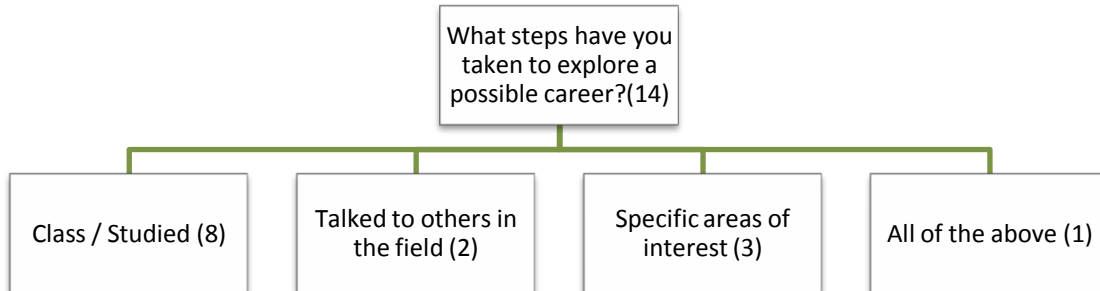
Item 4:



There were three general categories prevalent in student responses to item 4: (1) the arts, (2) personal satisfaction, and (3) other. Within the arts category, students gave answers such as “music producer” and “artistry”. Within the personal satisfaction category, students gave answers such as “making people happy”, and “making a difference”. Within the other category students responded with “athlete”, “medical”, “teacher”, “all of the above”, and “other”.

There was little overlap with answers due to the fact that students listed specific careers of interests in the “other” response box. Multiple choice response items provided were general ideas about unspecific careers.

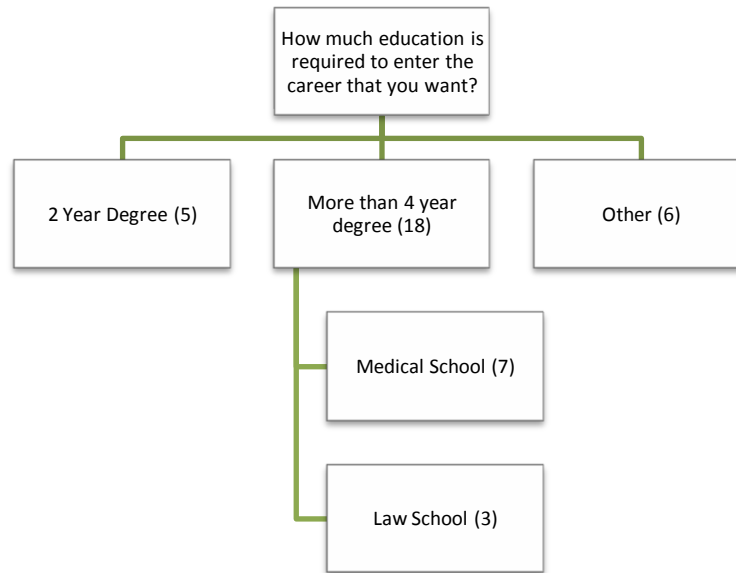
Item 5:



There were four general categories prevalent in student responses to item 5: (1) class/studied, (2) talked to others in the field, (3) specific areas of interest, and (4) all of the above. Within the class/studied category, students gave answers such as “took a class about it” and “studied about it”.

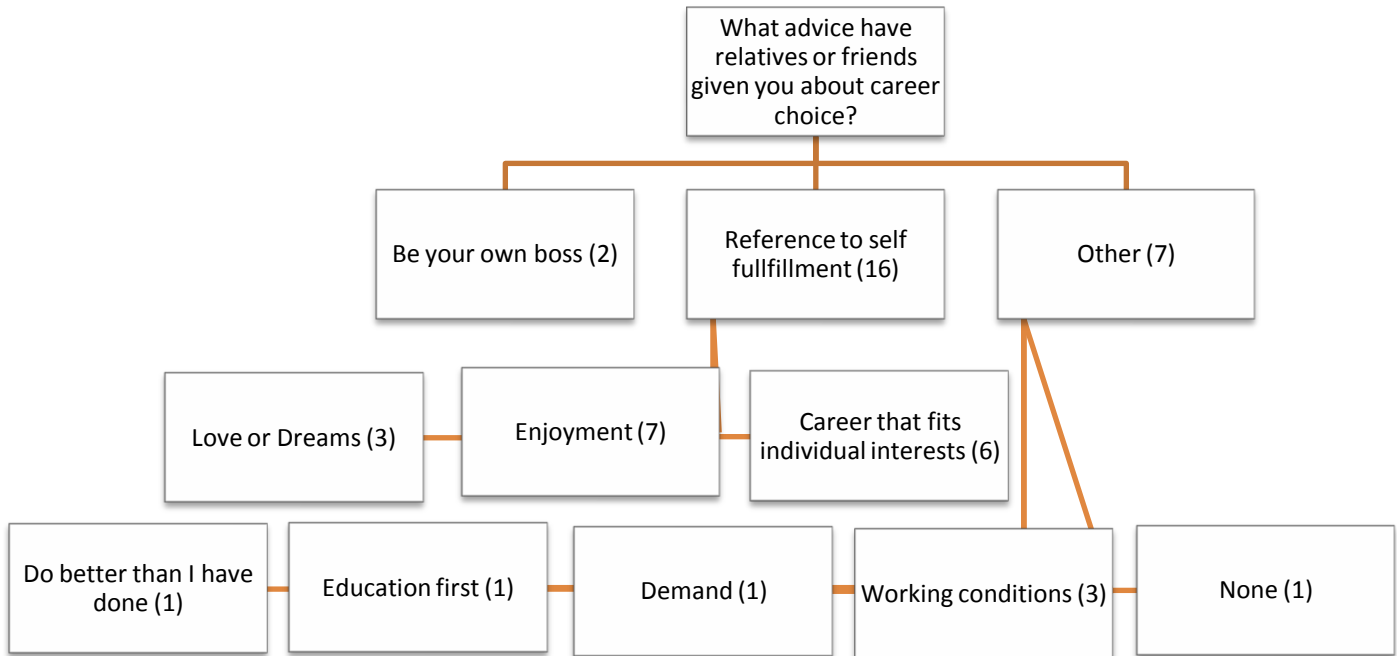
There was overlap in the multiple choice response “talked to people in a job I like” and the other responses of “talked to others in the field”. These results show consistency in answers provided by students and multiple choice selections.

Item 6:



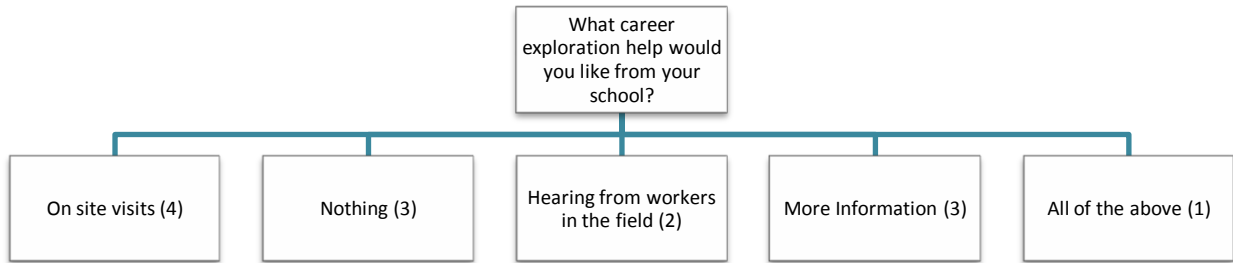
There were three general categories prevalent in student responses to item 6: (1) 2 year degree, (2) more than 4 year degree, and (3) other. The multiple choice response “4-year college degree showed some overlap with open-ended responses categorized as “more than 4 year degree”. However, all 18 responses in that category listed other types of schooling needed in addition to the 4 year degree. These included “law school” and “medical school”.

Item 7:



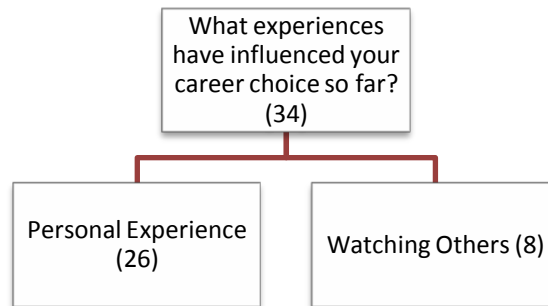
There were three general categories prevalent in student responses to item 7: (1) be your own boss, (2) reference to self fulfillment, and (3) other. Within the be your own boss category students gave the answer “be your own boss”. Within the reference to self fulfillment category, students gave answers such as “a job I will enjoy doing”, “do something you like”, “get a job you are interested in” and “make sure you are happy”. Within the other category students gave the responses of “none”, “work hard”, “get your education first”, “do better than what I have done”, “do something indoors and at an office”, “not dangerous”, and “get in a career with high demand”.

Item 9:



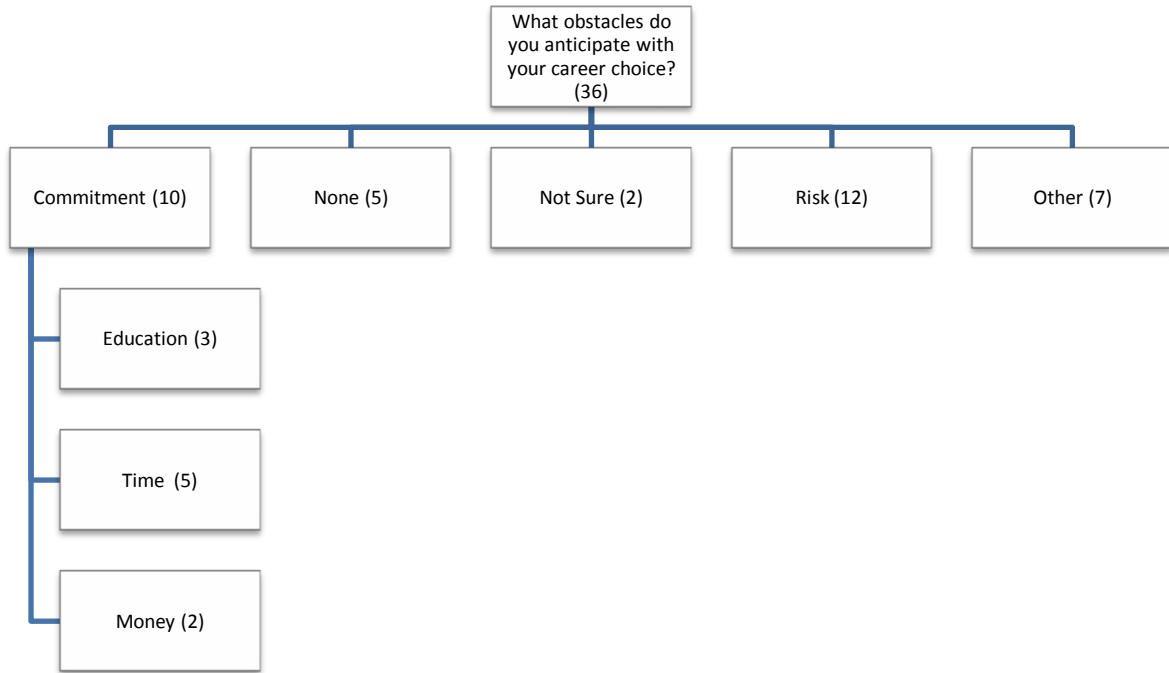
There were five general categories prevalent in student responses to item 9: (1) on site visits, (2) nothing, (3) hearing from workers in the field, (4) more information, and (5) all of the above. Within the onsite visits category students gave answers such as “field trips to the job of choice”, and “going to a hospital and observing”. Within the nothing category, students gave answers such as “nothing” and “none”. Within the hearing from workers in the field category students gave responses such as “speakers” and “talk to art teachers and other artists”. Within the more information category students gave answers such as “information on different jobs in the world” and “a career fair”. One student gave the response “all of the above”.

Item 10:



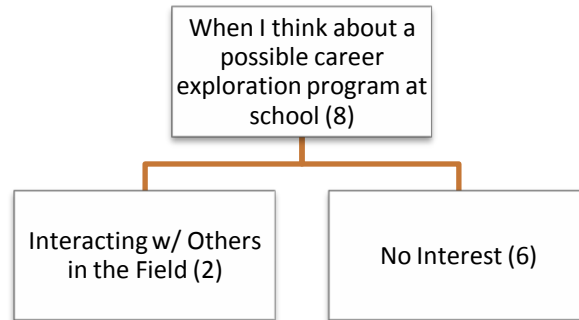
There were two general categories prevalent in student responses to item 10: (1) personal experience and (2) watching others. Within the personal experience category, students gave answers such as “my own thoughts”, “personal interests”, “personal choice”, and “myself”. The multiple choice response “talking to others in the field” overlaps ideas presented in the “other” responses categorized into “watching others”. This shows alignment amongst answers. However, multiple choice responses do not present the idea of personal experience. There were 26 students who responded that personal experience was their main influence on career choice so far.

Item 13:



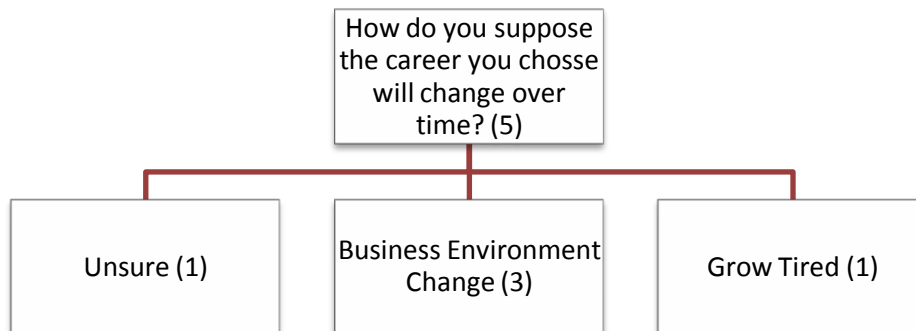
There were five general categories prevalent in student responses to item 1: (1) commitment, (2) none, (3) not sure, (4) risk, and (5) other. Within the commitment category, students gave answers such as “working 7 days a week” and “long hours”. There was little overlap in ideas presented in the multiple choice answers and the “other” responses given.

Item 14:



There were two general categories prevalent in student responses to item 1: (1) interacting with others in the field and (2) no interest. There was overlap with the “no interest” response present in both the open-ended responses and multiple choice responses.

Item 15:



There were three general categories prevalent in student responses to item 1: (1) unsure, (2) business environment change, and (3) grow tired. Ideas presented in the multiple choice response of “demand for this job will increase” overlapped ideas presented in the “business environment change” category.

Summary of Qualitative Findings

There are many similarities between open-ended response items and multiple choice items in the career exploration poll. In item number one the response of “work satisfaction” from the multiple choice items overlapped ideas associated with the reference to self desires category drawn from the Excel spreadsheet. The multiple choice answers “reasonable hours” and “salary and benefits” also overlapped main ideas presented in the reference to working conditions. Both of these results show consistency in answers provided by students and multiple choice selections. In item number three, the response of “mentors” from the multiple choice items overlapped ideas associated with “youth pastor” drawn from the Excel spreadsheet. Family was both a category in multiple choice response and qualitative analysis. Both of these results show consistency in answers provided by students and multiple choice selections. In item number five there was overlap in the multiple choice response “talked to people in a job I like” and the other responses of “talked to others in the field”. These results show consistency in answers provided by students and multiple choice selections. In item ten the multiple choice response “talking to others in the field” overlaps ideas presented in the “other” responses categorized into “watching others”. This shows alignment amongst answers. However, multiple choice responses do not present the idea of personal experience. There were 26 students who responded that personal experience was their main influence on career choice so far. In item fourteen there was overlap with the “no interest” response present in both the open-ended responses and multiple choice responses. In item fifteen ideas presented in the multiple choice response of “demand for this job will increase” overlapped ideas presented in the “business environment change” category. The qualitative data provide further insights into the perceptions of students on career exploration.

CHAPTER V. DISCUSSION

Introduction

The purpose of the study was to further the knowledge base in the use of polling to engage student voice by examining the degree to which their perceptions differ based on gender. In addition, the purpose was also to examine students' perceptions in the area of career exploration. In summarizing the study all the various influences within the school population as related to gender pertaining to the career exploration poll was addressed. The review of literature revealed a deficit in research in the area of student opinion polling used to gauge student opinion in the area of career exploration.

An independent samples t-test was used to analyze the data in items with scale item responses. These items dealt with the influence of relatives on career decisions, how often one thinks about their future career, and how stressful is it for one to choose a future career. A Pearson Chi-square was used to analyze items with nominal item responses. This analysis was used due to the fact that the student had the ability to answer multiple choices under each item with the exception of item 6. The purpose of the research was to use a developed student on-line polling system to measure the degree to which students have explored available career opportunities and the influences upon their thoughts. Additionally, the research examined differences within and between the variable of gender. The direct input from students can be used by the school in the continuous improvement plan.

Research Questions

1. How are student perceptions on search status of a career reported on the Career Exploration poll influenced by gender?
2. How are student perceptions on sources of influence in helping choose a career reported on the Career Exploration poll influenced by gender?
3. How are student perceptions on things to aid in search process of a career reported on the Career Exploration poll influenced by gender?
4. How are student perceptions on knowledge about intended career reported on the Career Exploration poll influenced by gender?
5. How are student perceptions on career values or goals reported on the Career Exploration poll influenced by gender?

Implications for School Wide Improvement

Poll findings reveal that parents are a powerful source of influence on career exploration. It is also suggested through the research that schools consider finding new ways to collaborate with families. Appendix 18 highlights items that are of extreme high or extreme low response rate.

Item 2 indicates that relatives are a source of influence on career selection for 89% of students. Item 3, the extent of student reliance on relatives for processing information about careers, is reinforced by this item indicating that family influence (78%) exceeds other sources (friends 65%; teachers 44%).

The influence of home and school could be more unified with the periodic use of homework to motivate parent-child conversations on issues related to careers and work environment. Item 5 is related to what steps have been taken to explore a possible career.

The most prevalent response was web search of job requirement (55%). It is suggested that counselors at this school formulate a list of the most valuable web sites for students to visit augmented by explanations on unique aspects of each site. For students who lack in self-starting skills, such a resource could motivate searching.

Item 6 is related to how much education is required for the career that you want?

Responses to this item reflect lack of knowledge. Although 53% report they need a college degree, only 5% view vocational or trade school as appropriate. One implication is to ensure that school trips to orient students about possible future educational opportunities should include visits to trade schools and vocational sites instead of colleges only. Students seem simply unaware of the careers that they could pursue in such areas. If the responses of these students were to represent adult society there would not be enough electricians, carpenters, plumbers, air conditioning workers, auto repair, electronic technicians because too few chose education for such employment. There should also be consideration about how the school provides career education for special education (6 million in U.S.) and slow learners (8 million in U.S.).

Item 8 is related to how often one thinks about a future career. Almost all students, 96% ,indicated often and sometimes. This underscores the priority that they attach to this aspect of their future. Conversations are needed with teachers at school. It seems important to recognize that doubt, anxiety, worry, and anticipation are a combination of the emotions these students feel while thinking about their future career.

Item 9 is listed as what career exploration help would you like from your school? The most prevalent response was scheduled observations of people on the job (51%). This also implicates item 7 where 76% of the students have been advised by friends and relatives to

find a satisfying job. The best way to find out the satisfactions of a job is to speak directly with people in the desired positions to get a balanced view.

Item 12 is related to how certain one is about a particular career. Thirty-nine percent have decided definitely about the job they want. For the 61% who have not there is a need to know that indecision is a norm in high school but should not prevent more exploration or advanced education. Since over half of college students change majors, being certain early may instill confidence but openness to other options is a good idea. Premature choice is a mistake many adults admit about their career. If they had the chance to go back and do it over, many would choose differently. Here again, monthly career days where a few minutes in each class is devoted to Q & A about careers is a good idea.

Teachers have been identified as an important influence by 44% of students and their friends by 65% (item 3) so this is a good forum to merge impressions by peers and adult mentors. By devoting some time in all or many classes once a month it is possible to address an issue that implicates the future of every student in school. It is difficult to say that about many topics. The topic also implicates finding ways to ensure that parents are as well informed as they can be given their importance as advisors.

Summary of Findings

All summaries directly pertain to items addressed in the findings section of the dissertation; some additional findings may be pertinent to the overall difference or similarities within each area. All 15 multiple choice items on the career exploration poll were addressed in this study. These items relate to student career exploration thoughts and influences.

Gender

The data for items 1, 2, 3, 6, 7, 8, 9, 10, 11, 13, and 15 show no significant difference in all possibilities of response. Item 4 (When you dream about a career, what kinds of things do you imagine yourself doing?) showed statistical significance for gender response to the A (helping others) response. The Pearson Chi-square statistic was 22.4 with $df = 1, p = .00$. Females were suggested to be more likely to imagine themselves in a career helping others. Item 5 (What steps have you taken to explore a possible career?) showed statistical significance for gender response to the C (web search of job requirements) response. The Pearson Chi-square statistic was 10.85 with $df = 1, p = .001$. Females were suggested to be more likely to use the Internet to search job requirements. Item 12 (How certain are you about a specific career?) showed statistical significance for responses based on gender ($t_{(286)} = 2.65, p = .01$). Females were suggested to be more confident in the decision of a future career. Item 14 (When I think about a possible career exploration program at school) showed statistical significance for gender response to the D (I do not have any interest in being a participant) response. The Pearson Chi-square statistic was 16.84 with $df = 1, p = .00$. Males were suggested to be more likely to not be interested in career exploration opportunities at school.

Conclusions

Gender

Gender has little implications in determining student exploration thoughts and influences. Most items were relatively close in relation to percentages of responses. Though females are more likely to spend more time thinking about their future career the difference in responses were not statistically significant. Though females found choosing a future career to be more

stressful than males, the results were not statistically significant. Though more females desired the chance to interview current workers in a profession the results were insignificant.

The research suggests that females imagine a career in helping others more often than do males. Providing course work focusing on service related career options could benefit females. By examining career options in service related work, females can become more aware of how to put their desires into action and what career path to begin to follow. Females should be provided with options to address their desire to help others.

The research suggests that females are more certain about their decision to pursue a certain future career. Providing career exploration focused on individual strengths and weaknesses could benefit both genders. This type of exploration could provide insight into many career options students have not considered. This could cause females to rethink their decisions as well as provide males with more ideas to help them decide upon a career path.

It is also suggested that females are more likely to search the web for information about possible careers than do males. Providing Internet driven lessons such as Internet scavenger hunts and online research driven assignments could provide males, who are more likely to have not searched the Internet for career information, with the experience of using the Internet as a resource to search for career information. Females are more likely to do it on their own. Males need to become aware that information is available on the Internet about career and learn to utilize it as a resource.

Finally, it is also suggested that males are more likely to have no interest in a career exploration program at school. Despite having no interest, these opportunities should be provided for all students. Possible reasons for lack of male interest could be lack of

opportunities that support male career interests. Doing a survey of male career interest at the school and catering school career exploration opportunities directly related to male interest could spark male involvement and desire for school provided career exploration opportunities.

Overall finding suggest that it can be implied that gender is not a major issue for schools when addressing the type of career exploration provided to the students. Despite significant differences in 3 areas of career exploration, there is a lack in significance when addressing the variable of gender. Possible action is suggested for the areas of significance to address the differences in gender responses.

Implications for Educational Leadership and School Community

The career exploration poll was administered at a rural, central Alabama high school. Results were used in the schools continuous improvement plan. This study analyzed the influence of gender upon career exploration influences and ideas. Though ideas presented on the career exploration poll were used in the continuous improvement plan there was a lack of communication amongst the stake holder's of the community. There was limited conversation amongst teachers, administrators, students, and parents about the outcomes. There is a need for more open access and dialogue about the poll findings rather than in-house discussion only.

Limitations

This study sought to explore student thoughts about career exploration and the influences upon those thoughts. This poll was administered in March. There was no time to include the results of this poll in the current year's continuous improvement plan. Results will be implemented in the following school year's continuous improvement plan.

The poll was administered during one complete school day. During the course of these days there was time students could have discussed the items on the poll. Due to the number of computers with Internet access available and the number of students, the poll was not administered to the entire sample during the same time frame. The discussion amongst students could have led to influences other than those addressed by the poll.

This study is generalizable only to the population of the school in which it was administered. It cannot be generalized to the region, state, or country in which the school is located. Factors such as demographic differences, community, and life experiences within the school as opposed to other schools, play a major role in this. The purpose of the poll was not to be generalized to the region, state, or county of where the poll was administered. The original purpose was to only be generalizable to the school population for use for the specific school's continuous improvement plan.

Recommendations

Recommended actions for improving the polling process

To maximize the potential of the career exploration poll, this study recommends students be informed about the importance of using their opinions and thoughts in the continuous improvement process. This study also recommends follow up to be done with the student body.

Recommendations for Practices

1. Information – provide students, parents, and other teachers about the importance of the poll through an assembly or letter.

2. Consistency – have all students take the poll with the same administrator. Therefore they are given the same information.
3. Results – give results of the polls to students individually and provide them with information on how their ideas will change the school itself.

Recommendation for Further Studies

This study was conducted in a rural, central Alabama high school. One recommendation would be to administer the poll to students in a higher income school as well as a Title 1 school. This would allow the researcher to look at the effects of the community on career exploration thoughts and influences.

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Appendix 1

Internet Polling Entry

LearningPolls.org | Career Exploration Poll

The purpose of this poll is to find out how students feel about career exploration experiences and determine ways schools and families can support this aspect of education. Teenagers are the future work force so they naturally think about kinds of jobs that would be most appealing and appropriate for them.

In order to access the poll, please enter the password you were provided:

[\[About LearningPolls.org\]](#) [\[Home\]](#) [©2006 by P. Strom and R. Strom]

Appendix 2

Internet Career Poll

LearningPolls.org | Career Exploration Poll

The purpose of this poll is to find out how students feel about career exploration experiences and determine ways schools and families can support this aspect of education. Teenagers are the future work force so they naturally think about kinds of jobs that would be most appealing and appropriate for them.

Directions: For each item, select the answer(s) that indicate how you feel. In some cases, you may select more than one answer. If an answer you want to give is not listed, write it down on the line marked 'other.' Your responses are anonymous and may be combined with those of other students at your school in a report to students, faculty, and parents.

1. Which factors will you consider in choosing your career

- amount of job stress
- salary and benefits
- reasonable hours
- work satisfaction
- other:

2. How influential will relatives be in helping you choose a career?

- very influential
- some influence
- slight influence
- not an influence

3. Which of these sources do you talk to about possible careers?

- family
- friends
- teachers
- mentors
- other:

4. When you dream about a career, what kinds of things do you imagine yourself doing?

- helping others
- being a manager
- becoming wealthy
- being my own boss
- other:

5. What steps have you taken to explore a possible career?

- talked to people in a job I like
- conversations with my relatives
- web search of job requirements
- have not taken any steps so far
- other:

6. How much education is required to enter the career that you want?

- a high school diploma
- vocational/trade school
- 4-year college degree
- I do not know
- other:

7. What advice have relatives or friends given you about career choice?

- choose a high paying job
- get a job with low stress
- find a job that is satisfying
- follow someone's footsteps
- other:

8. How often do you think about your future career?

- often
- sometimes
- seldom
- never

9. What career exploration help would you like from your school?

- guidance about web investigation of careers
- orientation nights at school with speakers from different jobs
- scheduled observations of people on the job
- chances to interview workers online/ phone
- other:

10. What experiences have influenced your career choice so far?

- characters on television, Internet, movies
- talking to people who work in the field
- advice from faculty at my school
- advice from parent and other relatives
- other:

11. How stressful is it for you to choose a career?

- a lot of stress
- some stress
- a little stress
- no stress

12. How certain are you about a particular career?

- I have definitely decided what job I want
- I am considering several career options
- I have no idea what career would be best
- I am not ready to explore possible careers

13. What obstacles do you anticipate with your career choice?

- the job I want does not have a high salary
- the job I want calls for being gone a lot
- the job I want requires higher education
- the job I want means relocating my home
- other:

14. When I think about a possible career exploration program at school

- I would like to have my parents participate with me
- I would like to attend these meetings with classmates
- I would like to come to these meetings by myself
- I do not have any interest in being a participant.
- other:

15. How do you suppose the career you choose will change over time?

- there will be a need for continuous education
- job requirements will stay much the same
- demand for this work will increase salaries
- status of people in this field is bound to grow
- other:

Select your grade level, gender, ethnicity, and age.

16. My grade level is:

- 9
- 10
- 11
- 12

17. My gender is:

- Female
- Male

18. My ethnicity is:

- Asian
- Black
- Hispanic
- Native American
- White
- Other

19. My age is:

- 14
- 15
- 16
- 17
- 18
- 19

Appendix 3

Polling Steps for Students

The purpose of this poll is to find out how students feel about career exploration experiences and determine ways that your school can further support this aspect of education. You are the future work force so you naturally are beginning to think about the kinds of jobs that would be most appealing and appropriate. Your responses are anonymous and may be combined with those of other students at your school in a report to students, faculty, and parents.

1. Open the “Career Exploration Poll” file on this computer’s desktop. This file has an active link you press to instantly bring you to the Poll.

2. Type in the entry password: XXXXX

Then please respond to all items on the poll.

*For each poll item, select the answer(s) that indicate how you feel. Many items (ones with square options), you may select more than one answer.

*Some items (ones with circle options), only allow for one answer to be chosen.

*If an answer you want to give is not listed, type it on the line marked 'other.'

3. Near the end of this poll make sure to type in your SCHOOL CODE: XXXX

4. Press Submit button at the very end of the poll.

Your school thanks you for making your views known!!!

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Appendix 4

Student Response Coding Item 1

1. Which factors will you consider in choosing your career

- amount of job stress
- salary and benefits
- reasonable hours
- work satisfaction
- other:

job doing what i want to do
If it is something I am passionate about.
job habits and resonable hours
something i love to do
a nurse i love help others
personal interest
personal interest
Location
whether this is something i enjoy doing
Location
do i love what i will be doing
work environment
Location
fun and creative
all of the above
If it is a job that i want and will enjoy.
Location
type of lifestyle that is applicable
schooling required
Creative

Codes

Reference to self desires
Reference to working conditions
Reference to location
Other

Appendix 5

Student Response Coding Item 3

3. Which of these sources do you talk to about possible careers?

- family
- friends
- teachers
- mentors
- other:

Youth Pastor
friends & family
Myself
Myself
Pastor and Youth Pastor
people who work day to day with the career I want.
no one
Nobody
no one
my dogs
Counselors
Grandparents
The people in the career
Myself

Codes

Youth Pastor
Myself
No One
Family
People in Career
Other

Appendix 6

Student Response Coding Item 4

4. When you dream about a career, what kinds of things do you imagine yourself doing?

- helping others
- being a manager
- becoming wealthy
- being my own boss
- other:

Artistry

Traveling

enjoying my job

music producer

Creating my own hours

Military

Teaching

being a producer

dealing with sports

making people happy

making a difference

being satisfied about what i am doing

Music

having security/stability

Athlete

having fun

being a vet

Enjoying my job; having fun doing what I do.

making a difference and doing something BIG

become in the best helicopter pilot

culinary arts

enjoying what i do

being a doctor

macking a beter community

Painting, drawing, and other art stuff

being happy

repetitive, yet easy tasks

all of the above

defending people.

all of the above.
a challenging job
finding justice
teaching children
soccer player
Having Satisfaction
Painting, drawing, and other art stuff
Entrepreneur

Codes

The Arts

Athlete

Personal Satisfaction

Medical

Other

Appendix 7

Student Response Coding Item 5

5. What steps have you taken to explore a possible career?

- talked to people in a job I like
- conversations with my relatives
- web search of job requirements
- have not taken any steps so far
- other:

took a class about it
participated in college programs
talked to recruiters
involved in a junior program
looked at colleges with the career options I want
Training
studied about it
Talking to people that has the same career I
want
work on my drawing and done a mural or two
play soccer
bought supplies
Internship
looked at at taking classes in college
all the 1st three

Codes

Class / Studied

Talked to others in field

Specific areas of interest

All of the above

Appendix 8

Student Response Coding Item 6

6. How much education is required to enter the career that you want?

- a high school diploma
- vocational/trade school
- 4-year college degree
- I do not know
- other:

more than a 4 year college degree
Medical school
8-year college degree
4 year college degree and medical school
2-year college degree
how ever much education you would like.
2 year degree
PhD
4 or more years
Specialized Schooling - Veterinarian School
Seminary
2 year degree
4 years of college degree 4 years of medical school
masters degree
10 + more years in college
more than 4 years (Ph.D)
a diploma and at least one year of college
basically depends
None
about 8 years of college
college & medical school
4 year college degree + 3 year law school
6 year college degree
Law school, high school, and 4 year college
get drafted by a pro team
Medical Degree
2-year college degree
Requires Medical School also.
associates degree

Codes

Associates Degree / 2 years

More than 4 year degree

Other

Appendix 9

Student Response Coding Item 7

7. What advice have relatives or friends given you about career choice?

- choose a high paying job
- get a job with low stress
- find a job that is satisfying
- follow someone's footsteps
- other:

NOTE

be your own boss

find a job that you like to do

find a career that fits me

do what i think is best

a job i will enjoy doing

get a job you are interested in

make sure your happy

get a job you love

finding a job that best suits me

follow your dreams

do what feels right

Work Hard

do something you like

get your education first

do better than what i have done

do something indoors at an office

do something that you will enjoy and that is fun

Be your own boss.

one that i will like

do something you love

not dangerous

get in a carrer with high demand

get a job that i will enjoy

do something that you will enjoy and that is fun

Codes

Be your own boss

Reference to self fulfillment

Other

Appendix 10

Student Response Codes Item 9

9. What career exploration help would you like from your school?

- guidance about web investigation of careers
- orientation nights at school with speakers from different jobs
- scheduled observations of people on the job
- chances to interview workers online/ phone
- other:

field trips to the job of choice

Information on different jobs in the world

Scouting

Speakers

Nothing

going to a hospital and observing

I would like to visit people in the career fields

A class of apprenticeship

talk to art teachers and other artist

None

a career fair

None

all of the above

Codes

Nothing

On site visits

Hearing from workers in the field

More information

All of the above

Appendix 11

Student Response Coding Item 10

10. What experiences have influenced your career choice so far?

- characters on television, Internet, movies
- talking to people who work in the field
- advice from faculty at my school
- advice from parent and other relatives
- other:

the way they make cars today
my aunt being a nurse
My love for infants and small children.
Friends
learning about the career through projects
wanting to help people
Myself
advice from my doctor
the motivation to succeed
personal interest
My interests
Myself
Having classes that specialize in the career field
playing sports
personal experience
personal choice
observing the people in the field
Travel Ball
things i do
Love of computers/games
Speakers
The complexity and awe of video games
real live results and stories
Observations
just i following my dream
my own thoughts
creativity and imagination
experience as a student
drawing..looking at interior designs online

from experience
extreme interest
personal experience
my love for the field
experiencing what they do

Codes

Personal Experience / Interests

Watching Others

Appendix 12

Student Response Coding Item 13

13. What obstacles do you anticipate with your career choice?

- the job I want does not have a high salary
- the job I want calls for being gone a lot
- the job I want requires higher education
- the job I want means relocating my home
- other:

less time with family

None

I have many careers i would like to explore

long hours

It requires a great deal of patience.

the job i want might be dangerous for a female.

hair experience

the job I want is physically/mentally demanding

Emotional Hardships

Education

i dont know what i want to do yet

a lot of schooling, missed opportunities

None

the job I want will not be satisfying for a care

None

high salary

a music career is never steady

being able to pay for the education required

the job i want might not be a good stable choice

the job I want can be dangerous

If I am good enough

the job i want means taking risks

the job I want does not guarantee success

Not being able to get a job in the field

Getting along with people that has bad attitudes

not high,not low,mediokre salary

the helicopter pilot tuition is really expensive

working seven days a week

the job I want deals with difficult decisions
the job i want requires me to have great art
skill

the job requires me to help others

The amount of years that has to be done.

bieng able to see my family often

None

None

price of the art stuff

Codes

Commitment

None

Not Sure

Risk

Other

Appendix 13

Student Response Coding Item 14

14. When I think about a possible career exploration program at school

- I would like to have my parents participate with me
- I would like to attend these meetings with classmates
- I would like to come to these meetings by myself
- I do not have any interest in being a participant.
- other:

I have chosen my career.
I want to listen to workers and interact with them
I dont know
If it had to do with my interests, then I would go
with people who want to have the same job
not parent but sibling
it does not matter who i participate with.
Outside of school will be better

Codes

Interacting with others in field

No interest

Appendix 14

Student Response Coding Item 15

15. How do you suppose the career you choose will change over time?

- there will be a need for continuous education
- job requirements will stay much the same
- demand for this work will increase salaries
- status of people in this field is bound to grow
- other:

i dont know yet

Technology

Money will Be a factor

may get generic

different people, different drawings or
paintings

Codes:

Unsure

Business Environment Change

Grow Tired



LearningPolls.org | Poll Results

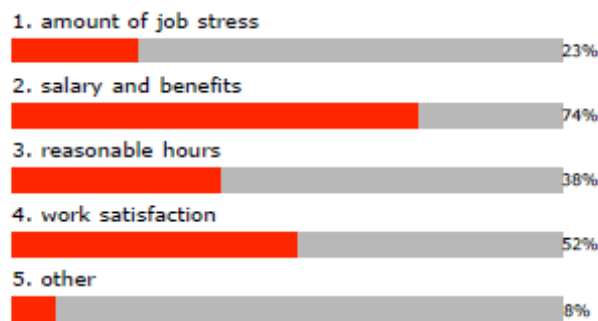
Results for:

Results from

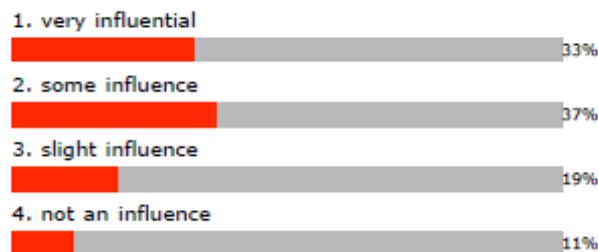
Name of Poll: **NCCareer**

Purpose of Poll: **The purpose of this poll is to find out how students feel about career exploration experiences and determine ways schools and families can support this aspect of education. Teenagers are the future work force so they naturally think about kinds of jobs that would be most appealing and appropriate for them.**

Q1. Which factors will you consider in choosing your career (n=291)



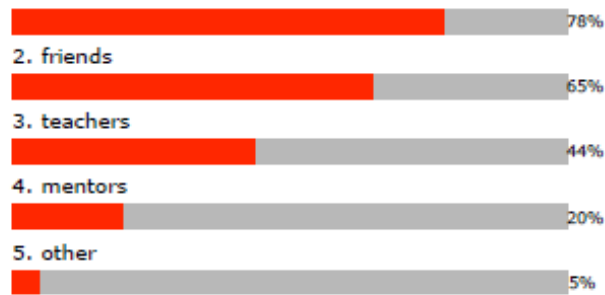
Q2. How influential will relatives be in helping you choose a career? (n=291)



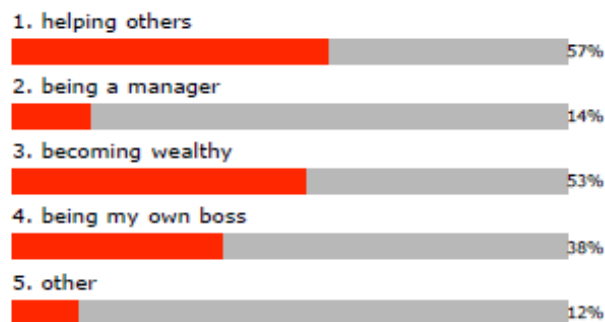
Q3. Which of these sources do you talk to about possible careers? (n=291)

1. family

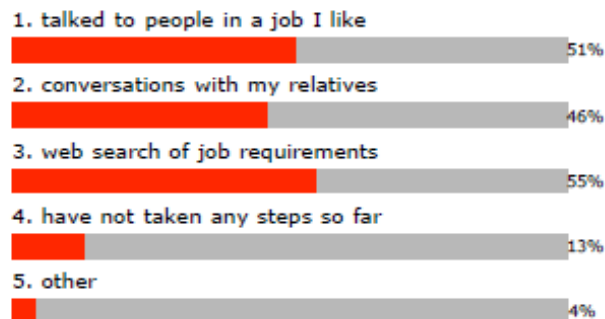




Q4. When you dream about a career, what kinds of things do you imagine yourself doing? (n=291)

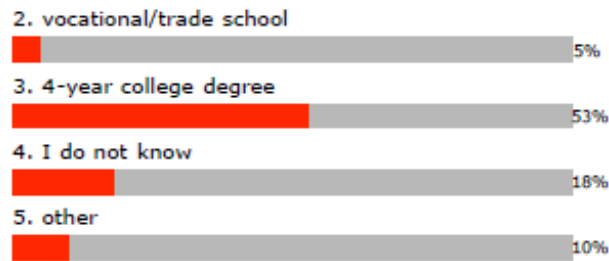


Q5. What steps have you taken to explore a possible career? (n=291)

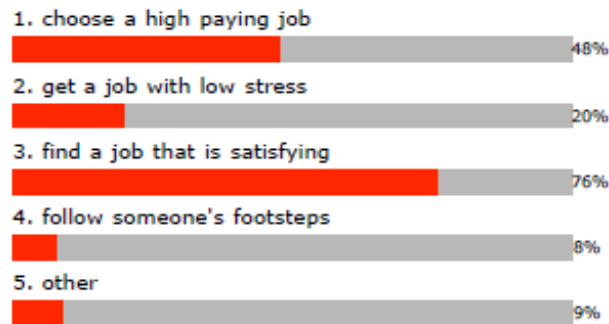


Q6. How much education is required to enter the career that you want? (n=291)

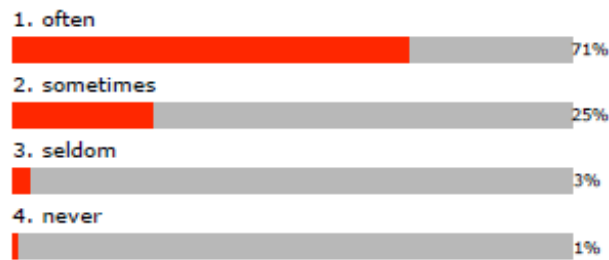




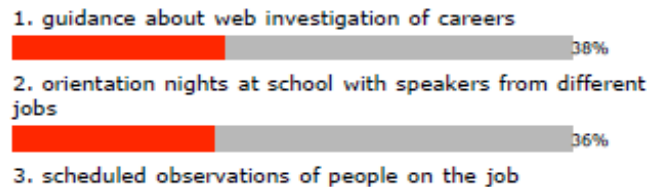
Q7. What advice have relatives or friends given you about career choice?
(n=291)

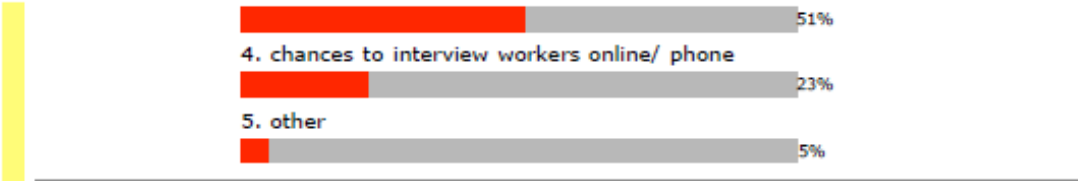


Q8. How often do you think about your future career? (n=291)

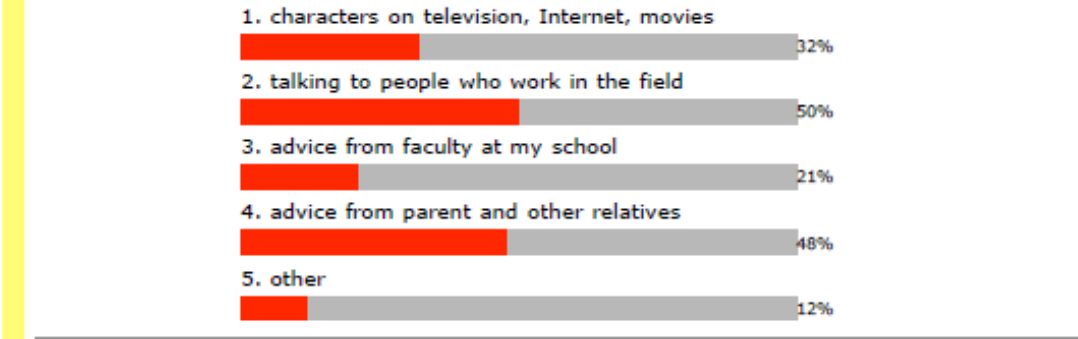


Q9. What career exploration help would you like from your school?
(n=291)

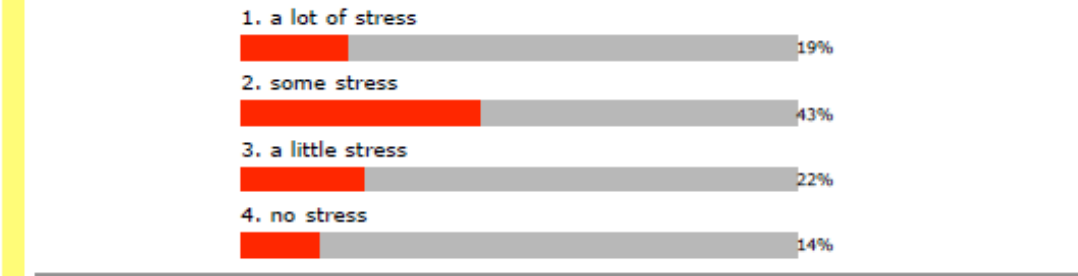




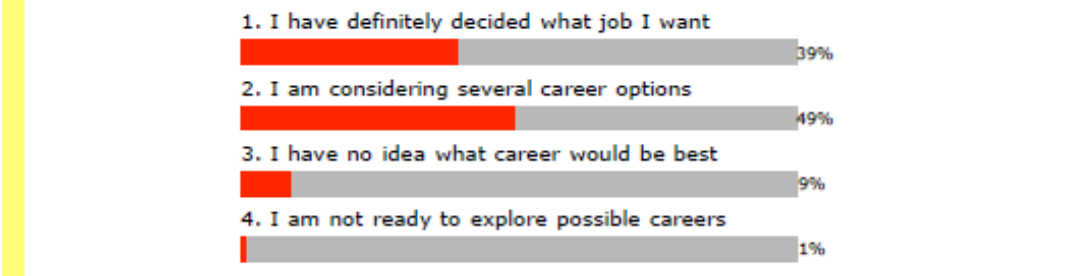
Q10. What experiences have influenced your career choice so far? (n=291)



Q11. How stressful is it for you to choose a career? (n=291)

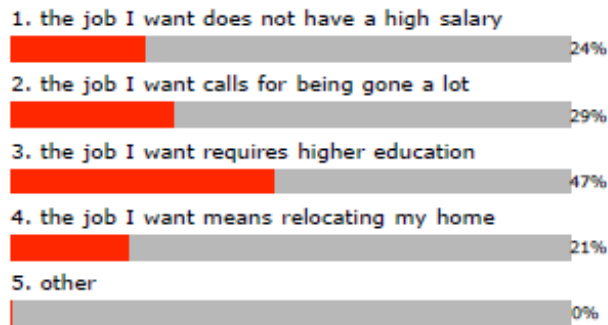


Q12. How certain are you about a particular career? (n=291)

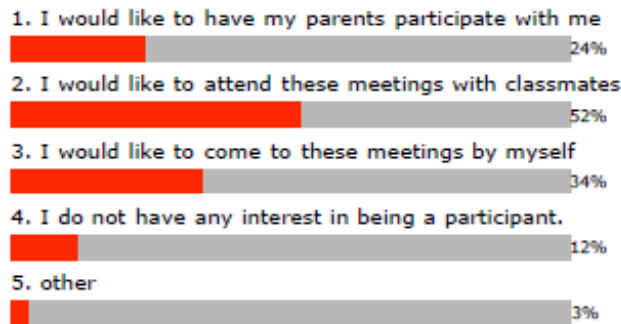




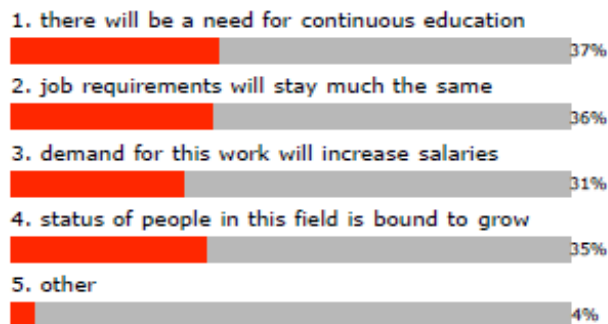
Q13. What obstacles do you anticipate with your career choice? (n=291)



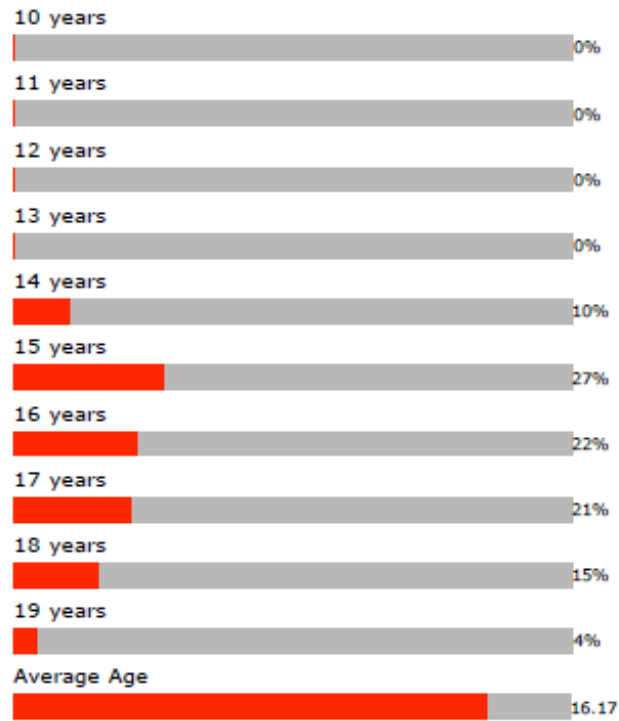
Q14. When I think about a possible career exploration program at school (n=291)



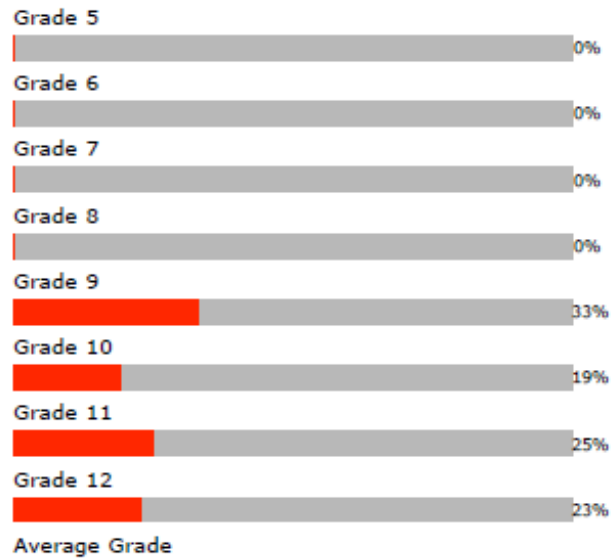
Q15. How do you suppose the career you choose will change over time? (n=291)

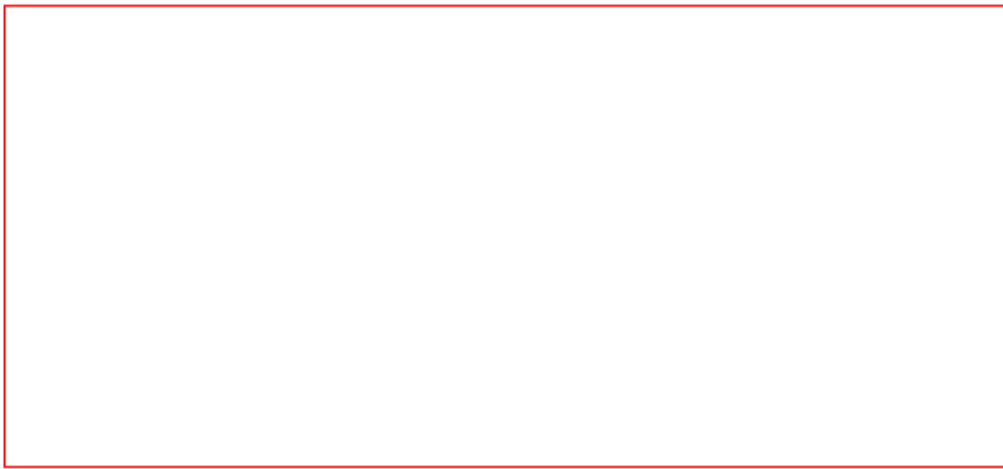
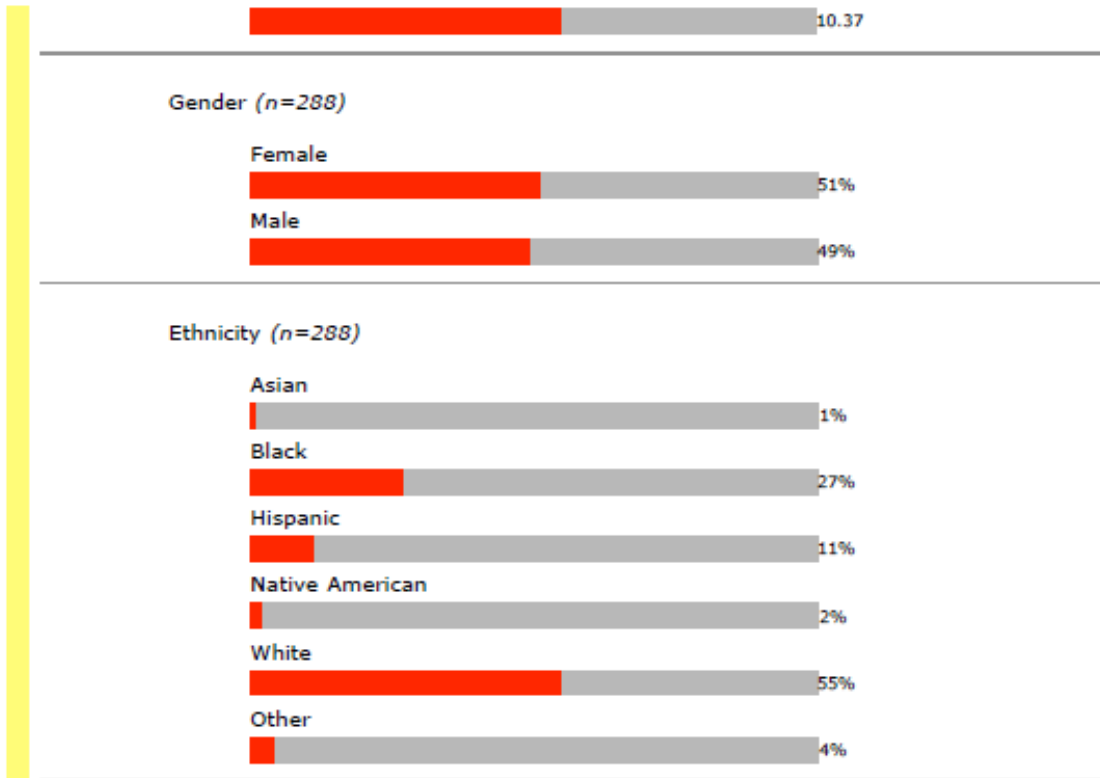


Age (n=288)



Grade (n=288)





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Appendix 16

Career Poll Items Grouped by Common Topic

Group 1: SEARCH STATUS (Identity status- still searching, not searching, or decided)

Q8-How often do you think about your future career?

Q11-How stressful is it to choose a career?

Q12-How certain are you about a particular career?

Group 2: SOURCES OF INFLUENCE in HELPING CHOOSE CAREER

Q2-How influential will relatives be in helping you choose a career?

Q3-Which of these sources do you talk to about possible careers?

Q10-What experiences have influenced your career choice so far?

Group 3: THINGS TO AID IN SEARCH PROCESS

Q5-Steps taken so far to explore a career

Q9-What types of career exploration help can school provide?

Q14-Attend career exploration meetings at school with who else?

Group 4: KNOWLEDGE ABOUT INTENDED CAREER

Q6-How much education is needed for career?

Q13- Obstacles seen with career choice?

Q15-How will career change overtime?

Group 5: CAREER VALUES (GOALS) for career or conditions of career

Q1-Which factors will you consider in choosing your career?

Q4-When you dream about a career, what kinds of things do you imagine doing?

Q7-What advice have relatives or friends given you about career choice?

P. Strom & R. Strom © 2007

Appendix 17

Permission Letter for Use of Existing Data

April 7, 2011

Dr. Paris Strom
Leah S. Whitten
Educational Foundations, Leadership, and Technology
4036 Haley Center
Auburn University, AL 36849-5221

To whom it may concern:

High School conducted student surveys earlier this semester for intended purposes of gathering information for use in our school improvement plan. Dr. Paris Strom from Auburn University allowed High School to use his online Career Poll to collect this data regarding student perceptions about career exploration and preparation. This process enabled us to anonymously assess student voice about career interests and needs.

It is my understanding that Dr. Strom and Leah Whitten would like to use these data for research and possible publication. Dr. Strom and Leah Whitten will be allowed to use these data for research and publication purposes as long as the data will not identify our school or district in any way and/or any student or faculty member from our school or district.

If you have any additional questions please contact me at _____).

Sincerely,

Appendix 18

Career Exploration Poll Responses by Students Ages 12 to 19: Summary of Implications for Stakeholder by Percentage

