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# The Aspirations of Young Women in Worcester Private/Charter High Schools Replication Study

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by

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To:
ACSW, John M. Wilkes, Guidance Department of Worcester Private/Charter High Schools, Principal of Massachusetts Academy, and all other who aided in the progress of this study and analysis.

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I would like to thank ACSW for sponsoring this replication study for the second year as it has provided me with one of the most exciting and most educational experiences in Worcester Polytechnic Institute. This project allowed me to explore the current and possibly the future of gender equity within our society, a subject of interest to me personally. This was a great opportunity for me to expand on my knowledge as well as add a little personal flavor to the study and to the ongoing debate on gender equity within stereotyped occupations.

My greatest appreciation extends to John M. Wilkes, who has been one of the best people to work with not only in my educational career, but also in life. His passion, one of many, is gender equity and gender equity in society and all aspects of it, work, education and many others. Professor Wilkes was helpful, informative and always patient. He was able to demonstrate aspects of the study to me that were not visible, and then helped me incorporate the findings and my own opinions into the analysis of the results. He not only made this study a learning experience, but he also introduced me to the possibilities for the future in terms of this very fascinating subject. Juggling many classes and especially projects, he always found the time to address any concerns or issues I was having and helped me greatly in the writing process of the final paper. Even though I never got the chance to work with him in class, I experienced the best aspect of his knowledge, in a field he is passionate about, the study of gender equity in high schools and of female status in stereotypically acclaimed occupations. I am looking forward to working with him on anything that the future presents to us, and defiantly staying in touch.

The guidance counselors and all the teachers that participated this year in administering the surveys utilized in this study are also greatly appreciated. Their patience and time allocated for this project is what made it all possible. Without their collaboration, the replication would not have been a success.

## Abstract

Last year the Worcester City Manager's Advisory Committee on the Status of Women (ACSW) sponsored a gender comparative study of the career aspirations of all the High School Juniors (at Public and Private High Schools). The results suggested that females were much more interested in the professions than the males, but focused on Law and Medicine. The technical professions remained male domains, and Teaching and Social Services female domains. Interest in business careers was approaching a 50/50 balance. Gender was a far more important predictor of career aspirations in the private/parochial schools than in the private/secular and public schools. Still, the overall finding was that the data from the public and private schools was quite similar, surprisingly so.

The implications of these trends and findings were sufficiently great that the ACSW sponsored three more teams this year to see if these findings would replicate. The private school study teams decided to expand their studies by adding a new variable, gender identity (masculine or feminine as culturally defined), operationalized by Sandra Bem. This is the report of the private high school replication study, augmented by the new Bem Sex Role Inventory variable. In the main, the pattern of career aspiration findings from last year, have replicated. In addition, we now know that it is the surprisingly large minority group of masculine identity females (twice the size of feminine identity males) that is the vanguard of progress toward gender equity in still primarily male fields. What is special about Medicine and Law is the shift in aspirations of large numbers of feminine identity females to enter into these fields as well. The social definition of these fields seems to have changed – at least as the oncoming generation of students now in high

school see them. It is what they think that matters most in terms of gender equity in the professions a decade or two from now.

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## Introduction

In 2005 the City Manager's Advisory Committee on the Status of Women in Worcester (ACSW) recruited two IQP teams at Worcester Polytechnic Institute to perform a study of career aspirations of the high school juniors of Worcester. Their goal was to determine whether the aspirations of the junior class seemed likely to lead toward gender equity in the next generation – as the students in Worcester public and private high schools entered the work force. (Assuming that the proportion of students that manage to realize their aspirations does not change) A discrepancy between current gender ratios in these professions and student aspirations gender ratios would indicate that progress toward gender equity would be made in the next generation so long as equal opportunity was protected by the political authorities. This year the ACSW was interested in working with more teams of Worcester Polytechnic students in order to replicate the findings that were produced last year and also to improve the survey instruments. The specific things foremost in their list of recommendations and outstanding questions that went beyond the replication of the prior year's findings were as follows:

- Should the data be collected on a regular basis – and earlier than junior year in high school to give the schools more time to act on it? On the other hand, it was not clear whether most sophomores have stable career aspirations yet, so earlier data collection was subject to question. How might the data be used to help WPS students?
- Developing a program for the female students with aspirations involving a Political or Civil Service career was identified as an area that should get priority, and the FACES program by WPI (to encourage females interested in Engineering) was a potential model for such a program.

- Male and female students aspiring to careers that counter gender stereotypes, such as male Nurses and female Engineers, should get special encouragement.
- Identifying female students suitable for the annual *Young Woman of Consequence Award* should be a secondary goal of the survey project, should it become a regular part of data gathering by the Worcester Public Schools.

This year there were three teams recruited to do survey research, one of which was to look at the public high school students (sophomores at 2 schools and juniors at 6 schools), the second of which was to do a study of middle school students, and the other one to study the private/charter high school students in Worcester. I conducted the private/charter high school aspiration study replication with some help from an independent IQP group (not working with the ACSW) that was conducting a gender mix study. They wanted to see what impact the sex ratio at four different parochial high schools ranging from all male to all female students was on career aspirations. Thus, we could share data in some cases rather than have both teams collect similar data in the same schools. The data produced by my gender replication study in the two coed private/parochial schools was of interest to them and they added additional data from two single sex parochial schools.

Last year, the public and private school teams worked together on developing a survey that was distributed to the students of the public and private high schools to identify and compare the popularity of different career aspirations by sex. For the replication study this year, the survey was revised to make it a better measure of both the range of aspirations under consideration and the specific options in certain fields. The private school study also included a measure of gender

identity, masculine and feminine self-image, as well. There were some sections that were changed, added as well as deleted, from the survey used last year.

I not only wanted to replicate the findings of the previous study but also wanted to look deeper into the roots of some of the results that were encountered last year. This led me to develop an open ended follow up essay survey that asked some selected respondents to interpret their career choices. In this way I hoped to see how gender stereotypes affect career choice among students with different self-identities, at least among students attending expensive private or selective charter high schools. A follow - up essay survey on certain careers was administered to selected students with the same aspirations but different self – identities – in the participating schools. Unfortunately, there was not enough time to both collect and analyze the follow – up results before the WPI academic year ended. So, I will analyze them later or pass them on to a team working next year. It is my ultimate goal to provide useful information to the guidance departments of each participating schools about the range of gender - identities found in their student bodies and measure the extent to which they affect the perception of different careers. Anything I can do to help the ACSW bring our community closer to gender equity by identifying the factor hampering progress in this area would be worth doing. Equal opportunity is a cause I really care about.

This study suffered several delays. Even contacting the guidance offices and receiving permission from the five private schools that were part of the study last year was not a quick and easy process. One failed to respond for several months. But, in the end, I arranged for the newly developed surveys to be distributed to the same four private and one public (Massachusetts

Academy of Science and Technology) high schools that participated in this study last year. Since this is a replication study, the participants were once again the junior class in each high school. The reasoning behind the choice of the students remained the same. It was because the junior class was in the "college/future preparation" stage that they were likely considering career alternatives seriously but not absolutely committed to any particular path yet.

The public school project group was also conducting their replication study for the public high schools with juniors, but included the sophomores at two high schools. Their survey did not include the gender - identity items. Pilot testing the value of the Bem Sex Role Inventory was a job of the private school groups. There was a slightly different format of the survey and coding scheme as well, but on the whole the public and private school students were comparable. With the results from both survey teams, I was able to compare the public and private high school aspirations and status on gender equity as well compare the entire replication study to the study conducted last year.

I also compared the student aspirations data to the National, State and Worcester Labor Statistics for both 2003 and 2004 in order to see if Worcester was likely to change in its levels of gender equity if the students carried through on their plans. As with any replication study, I also wanted to see whether any changes in aspiration patterns of the participating students in Worcester over the past two years raised questions about the quality of the data. Differences were more likely to be due to data instability than to a real trend operating over so short a time. Hence, the real question was whether we were picking up random variation on an unstable base of perception and opinions (noise) or had an instrument that was tapping a pattern that was stable and could be

subjected to meaningful interpretation. If the data from the two years did vary, an estimate based on two data points was more likely to be accurate than one based on a single data point. Given my student estimate, I could then compare the aspirations of the Worcester students with the present employment levels by sex in the various careers under study both on the national and state levels, to see if change would occur if the students carried through on their current pattern of aspirations, at least at the same rate as in the past. While I did not find exactly what the rate of success in graduating from Law and Medical school was for past WPS students, there was some information in the literature that could support an informed guess, or estimate.

The surveys were analyzed and the results presented to the ACSW. There was a planned meeting with the private/charter schools as well as with the public school representatives, but they were not able to come at the time proposed by the ACSW. Hence, they will wait for the written final reports. I presented my project to the ACSW twice, once with the public school replication team as kind of a midway "progress" report, and once with all the other groups presenting back - to - back in front of the ACSW members in 15 minute slots, after the analysis was largely complete (but the reports not yet written).

Key variables that were analyzed this year include gender, career interest, parental occupations, post high school plans, self-image and reservations regarding college and other barriers to entering the careers that were of the greatest concern to the respondent. Each of these variables was represented within the survey by at least one item and usually more than one. For example, the self-image section took the form of the relatively lengthy (half page), 60 item, Bem Sex Role Inventory (BSRI) designed by Sandra Lipitz Bem (1993).

As was the case last year, one of the main hypotheses was that gender will play a major role in career aspirations of high school students in Worcester. Another possible influence is school "specialization". The public high schools of Worcester have "magnet" small schools within them called "academies" that are devoted to the health professions, technical professions, the arts, and other careers. The main public school hypothesis was that gender would be more of an influence than the presence of a small school. However, in my study of the private high schools there was no such "specialization". There was however the secular – parochial difference to consider. Last year's analysis team (Croteau and Boudreau, 2005) reported that gender was more predictive of career aspirations in the parochial schools than it was in the secular schools. If so, this made the private school study the perfect place to find out if gender identity at the personal level interacts with gender stereotyped cultural expectations. I hypothesized that gender identity would affect the way students respond to gender stereotyped careers, (i.e. those that are currently dominated by one sex.)

Hence, the paper to follow will report a replication of last year's results, clarify some ambiguities left by last year's career classifications, go on to test the value of collecting Bem self - identity data as a predictor of career aspirations and finally compare a few of the findings to existing occupational statistics and public school results.

## Overview of the Analysis Process

The aspiration survey instrument that was used this year to conduct the Career Aspirations study was designed by two teams last year (Handler and Hogan, Boudreau and Croteau). Handler and Hogan (2005), the public school data collection team, started first and designed the bulk of the survey. They then got held up in the public school review process for two months and the private school team of Croteau and Boudreau got into the field to collect data first. They also got higher response rates at most private schools than was typical of the response rate from the larger public schools. The questionnaire that both teams utilized last year was mostly original but with a few items inspired by literature sources.

The goal was to find out the relative level of interest of the participating students in the specified careers, whether their plans after graduation included college, as well as some of the doubts and reservations that they might be experiencing regarding their future after high school graduation if they were hoping to go on to college. These answers would be compared by sex. This year, the students (myself with the help from the independent private school team) working on the private school project (as well as students trying to replicate the public schools study) received from Handler a revised version of the survey she had used before, which was reviewed by the public school administration over the prior summer. The survey was revised in many sections to deal with the questions and the criticisms raised by those who took the survey, tried to use the results or had been involved in coding and analysis the year before. Also, this year, one team worked independently from teams that were sponsored by the ACSW, so as to recruit a private/parochial high school that had decided not to participate the year before due to the association of the study

with the Worcester City government. They also added the new section to the survey. This section is called the "Self-Image" section and in actuality it is the inventory designed by Sandra L. Bem to measure one's sex - role identity.

I decided to adopt the Bem Sex Role Inventory for the rest of the private schools in the study, secular and parochial. I also developed an open - ended questionnaire as a follow - up survey to the answers of this section found on the primary survey. The follow - ups were distributed to the schools, but I was unable to collect all the results in the time frame necessary to complete this project. It is still my goal to collect the answers, code and analyze them in the future, to see where the results will take me with regard to how each gender identity grouping differs in terms of their perspective on careers and interpretation on the primary survey.

The primary survey contained similar sections to the one administered last year, but many items and response categories have changed a little. The first section included the name of the student, the name of their advisor, the school name, graduation date, and gender. Gender (really biological sex) was an important piece of information in the comparative replication study this year. In addition, both the follow-up survey as well as the self-image section depended on knowing which masculine and feminine identities were held by people of the same biological sex. This year, the question of ethnicity was eliminated from the survey used by the private school team, but it was used by the public school teams, where about 48% of the public school students are from one or another minority group. The removal of ethnicity from the private school survey for this year was on the advice of Croteau and Boudreau, who reported that the population was so homogeneous in ethnic terms that it would be more meaningful to ask which

of the private school students lived in Worcester as opposed to surrounding suburban school districts. Another important part of the survey that was retained for this year's study was that of parental/guardian's occupations. This section, as intended last year, can show the analysis teams whether or not the students are aspiring to the same careers that their parents are in.

The next section of the survey was the career section. Last year, the survey listed 14 career choices and the students were asked to rate their level of interest in each career. The levels of interest ranged from one to five, 1 being "*No interest*" and 5 being "*Very interested*". This year, the career section listed 23 career choices. The level of interest ranged from one to four so as to exclude the middle group, from 1 being "*Not interested*" and 4 being "*Very interested*".

The instructions on the career listings for the survey used last year were worded so that the students would not feel obligated to chose "realistic" rather than "preferred" careers and the level of interest indicated in a career was not to take into account educational costs. "Don't let concerns about money/education/parental approval/etc. limit your response" was part of the directions for this section. The nine additional careers were to clarify interests in fields presented as single categories the prior year.

My purpose was the same this year as last – as far as they went, but I went further. I wanted to also see students' aspirations listed without the effect of the outside factors, and then let them talk about parental approval or the salary expectations given the career choice in a follow-up interview or essay, to get the real picture they faced. I theorized that "masculine" and "feminine"

way of evaluating a career would differ, especially in terms of the relative importance of salary and social approval.

The survey used this year, included 23 career choices, the extra nine primarily specifying those careers listed last year on the survey that were grouped in ways that were too ambiguous. This year the Engineering/Physical Science careers were split into two separately listed careers, Engineering and Physical Science careers. This is due to the fact that the percentage of students interested in one career might have been higher than in the other, so the total percentage ended up being overstated or understated. The same idea followed for splitting the choice in the Computer/IT careers, where this year the two were listed as two separate career choices. There was also the addition of the career Medical Other, where as last year there were only the careers Medical Support and Medical Practice listed in the section of the survey. The Art career was split into three careers this year due to the fact that art training is specialized and the career lines into colleges and the local community that could support aspiring students are different. This year there were three artistic careers listed, Performance Arts, Visual Arts, Musical Arts compared to last year, where the survey only listed the "Arts" as a career. Food Service and the Media careers were also added as two separate career choices in the survey this year in addition to the three careers of Social Service, Service Industry, and Civil Service that were listed on the survey last year. City Administration and Elected Political Office were also accompanied by two extra careers on the survey used this year, International Political careers as well as State or Federal Government service careers.

As intended last year, this year the section on future plans was also part of the primary survey, where each student was asked to specify their interest in attending a 4-year college, a 2-year college, a vocational school, joining the military, working or marriage upon high school graduation. Combinations of answers were also permitted. Hence, students might be attending a 4-year college and also be working or married. This section was also intended to be more useful to the guidance departments than it was last year. However, the public school guidance people had not found the survey useful enough last year to endorse it again this year, even in an improved format. Private school guidance feedback suggested that it was useful – but could be made even more so with timely consultation with their staff members. The reality is that the logistics of "personalizing" the survey to suit each guidance department are daunting, and then one has sacrificed data comparability for local utility. So, the survey was improved based on comments and criticisms from the prior round but the private high school guidance departments were not individually "consulted".

The next section of the survey was also a crucial part for the guidance departments as well as for the teams studying the private and public schools for the second, consecutive year. This section lists of possible reservations that the students might be experiencing regarding their plans for the future. It also allowed for comparison of students' concerns for both years that the study took place. It was intended to supply the guidance departments of the participating schools with important information about the relative likelihood of doubts based on gender expectations, standardized test scores, lack of information or money.

The next section included an item that is strongly connected to the self-image section that follows it in the primary survey. This item asks the students how willing they would be to enter into a career field that is counter – stereotypical to their gender or actually, in which their gender is the minority. "How likely is it that you would pursue a career that relatively few females (there was a male version also) work in?" "How do you think your parents would react if you wanted to pursue a career that relatively few females work in?" This section not only provided information for determining current gender equity levels but also how fast the next generation is likely to move towards it. Having this information at hand, I could determine whether gender identity was related to some of the reasons that some of the students continued aspiring towards gender - stereotypical careers and while others went into the counter gender-stereotyped careers. This also showed the teams of both the private and the public schools how the students that we're studying thought their parents felt about the idea of going into a career that was not typical of their genders.

The newly added section of the survey, which was called the "Self – Image" section, is a Bem Sex Role Inventory (BSRI) which was designed by the feminist and psychologist, Sandra Lipitz Bem. This section consisted of 60 adjectives, of which 20 were feminine, 20 were masculine, and 20 were neutral. Each one of the adjectives received a score from one to seven, 1 being "never" and 7 being "always", showing how often the students felt that adjective described them. Then the answers were divided into the three categories listed above, and the answers were averaged for each of the three categories. Then a Bem Score was assigned on whether the student was feminine, masculine, androgynous, neutral or undifferentiated. Based on the results, I was

also able to use the other pieces of data for each of the students and more deeply explore the root causes of differences in career aspirations within the gender groupings that were appearing.

The last section of the survey was a list of the extra curricular activities that the students were involved in during the past three years. This was one of the most important sections for the guidance department to retain as it could help them frame college application letters and select candidates for awards and scholarships. The other information obtained in the rest of the survey included number of AP and Honors courses the students were taking this year, as well as whether or not they were Worcester residents. This information was partly for statistical analysis requested by the ACSW, but the extracurricular activities section was of interest to the ACSW in terms of getting candidates for the *Young Woman of Consequence Award* identified, and encouraged to submit application and letters of endorsement.

The surveys were distributed to the same private/charter and public schools as last year and after collection entered into an excel database. This database was then used for analysis and graphing the findings. The answers were coded into an appropriate scheme for transfer into SPSS, where more statistical analysis was carried out to assess the significance levels and correlation coefficients in the promising findings. Finally, the results could be reported.

After analyzing all the sections of the primary survey, the self-image section was then closely analyzed to see which students would be asked to participate in the follow up- survey. The students were placed in one of the following groups based on the results of the self-image section of the primary survey: Masculine - Male, Masculine - Female, Feminine - Female, Feminine -

Male, Neutral - Male, Neutral - Female, Androgynous – Male, Androgynous – Female. For the purposes of data analysis Neutral and Androgynous students were combined into one middle category. Students in each of these categories were then grouped in the choices of the careers towards which they were aspiring and asked four questions to see whether or not their gender-identity played a role in their choice of the career and how exactly they viewed the career of their choice. The point of this follow - up survey was to determine how the students with a given gender-identity viewed the same career. I wanted to see whether or not the stereotype associated with a career would still hold upon the face of a personal inclination that would make the respondent comfortable with the traditional people of the opposite sex. The follow up survey was successfully administered to the five schools, but Worcester Academy (the latest school to administer the first wave survey) decided to bail out of the second wave of the study. The other schools were still completing the surveys at the end of the year, which did not allow me time to analyze the results and to include any of the findings in this report. I am planning to work on interpreting the essay from the follow-up surveys later in order to provide the ACSW as well as the participating schools with the results next year, when the new teams form. I am hoping this detailed, qualitative study will open new doors and increase our understanding of student aspirations, particularly how their reasoning behind their choices ties into their gender identities. The primary survey used this year can be found in Appendix A, the one utilized last year in Appendix B, and the follow - up survey in Appendix C.

## Literature Review

This year as well as last year, the study has shown that there was a significant difference in the distribution of male and female career aspirations. There were some careers towards which there were more male students aspiring, but there were also other career choices which seemed to attract more females. Typically, in our culture, there are also careers which are stereotypically assigned for females and males alone. The goal of both years of study was to see if there was a chance that the next generation was moving towards gender equity and away from the culturally developed stereotypes. This year's private/charter school study also introduced the BSRI, which will be discussed in detail in the upcoming sections, and it turned out that career aspirations also differed significantly amongst students of both genders. It is therefore interesting to explore the purpose of the development of this measuring tool and the historical background on Sandra Bem. It is also interesting to see if literature shows that there is a difference between gender-identity and biological gender, and whether or not the latter had a larger effect on human plans and aspirations.

Much literature and many studies have shown that each gender, male and female, consists of different levels of gender-identity. Gender - identity is the way a person views himself or herself, within each biological sex. Sandra Lipitz Bem dedicated an entire book, "Through the Lenses of Gender" (1993), to explore the possibilities and reasons that such roles are recognized by each gender and why. Within the field of gender socialization, which is the process by which humans learn to associate certain activities, beliefs as well as values with the appropriate gender, it is believed that gender identity is learned at a young age and through interaction and learning of the surrounding environment. (Renzetti, Curran 1999) This is, in fact, how cultural gender

stereotypes are born. There are certain expectations within our society for each gender in terms of education, behavior and most importantly self-images as well as personal aspirations. Stereotypically it is believed that "*feminine* qualities are counter posed to *masculine*: women are labeled passive, men active; women are defined emotional, men described as intellectual; women are assumed to be "naturally" nurturing, men "naturally" ambitious." (Ruth, 1990)

There are many theories that have been developed as well as tested to explain how children from the young age have acquired/developed their personal gender identities. So how does gender-identity form? It is interesting to see how females and males learn to identify themselves with their appropriate sex. It is even more important to see how males know that some things they involve themselves in are masculine and how do females acknowledge their actions as feminine. The explanations provided by these theories range from those that explain gender - identity as a results of cultural direct impact, from education, as well as social impacts of the surrounding environments.

One of the first theories that attempted to explain why females and males have different attitudes and ways of acting as well as why gender in general differs among the sexes was by Sigmund Freud. Sigmund Freud introduced the "*Identification Theory*" to explain the gender - identity differences. He introduces this theory and explains that gender identity formation occurs in three stages. During the two initial stages, which occur during early childhood, both boys and girls are treated differently by parents as well as others surrounding them. During the third stage, the most important in regards to gender - identity identification is referred to as "*Phallic Stage*". Freud describes that during this stage it is when the "identification" process begins. This process of

identification is the process during which girls begin to act like the females around them and boys like the males around them. This theory also divided this process into two separate ones for each biological sex, according to Sigmund Freud, but it is not necessary to discuss them in detail. The importance of this theory shows that the surroundings shape the way the sexes develop their gender - identities. The people around them, males and the females, from day one of their lives, help motivate as well as teach the appropriate behaviors to the males and to the females. "This also shows that we as humans are not biologically equipped with such behaviors and motives, but instead we learn them though our life experiences". (Renzetti, Curran 1999)

The "*Social Learning*" theory is the other theory specifying that children once again learn the appropriate and/or accepted behaviors for their gender by being rewarded. (Renzetti, Curran 1999) For example, if a girl likes to be dressed in pink dresses, then the mother will feel more motivated to buy her more toys for being a good girl. This theory specifies that instead of learning how to act gender appropriately the children learn from actually not doing so and getting punished for it in one way or another. This punishment is what brings them back into the norm of what their gender is expected to identify with and how to act. In Freud's theory, it was the actual treatment imposed on the children from an early age that mattered most, not expectations that were conveyed more subtly.

One of the other very important, especially to this study, theories is that of Sandra Lipitz Bem, the "*Enculturated Lens Theory of Gender Formation*". This is very important to describe due to the newly added section in this year's study. In order for us to better understand the results of the section, it is important to understand the intentions of its developer in the first place. Sandra Bem

too believed in the theory of *"Social Learning"* and that gender roles are in fact learned by the children at a young age, but she specified that all the information received by the children is also used in their every day lives and for this reason they come to learn what is appropriate and what is not. Sandra Bem then went on to explain the *"Gender Schema Theory"* where she explored the idea of the fact that gender roles are in fact learned from the society surrounding the child, but there are also ways in which the children learn from a young age to actually apply what they have learned in gender appropriate ways. "The outcome is that the sexes become opposite …"not only in degree… but in kind…" (Bem 1985) "This means that the children no longer view each other just opposites but they also begin to rank themselves on how far opposite they actually are from one another". (Bem 1993) In short, they are active agents, not just passive recipients in this peer socialization process.

Even before Bem explored the *"Gender Schema Theory"*, she was fascinated by learning and writing about the physiological androgyny. In this theory she claimed that within each person of each gender there are to some extent some masculine traits and some feminine traits and that in actuality it is how it should be for the person to be psychologically and physiologically stable in terms of gender identification. She also claimed that this is how each person of each gender needs to associate themselves to construct a healthy and gender equal environment in our societies.

In her search to measure how masculine and how feminine a person was, Bem developed a tool called the Bem Sex Role Inventory (BSRI). This is the "Self – Image" section of the survey that was used this year in the private/charter high schools. This tool would score the participants to be

either, masculine, feminine, neutral or androgynous. In order to go forward with the newly developed tool Sandra Bem checked whether the results that BSRI produced were actually valid. From one of her validity tests she discovered that people who scored to either be masculine or feminine seemed to perform or choose activities that were stereotypically acceptable for their gender, whereas the androgynous participants were more interesting and less predictable. Basically those who were men and had masculine gender roles and those who were female and had a feminine gender role were the people who tended to perform things in such a way that gender stereotypes prevailed. The androgynous participants did not seem to be affected in their participation (or how they went about doing their activities) whether or not they were considered masculine or feminine. The masculine males and the feminine females were the participants that were not comfortable with performing counter stereotypical tasks. (Bem 1993)

Through out this year's study I wanted to see if gender identity was a better predictor of career aspirations, future plans and reservations for the students of the junior class in private/charter schools than biological sex differences. I therefore wanted to see whether the school types and the backgrounds of the students were also a factor in predicting their gender role and in turn their decisions about their future. I think that the reason the school (public, private/secular, private/parochial) which the student attends makes a large difference in the decisions he or she will make for the future, career wise has to do with the prevailing student culture about what gender means. Even the doubts they have will be based on what they feel is expected of them and to whom they are comparing themselves within their societies (such as their high schools) would have this reference point. Michael Kimmel writes in his book "The Gendered Society" that much research through which he has read shows that our attitudes, behaviors, as well as our

development of gender - identities largely depend on the environment that we are in, the people around us and the beliefs of our society. This means that, as the previously discussed theories suggest, our gender identities and the selected roles are in fact separate from our biological sex. But, how far separate they are depends on how we grew up, which schools we attended, who our friends were and how our parents and teachers perceived the appropriate behaviors for each biological sex.

Kimmel devoted two chapters of his book to discussing the *"Gendered Classroom"* and *"Gendered Labor Force"*, and since both topics were on a large part what I focused on in this year's replication study, I believe it is worth reporting his observations. The purpose of this study was to see whether or not the schools were moving towards gender equity and which genders and/or gender roles particularly are actually motivating this trend. Kimmel and other writers stress that gender roles are learned through the experiences within specific social environments. Children begin their learning process of what is gender appropriate from kindergarten up to the days they enter the work force and beyond. Kimmel writes, "Boys and girls learn and teach each other, what are appropriate behaviors and experiences for boys and girls are, and make sure that everyone acts according to plan. What's less visible is how teachers and curriculum overtly and subtly reinforce not only gender difference, but the inequalities that go along with, and even produce that difference. The classroom setting reproduces gender inequality." (Kimmel pg. 154) It is also evident through research that females are taught differently than males and they are also given less attention throughout their educational careers. This in turn, shapes their aspirations as well as their views on what is appropriate for them to even aspire to. So, if gender identities are learned through experience, teachers do far more than teach courses. They also provide the

guidelines for gender inequality by providing actual guidelines on how each gender is educated in the first place.

Kimmel also goes on to explore how after education, males and females who enter into the labor force continues to experience the same unequal treatment from those who shape their surroundings. This treatment once again is already engraved into our society and due to the fact that everyone goes through the same general pattern of education, gender appropriate identities and behaviors are also passed on. This is one of the reasons that there seems to be a larger proportion of male students aspiring towards careers in mathematics and sciences or engineering. It is not because the female brain is incapable of retaining this knowledge but because they were taught not to even desire to go into such fields. The following two quotes demonstrate the way male and female students view the English classes and it also demonstrates the stereotypical identities that follow both male and female student gender identities. (Kimmel 2000)

"I find English hard. It is because there are no set of rules for reading texts … English is not like math where you have rules on how to do things…" is the view of a male student regarding studying the English language. A female states the following, " I feel motivated to study English – you have freedom in English – unlike subjects such as math and science –and your view is not necessarily wrong…" (Kimmel 162) This obvious difference in opinions in regards to the English language is due to the fact that male students consider it a feminine course due to the fact that feelings are expressed, and since through out their lives male children were taught not to express their feelings so openly simply because they are men, they seem to dislike the subject

and do worse in it than females. This is an example of the learned gender inequality, and it is sadly one of the many that take place in education today. (Kimmel 2000)

Upon graduation from school, students look forward to entering the career of their interests and their decisions and views on what the appropriate career field once again depends on what their surroundings taught them it should be. "Nothing is more important to a man's pride, self respect, status and manhood than work." (Kimmel pg. 175) Men are raised to believe that they need to be strong and respected in their societies in order to be able to support their future or existing families, whereas females are viewed to be the care takers. Even within the careers into which females tend to go, their job descriptions tend to incorporate some feminine, required actions. This is also shaped by the society, and females tend to go with this flow because they have learned in school. It is for some reason appropriate to them to be in a career where they can and will have to use their feminine aspects in some way or another, and getting respect is not one of their priorities as it is for men in the labor force. From the early aspirations in kindergarten, females were taught to want to be nurses and care takers and men were taught to fight wars and engineer cures for their "inferior" wives. It was not only verbally experienced and learned but it was taught through literature and television as well. This also creates less hope for even establishing gender equity within schools and eventually within the labor force. (Kimmel 2000)

If all our behaviors are taught, and if we all accept the teachings, then there really is no way that we will ever reach gender equity unless we begin to appreciate as well as uphold the possibilities of our gender roles being separately viewed from our biological sexes. It is one thing to be a female with feminine beliefs and views, but it is also important to recognize that it is also even

better for females to have masculine attributes. As Sandra Bem stressed it is even better when each one of us possesses an equal amount of each gender identity, this way it will also be easier to move towards gender equity because it is the androgynous people who do not think in terms of stereotypes.

For this particular study I am therefore confident to say that there is much evidence showing that there is a lot of progress taking place towards gender equity in education and the work force as seen from the aspirations data, and literature suggests that a process of change has been set in motion in a few prestigious careers. Further, the current pattern of high school aspirations will clinch it, starting with some previously male dominated fields becoming gender balanced or even female domains. Since there are so many different gender-identities out there, it is especially interesting to see what the counter stereotypical students want to do with their lives.

It is also interesting to note that it is probably how the student learns how to behave appropriately for their biological sex that determines their future aspirations and plans. Since the student identities differ in careers of Masculine and Feminine, and they are actively responding to a still stereotyped environment the difference in even these views are influenced by the different backgrounds of the student. It might be said that if the students of one school are a majority of students from the same culture then the stereotypes will persist more than within a school where the students are ethnically diverse. My logic is that if in all ethnic groups there is a similar distribution of masculine and feminine students of both sexes, what one really wants to know is what the feminine - females and masculine - males of each ethnic group are aspiring to do. (One needs to control gender identity to clarify what the ethnic differences are.) I believe that

the ethnic differences in what gender means (White, Black, Hispanic, and Asian) will be striking and that the exposure of more conservative groups (in terms of gender equity) to less conservative ones, and to groups in which given occupations that are gender coded to other ethnic groups in which they are neutral, will sort of break down the more conservative stereotypes by raising questions about things once considered normal and natural. It is the way they were taught by their parents, their kindergarten teachers and teachers they encountered in high school that really determines one's career aspirations and gender identity. It is therefore socio-cultural diversification that will one day help break down the prevailing uniform expectations as much as variation in gender identity bring us towards gender equity in all respects, but especially equal opportunity in the work force.

# Results

## *Private/Charter High School Students' Career Interests Results and Comparisons*

The surveys were distributed in the same four private and one charter schools as in the study conducted last year. The results of this year's response rates within each of the participating schools can be seen below.

1. 2005-2006 Response Rates by Private/Charter high school and overall

| | Expected | Actual | Response % | Male | % Male | Female | % Female |
|---|---|---|---|---|---|---|---|
| Bancroft | 45 | 40 | 88.88% | 20 | 50.00% | 20 | 50.00% |
| Holy Name | 190 | 168 | 88.40% | 65 | 38.70% | 103 | 61.30% |
| St. Peter-Marian | 185 | 156 | 84.32% | 75 | 47.77% | 81 | 51.92% |
| Mass Acad. | 40 | 30 | 75.00% | 15 | 50.00% | 15 | 50.00% |
| Worcester Academy | 125 | 123 | 98.40% | 69 | 56.10% | 54 | 43.90% |
| Totals | 585 | 517 | 88.37% | 244 | 47.00% | 273 | 53.00% |

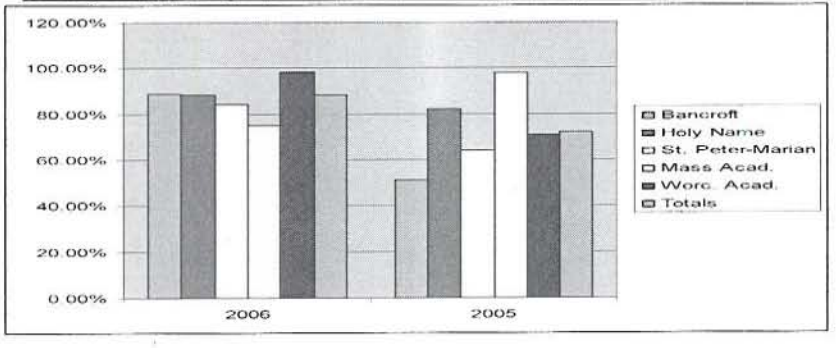
Last year's response rates are illustrated in the below table for comparison purposes.

2. 2004-2005 Response Rates by Private/Charter high school and overall

| | Expected | Actual | Response % | Male | % Male | Female | % Female |
|---|---|---|---|---|---|---|---|
| Bancroft | 65 | 33 | 51.00% | 14 | 42.00% | 19 | 58.00% |
| Holy Name | 190 | 155 | 82.00% | 60 | 39.00% | 95 | 61.00% |
| St. Peter-Marian | 185 | 119 | 64.00% | 54 | 45.00% | 64 | 53.00% |
| Mass Acad. | 47 | 46 | 98.00% | 29 | 63.00% | 17 | 37.00% |
| Worcester Academy | 107 | 76 | 71.00% | 37 | 49.00% | 39 | 51.00% |
| Totals | 594 | 429 | 72.00% | 194 | 45.00% | 234 | 55.00% |

The table below illustrates the response levels for each school by the year of the study for each individual school as well as the total response rates for each year the study was conducted.

3. Response rates graphed for Private/Charter high schools 2004-2006



It is interesting to note that the response rate from the five participating private/charter schools improved this year compared to last year. The response rates of Bancroft, St. Peter Marian and Worcester Academy was noticeably higher this year than last year. The only response rate that is lower this year than last year is from Massachusetts Academy.
The next table demonstrates the breakdown of the number of students *"Very interested"* (those who chose a 4) for each gender and it also shows the total percentages of the students who showed a high interest in each profession for the 2005-2006 replication study. The table below demonstrates the raw data that was obtained from the statistical analysis of the collected surveys this year. The section following this table demonstrates the procedure I followed to make the results of this year comparable to the results obtained last year by the team working with the private/parochial high schools. With the changes that were made to the survey used last year, comparability became an issue that needed to be taken care of. There were additional careers listed on the survey as well as some combinations of careers (i.e. Engineering/Physical Science) that needed to be separated for a better picture to be revealed of the actual career aspirations in each field of the students in the participating private/charter high schools.

**4. Career Aspirations of Private/Charter High School Students 2005-2006**

| | Male | Male % | Female | Female % | Total | Total % |
|---|---|---|---|---|---|---|
| **Teaching** | 10 | 4% | 33 | 12.04% | 43 | 8.32% |
| **Engineering** | 47 | 19.18% | 13 | 4.74% | 60 | 11.61% |
| **Phys. Science** | 20 | 8.16% | 10 | 3.65% | 30 | 5.80% |
| **Computers** | 23 | 9.39% | 6 | 2.19% | 29 | 5.61% |
| **IT** | 21 | 8.57% | 4 | 1.46% | 25 | 4.84% |
| **Business** | 74 | 30.20% | 55 | 20.07% | 129 | 24.95% |
| **Trade** | 15 | 6.12% | 4 | 1.46% | 19 | 3.68% |
| **Medical Practice** | 28 | 11.42% | 64 | 23.36% | 92 | 17.79% |
| **Medical Support** | 11 | 4.49% | 29 | 10.58% | 40 | 7.74% |
| **Medical Other** | 19 | 7.76% | 34 | 12.41% | 53 | 10.25% |
| **Law** | 31 | 12.65% | 35 | 12.77% | 66 | 12.77% |
| **Performance Art** | 11 | 4.49% | 36 | 13.13% | 47 | 9.09% |
| **Visual Art** | 14 | 5.71% | 52 | 18.98% | 66 | 12.77% |
| **Musical Art** | 25 | 10.20% | 21 | 7.66% | 46 | 8.90% |
| **Media** | 34 | 13.88% | 39 | 14.23% | 73 | 14.12% |
| **Food Service** | 17 | 6.93% | 11 | 4.01% | 28 | 5.42% |
| **Service Industry** | 8 | 3.26% | 17 | 6.20% | 25 | 4.84% |
| **Social Service** | 9 | 3.67% | 28 | 10.21% | 37 | 7.16% |
| **Civil Service** | 25 | 10.20% | 11 | 4.01% | 36 | 6.96% |
| **City Admin.** | 6 | 2.45% | 3 | 1.09% | 9 | 1.74% |
| **Elected Political Office** | 12 | 4.90% | 9 | 3.28% | 21 | 4.06% |
| **Government Service** | 15 | 6.12% | 11 | 4.01% | 26 | 5.03% |
| **International Politics** | 16 | 6.53% | 16 | 5.84% | 32 | 6.19% |

**High Interests of Private/Charter High School Students for 2005-2006:** To better understand the distribution of aspirations among the sexes, I developed a table which lists the careers in order from most male dominated down to most female dominated. In the table below you will also find the ratios of gender aspirations within each career.

**5. Male to Female Ratios in each Career Field**

| Career | Ratio (M:F) |
|---|---|
| IT | 6 : 1 |
| Computers | 4.3 : 1 |
| Engineering | 4 : 1 |
| Trade | 4 : 1 |
| Civil Service | 2.6 : 1 |
| City Admin. | 2.3 : 1 |
| Physical Science | 2 : 1 |
| Food Service | 1.7 : 1 |
| Business | 1.5 : 1 |
| Elected Political Office | 1.5 : 1 |
| Government Service | 1.5 : 1 |
| Musical Art | 1.3 : 1 |
| Law | 1 : 1 |
| Media | 1 : 1 |
| International Politics | 1 : 1 |
| Medical Other | 1 : 1.6 |
| Medical Practice | 1 : 2 |
| Service Industry | 1 : 2 |
| Medical Support | 1 : 2.4 |
| Teaching | 1 : 3 |
| Performance Art | 1 : 3 |
| Social Service | 1 : 3 |
| Visual Art | 1 : 3.3 |

The table on page 32 demonstrates the breakdown of the number of students with high interests (those who chose a 4 or a 5) for each gender and it also shows the total percentages of the students who showed a high interest in each profession for the 2004-2005 initial career aspirations study:

**6. Career Aspirations of Private/Charter High School Students for 2004-2005**

| | Male | Male % | Female | Female % | Total | Total % |
|---|---|---|---|---|---|---|
| **Teaching** | 19 | 12% | 51 | 26% | 70 | 20% |
| **Eng/Phys. Science** | 52 | 34% | 29 | 15% | 81 | 23% |
| **Comp/IT** | 45 | 29% | 19 | 10% | 64 | 18% |
| **Business** | 79 | 52% | 63 | 32% | 142 | 40% |
| **Trade** | 24 | 16% | 3 | 2% | 27 | 8% |
| **Med Practice** | 30 | 20% | 67 | 34% | 97 | 28% |
| **Med Support** | 14 | 9% | 56 | 28% | 70 | 20% |
| **Law** | 30 | 20% | 39 | 20% | 69 | 20% |
| **Art** | 25 | 16% | 63 | 32% | 88 | 25% |
| **Service Industry** | 12 | 8% | 45 | 23% | 57 | 16% |
| **Social Service** | 14 | 9% | 51 | 26% | 65 | 19% |
| **Civil Service** | 32 | 21% | 9 | 5% | 41 | 12% |
| **City Admin.** | 12 | 8% | 10 | 5% | 22 | 6% |
| **Political Office** | 15 | 10% | 9 | 5% | 24 | 7% |

Due to the changes in wording on the survey used this year I needed to make the two sets of data obtained, this year and last year, comparable. Making the two years of data comparable is a bit complicated, as one does not want to double count the people interested in both, Physical Science and Engineering, Information Technology and Computers, Medical Support and Medical Other, and Performance, Visual and Musical Arts. It is also important to note that last year students who were "*Very interested*" and "*Pretty interested*" (those who chose a 4 or a 5 on the survey) were considered. Once again to make the results comparable for both years, I needed to account for the student who chose a 4 and a 3 on the survey this year, those who were "*Very interested*" and "*Pretty interested.*"

The tables in the following sub-sections demonstrate the methodology on making the results of both years comparable in the career fields listed in the prior paragraph for private/charter high schools.

**Physical Science and Engineering:** Last year, Physical Science and Engineering careers, were listed as one career field whereas this year the two career fields were listed separately to better see the distribution of career aspirations by gender in each. I did not want to double count the people interested in both Physical Science and Engineering, who would check off once last year, but twice this year. That is 9.50% of the current sample of 517 – or 49 cases, 39 males and 10 females. The data is presented on the following page:

**7. Physical Science and Engineering: Table A**

| | Male | Female | Total |
|---|---|---|---|
| **Very Interested in Both Engineering and Physical Science Careers** | 8 | 3 | 11 |

| | | | |
|---|---|---|---|
| **Very Interested in Physical Science and Pretty Interested in Engineering** | 5 | 2 | 7 |
| **Very Interested in Engineering and Pretty Interested in Physical Science** | 15 | 2 | 17 |
| **Pretty Interested in Both** | 11 | 3 | 14 |
| **Total** | 39 | 10 | 49 |

The students in question here are not necessarily equally interested in each of these fields. 11 (8 males, 3 females) are *"Very interested"* in both Physical Science and Engineering careers. 14 (11 males, 3 females) are *"Pretty interested"* in both careers. But, 7 (5 males, 2 females) are *"Very interested"* in Physical Science careers and only *"Pretty interested"* in Engineering. 17 (15 males, 2 females) are *"Very interested"* in Engineering and *"Pretty interested"* in Physical Science.

Still, all these people would be a 3 or a 4 on each career and be a double counting problem in comparing the 2005-2006 results to the 2004-2005 survey results.

**8. Physical Science and Engineering: Table B**

| | Male | Female | Total |
|---|---|---|---|
| **Very Interested in Physical Science and NOT Interested in Engineering** | 7 | 5 | 12 |
| **Pretty Interested in Physical Science and NOT Interested in Engineering** | 12 | 20 | 32 |
| **Very Interested in Engineering and NOT Interested in Physical Science** | 23 | 9 | 32 |
| **Pretty Interested in Engineering and NOT Interested in Physical Science** | 40 | 14 | 54 |

In addition, there are the 44 (19 males, 25 females) students who are *"Very interested"* (12) or *"Pretty interested"* (32) in Physical Science and NOT interested in Engineering at all. Then there are the 86 (63 males, 23 females) who are *"Very interested"* (32) and *"Pretty interested"* (54) in Engineering and NOT in Physical Science.

**9. Physical Science and Engineering: Table C**

| | Male | Female | Total |
|---|---|---|---|
| **Engineering ONLY** | 63 | 23 | 86 |
| **Physical Science ONLY** | 19 | 25 | 44 |
| **Both** | 39 | 10 | 49 |
| **Total** | 121 | 58 | 179 |

The comparable proportion to last year's results is therefore the 86 (Engineering only) plus 44 (Physical Science only) and 49 (interested in both), or 179 students. That is 35% of the total students for the 2005-2006 survey interested in one, the other or both compared to 23% of the total interested in "Engineering/Physical Science" last year. It seems that the combination deterred some students interested in only one last year, as well as blurring who was interested in what, and thus obscuring an interesting difference by sex. Female interest in Physical Science and Engineering is roughly comparable and if anything a bit higher for Physical Science. Male interest in Engineering is about three times as great as that in Physical Science. This results in a 4:1 gender difference in Engineering but only a 2:1 difference in Physical Science.

**Computers and Information Technology:** Last year, Computer and Information Technology (IT) careers were listed as one career field, whereas this year the two career fields were listed separately to better see the distribution of career aspirations by gender in each. I did not want to double count the people interested in both Computers and IT, who would check off once last year, but twice this year. That is 13.35% of the current sample of 517 – or 69 cases, 50 males and 19 females. The table is demonstrated below:

| | Male | Female | Total |
|---|---|---|---|
| **Very Interested in Both Computer and Information Technology Careers** | 16 | 3 | 19 |
| **Very Interested in Computers and Pretty Interested in IT** | 4 | 1 | 5 |
| **Very Interested in IT and Pretty Interested in Computers** | 4 | 1 | 5 |
| **Pretty Interested in Both** | 26 | 14 | 40 |
| **Total** | 50 | 10 | 69 |

The students in question here are not necessarily equally interested in each of these fields. 19 (16 males, 3 females) are *"Very interested"* in both Computer and IT careers. 40 (26 males, 14 females) are *"Pretty interested"* in both careers. But, 5 (4 males, 1 females) are *"Very interested"* in Computer careers and only *"Pretty interested"* in IT. 5 (4 males, 1 females) are *"Very interested"* in IT and *"Pretty interested"* in Computers.

Still, all these people would be a 3 or a 4 on each career and be a double counting problem in comparing the 2005-2006 results to the 2004-2005 survey results.

| | Male | Female | Total |
|---|---|---|---|
| **Very Interested in Computers and NOT Interested in IT** | 1 | 1 | 2 |
| **Pretty Interested in Computers and NOT Interested in IT** | 2 | 3 | 5 |
| **Very Interested in IT and NOT Interested in Computers** | 0 | 0 | 0 |
| **Pretty Interested in IT and NOT Interested in Computers** | 2 | 0 | 2 |

In addition, there are the 7 (3 males, 4 females) students who are *"Very interested"* (2) or *"Pretty interested"* (5) in Computer careers and NOT interested in IT at all. Then there are the 2 (2 males, 0 females) who are *"Very interested"* (0) and *"Pretty interested"* (2) in IT and NOT in Computers.

| | Male | Female | Total |
|---|---|---|---|
| **Computers ONLY** | 3 | 4 | 7 |
| **IT ONLY** | 2 | 0 | 2 |
| **Both** | 50 | 19 | 69 |
| **Total** | 55 | 23 | 78 |

The comparable proportion to last year's results is therefore the 7 (Computers only) plus 2 (IT only) and 69 (interested in both), or 78 students. That is, 15.09% of the total students for the 2005-2006 survey interested in one, the other or both compared to 18% of the total interested in

"Computer/IT" last year. Female interest in Computers was four times larger than the female students at all interested in IT alone, of which there was none. Male interest in Computers and IT is roughly comparable and if anything a little higher for IT. This results in a 1:3 gender difference in Computers and a 1:3 gender difference in IT, as well.

**Medical Support and Medical Other:** Last year, Medical Support and Medical Practice were the only two medical careers listed. This year Medical Other career choice was added to the survey. The results of students who chose to be interested in Medical Support might have also blurred what the students were actually interested in because if they were not interested in Medical Practice nor in Medical Support but interested in some other medical career, the only choice available to them close enough was Medical Support. For this reason the data obtained this year for both Medical Other and Medical Support needs to be made comparable. By using the guidelines of the analysis used in making Engineering and Physical Science careers and IT and Computer careers comparable, I also determined the comparable proportion of students interested in Medical Other/Medical Support careers for this year.

I did not want to double count the people interested in both Medical Support and Medical Other careers, who would check off once last year, but twice this year. That is 13.73% of the current sample of 517 – or 71 cases, 23 males and 48 females.

| | Male | Female | Total |
|---|---|---|---|
| **Very Interested in Both Medical Support and Medical Other** | 8 | 15 | 23 |
| **Very Interested in Medical Other and Pretty Interested in Medical Support** | 7 | 3 | 10 |
| **Very Interested in Medical Support and Pretty Interested in Medical Other** | 1 | 10 | 11 |
| **Pretty Interested in Both** | 7 | 20 | 27 |
| **Total** | 23 | 48 | 71 |

The students in question here are not necessarily equally interested in each of these fields. 23 (8 males, 15 females) are *"Very interested"* in both Medical Support and Medical Other careers. 27 (7 males, 20 females) are *"Pretty interested"* in both careers. But, 10 (7 males, 3 females) are *"Very interested"* in Medical Other careers and only *"Pretty interested"* in Medical Support. 11 (1 males, 10 females) are *"Very interested"* in Medical Support and *"Pretty interested"* in Medical Other.

Still, all these people would be a 3 or a 4 on each career and be a double counting problem in comparing the 2005-2006 results to the 2004-2005 survey results.

| | Male | Female | Total |
|---|---|---|---|
| **Very Interested in Medical Support and NOT Interested in Medical Other** | 1 | 3 | 4 |
| **Pretty Interested in Medical Support and NOT Interested in Medical Other** | 6 | 4 | 10 |

| | | | |
|---|---|---|---|
| **Very Interested in Medical Other and NOT Interested in Medical Support** | 1 | 8 | 9 |
| **Pretty Interested in Medical Other and NOT Interested in Medical Support** | 4 | 14 | 18 |

In addition, there are the 14 (7 males, 7 females) students who are *"Very interested"* (4) or *"Pretty interested"* (10) in Medical Support and NOT interested in Medical Other careers at all. Then there are the 27 (5 males, 22 females) who are *"Very interested"* (9) and *"Pretty interested"* (27) in Medical Other and NOT in Medical Support.

| | Male | Female | Total |
|---|---|---|---|
| **Medical Support ONLY** | 7 | 7 | 14 |
| **Medical Other ONLY** | 5 | 22 | 27 |
| **Both** | 23 | 48 | 71 |
| **Total** | 35 | 77 | 112 |

The comparable proportion to last year's results is therefore the 14 (Medical Support only) plus 27 (Medical Other only) and 71 (interested in both), or 112 students. That is, 21.66% of the total students for the 2005-2006 survey interested in one, the other or both compared to 18% of the total interested in Medical Support career only last year. The proportions seem to have replicated and they also show that it is possible that students who were actually interested in Medical Other careers checked off to be interested in Medical Support careers since there was no other option available. Female interest in Medical Other careers was only three times larger than the female interest in Medical Support careers. Male interest in Medical Other and Medical Support is roughly comparable and if anything a little higher for Medical Support. This results in a 2:1 gender difference in Medical Support and a 3:1 gender difference in Medical Other.

**Arts Careers including Visual, Musical and Performance Arts:** This year the Arts were divided into three separate careers, Visual, Performance and Musical Arts. Last year all three were implied by an individual career choice, Arts. To avoid double counting I needed to make this year's results comparable to last year's. I followed the same criteria as I did for making the prior careers that were paired last year and listed separately this year.

I did not want to double count the people interested in Visual, Performance and/or Musical Arts careers, who would check off once last year, but twice or even three times this year. That is 6.6 % of the current sample of 517 – or 34 cases, 12 males and 22 females.

| | Male | Female | Total |
|---|---|---|---|
| **Very Interested in All Three Arts** | 4 | 6 | 10 |
| **Very Interested in Musical Arts and Pretty Interested in Performance and Visual Arts** | 1 | 2 | 3 |
| **Very Interested in Performance Arts and Pretty Interested in Musical and Visual Arts** | 1 | 4 | 5 |
| **Very Interested in Visual Arts and Pretty Interested in Musical and Performance Arts** | 1 | 3 | 4 |
| **Pretty Interested in All Three Arts** | 3 | 4 | 7 |
| **Very Interested in Both Performance Arts and Visual Arts but Pretty Interested in Musical Arts** | 1 | 1 | 2 |
| **Very Interested in Musical and Visual and Pretty** | | | |

| | | | |
|---|---|---|---|
| **Interested in Performance Arts** | 1 | 1 | 2 |
| **Very Interested in Musical and Performance Arts but Pretty Interested in Visual Arts** | 0 | 1 | 1 |
| **Total** | 12 | 22 | 34 |

The students in question here are not necessarily equally interested in each of these fields. 10 (4 males, 6 females) are *"Very interested"* in all three Art careers. 7 (3 males, 4 females) are *"Pretty interested"* in all three Art careers. But, 3 (1 males, 2 females) are *"Very interested"* in Musical arts and only "Pretty Interested" in Performance and Visual Art careers. 5(1 males, 4 females) are *"Very interested"* Performance Arts but *"Pretty interested"* in Musical and Visual Art careers. 4(1 males, 3 females) are *"Very interested"* in Visual Art but *"Pretty interested"* in both Musical and Performance Art careers. 2 (1 male, 1 females) are *"Very interested"* in both Performance Art and Visual Art careers and only *"Pretty interested"* in Musical Art careers. One of each, male and female students, is also *"Very interested"* in both Musical and Visual Art careers and only *"Pretty interested"* in Performance Art careers. Only one female is *"Very interested"* in Musical and Performance Art careers but only *"Pretty interested"* in Visual Art careers. If we count these students and their career aspirations as demonstrated above, then we can avoid the double counting, and maybe triple counting, problems.

| | **Male** | **Female** | **Total** |
|---|---|---|---|
| **Very Interested in Performance Arts and NOT in the other two Art careers** | 0 | 4 | 4 |
| **Pretty Interested in Performance Arts and NOT in the other two Art careers** | 0 | 2 | 2 |
| **Very Interested in Visual Arts and NOT in the other two careers** | 1 | 6 | 7 |
| **Pretty Interested in Visual Arts and NOT in the other two careers** | 4 | 10 | 14 |
| **Very Interested in Musical Arts and NOT in the other two Art careers** | 9 | 1 | 10 |
| **Pretty Interested in Musical Arts careers and NOT in the other two Art careers** | 10 | 2 | 12 |

In addition, there are 6 (0 males, 6 females) students who are *"Very Interested"* (4) and *"Pretty interested"* (2) in Performance Art careers and NOT in either or both Musical and Visual Art careers. Then there are 21(5 males, 16 females) students who are only either *"Very interested"* and *"Pretty interested"* in Visual Art careers and NOT in either or both Musical and Performance Art careers. Also, there are 22(19 males, 3 females) students who are only *"Pretty interested"* and *"Very interested"* in Musical Art careers and NOT in either or both Visual and Performance Art careers.

| | **Male** | **Female** | **Total** |
|---|---|---|---|
| **Musical Only** | 19 | 3 | 22 |
| **Performance Only** | 0 | 6 | 6 |
| **Visual Only** | 5 | 16 | 21 |
| **All Three** | 12 | 22 | 34 |
| **Total** | 36 | 47 | 83 |

The comparable proportion to last year's results is therefore the 22 students interested in Musical Arts only plus 6 students interested in Performance Arts only plus 21 students interested in

Visual Arts only and 34 interested in all three Art careers at the same time, or 83 students. That is 16.05% of the total students for the 2005-2006 survey interested in one of the three, any two and not (any) of the third Art careers, or even all three Art careers, compared to 25% of the total interested in Arts last year. This lower percentage indicates either that the specifics provoked more thought than last year or that some people had a broader definition of the Arts than the "Fine Arts" career that we intended, and some important field is missing. The most likely omission is Literature, either being a Writer or Poet, though devoting oneself to Fashion Design or Crafts is also possible. In any case, the meaning of Arts are now "clarified" and specified in the revised survey both providing more useful information for college guidance purposes and an interesting gender difference in the Music versus Performance and Visual Arts categories. It is also interesting that there are more students interested in some combination of the three Art careers. This year's study also revealed the gender distribution within each combination of interest in the three possible careers in the Arts as well as in each individual Art career. The results revealed that there were many more male students interested in Musical Art careers and not in any other Art careers, where as there were more female students interested in Visual Arts only than male students. There were also more female students interested in all three Art careers than males, and no male students at all interested in just Performance Arts.

These ratios and comparisons were not possible with the results of last year's study. Male interest in Musical Art careers is over three times as great as that in Visual Art careers, and there were no male students at all interested in pursuing only a Performance Art based career. There were twice as many female students interested in Performance Art careers than Musical Art careers and almost three times as many interested in Visual Art careers than in Performance Art. The largest difference is that there are more than five times as many female students interested in Visual Art careers than in Musical Art careers. This shows that Musical Art career interest was stronger amongst the men and it was stronger amongst the women within the interest towards pursuing careers in Visual Arts. This results in a 7:1 gender difference in Musical Art careers, 0:6 gender difference in Performance Art careers and 4:1 gender difference in Visual Art careers.

Using these results, I was able to construct a comparable data set on career aspirations of students in private/parochial schools this year. The first table on page 39 demonstrates the adjusted proportions of students who were both "*Very interested*" and "*Pretty interested*" in the careers. The careers were combined into the same categories as they were introduced to the students on the survey used last year, again for comparability purposes. The second table on page 39 demonstrates high interests of students from last year's study.

**Private School Students**
**Very Interested and Pretty Interested Students 2005-2006**
***(Comparable Version to last year's results)***

| | Male | Male % | Female | Female % | Total | Total % |
|---|---|---|---|---|---|---|
| Teaching | 36 | 15% | 83 | 30.40% | 119 | 23.02% |
| Engineering/Physical Science | 121 | 49.59% | 58 | 21.25% | 179 | 35.00% |
| Computers/IT | 55 | 22.54% | 23 | 8.42% | 78 | 15.09% |
| Business | 144 | 59.02% | 101 | 37.00% | 245 | 47.39% |
| Trade | 43 | 17.62% | 8 | 2.93% | 51 | 9.86% |
| Medical Practice | 32 | 13.11% | 72 | 26.37% | 104 | 20.12% |
| Medical Support/Other | 35 | 14.34% | 77 | 28.21% | 112 | 21.66% |
| Law | 31 | 12.65% | 35 | 12.77% | 66 | 12.77% |
| Art | 36 | 14.75% | 47 | 17.22% | 83 | 16.05% |
| Media | 88 | 36.07% | 102 | 37.36% | 190 | 36.75% |
| Food Service | 40 | 16.39% | 52 | 19.05% | 92 | 17.79% |
| Service Industry | 36 | 14.75% | 54 | 19.78% | 90 | 17.41% |
| Social Service | 28 | 11.48% | 84 | 30.77% | 112 | 21.66% |
| Civil Service | 58 | 23.77% | 24 | 8.79% | 82 | 15.86% |
| City Admin. | 20 | 8.20% | 7 | 2.56% | 27 | 5.22% |
| Elected Political Office | 30 | 12.30% | 22 | 8.06% | 52 | 10.06% |
| Government Service | 36 | 14.75% | 26 | 9.52% | 62 | 11.99% |
| International Politics | 39 | 15.98% | 38 | 13.92% | 77 | 14.89% |

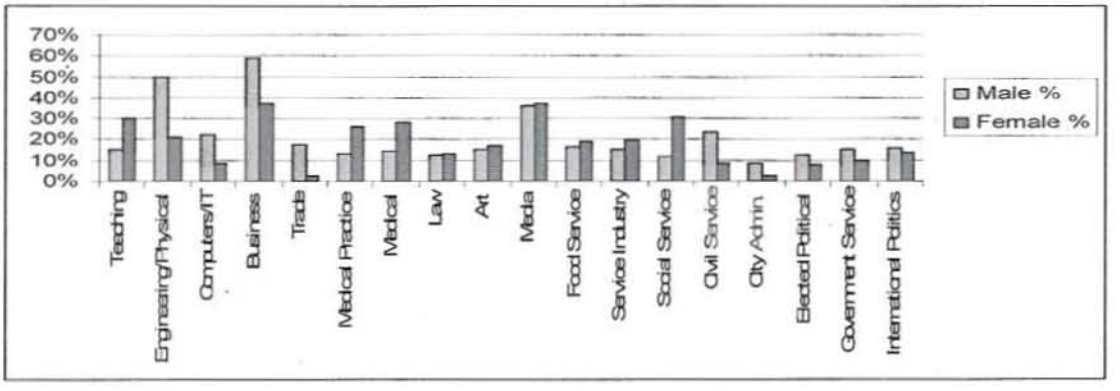
**Private School Students**
**Very Interested and Pretty Interested Students 2004-2005**

| | Male | Male % | Female | Female % | Total | Total % |
|---|---|---|---|---|---|---|
| Teach | 19 | 12% | 51 | 26% | 70 | 20% |
| Eng/Phys. Science | 52 | 34% | 29 | 15% | 81 | 23% |
| Comp/IT | 45 | 29% | 19 | 10% | 64 | 18% |
| Business | 79 | 52% | 63 | 32% | 142 | 40% |
| Trade | 24 | 16% | 3 | 2% | 27 | 8% |
| Med Practice | 30 | 20% | 67 | 34% | 97 | 28% |
| Med Support | 14 | 9% | 56 | 28% | 70 | 20% |
| Law | 30 | 20% | 39 | 20% | 69 | 20% |
| Art | 25 | 16% | 63 | 32% | 88 | 25% |
| Service Industry | 12 | 8% | 45 | 23% | 57 | 16% |
| Social Service | 14 | 9% | 51 | 26% | 65 | 19% |
| Civil Service | 32 | 21% | 9 | 5% | 41 | 12% |

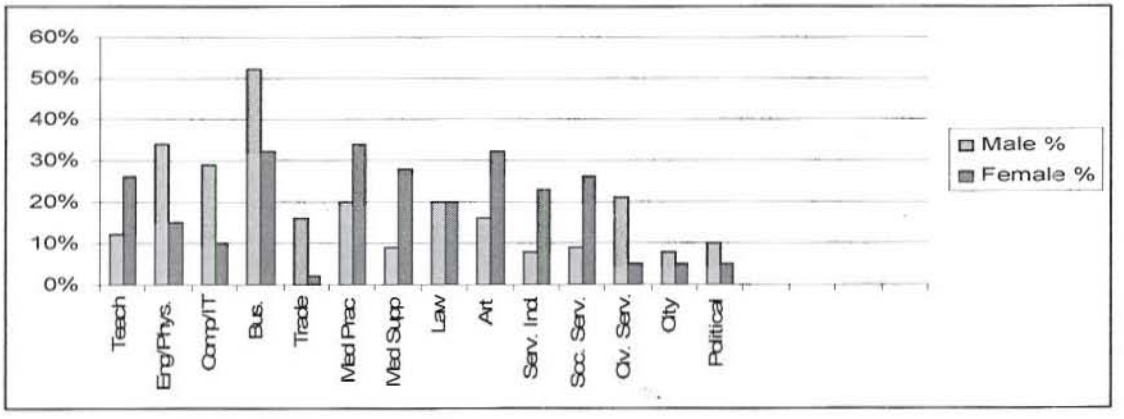
| | | | | | | |
|---|---|---|---|---|---|---|
| **City Administration** | 12 | 8% | 10 | 5% | 22 | 6% |
| **Political Office** | 15 | 10% | 9 | 5% | 24 | 7% |

Now that I have produced a set of comparable data, the following graphs will demonstrate the comparison of career aspirations for the two years of study by gender in the private schools. The graphs consider students who indicated to be *"Very Interested"* as well as *"Pretty interested"* for both years of study.

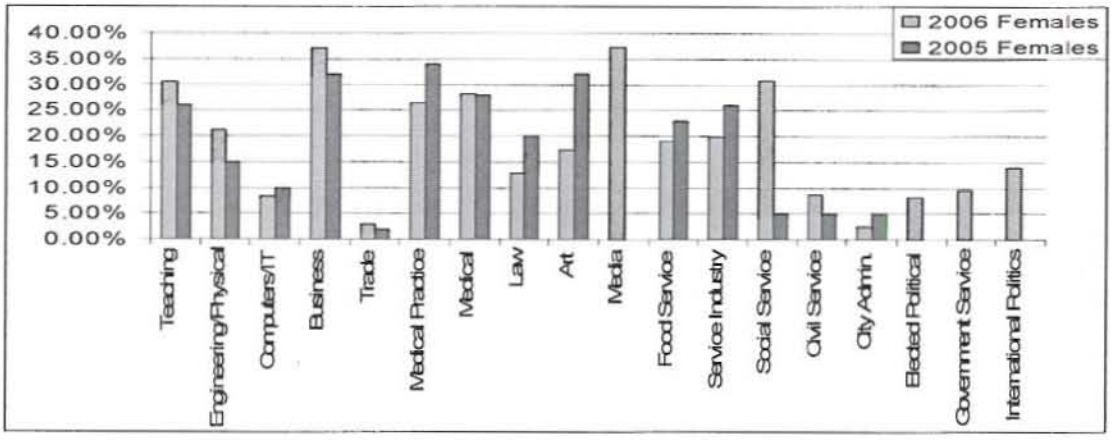
**2005-2006 Survey Results (Comparable Version) of High Interests in 18 Career Fields**



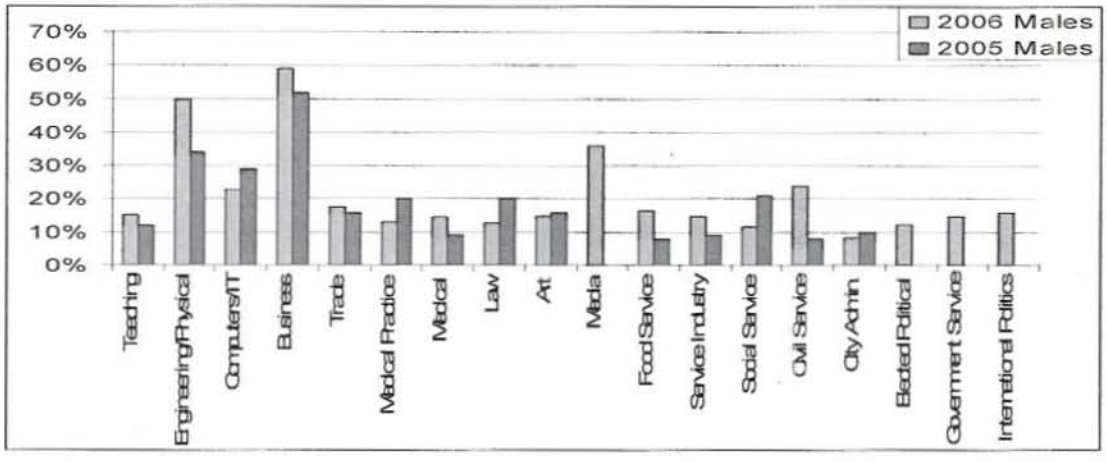

**2004-2005 Survey Results of High Interests in 13 Career Fields**




**Comparison of Females for Both years of Study of High Interest**




**Comparison of Males for Both years of Study of High Interest**




Looking at all the tables and graphs it becomes very clear that it was necessary to separate some careers and add others to the survey in order to produce better aspirations data as well as avoid confusion that could have been created by the previous wording. This year, students' aspirations towards most of the careers listed on the survey have replicated for females and males, as well as for students of private schools overall.

The "*2005-2006 Survey Results Graph (Comparable Version)*", on page 40, indicates that the results obtained in last year's study have replicated this year, which became very evident once the graphs were created using comparable data obtained by the processes outlined in the previous section of the report. Teaching, Medical Practice, Medical Support, Social Science and Service Industry careers seem to be female domains for both years of study as seen in the first two graphs on page 40. For the second year in the row, there is a larger proportion of male students interested in pursuing Engineering/Physical Science, Computer/IT careers, Trade and Civil Service careers. Business indicated a slightly higher male interest, but it seems that the proportions are approaching a 50/50 balance. Specifically interesting is the higher proportion of male students interested in the two pairs of careers, Engineering/Physical Science and Computer/Information Technology, which have also replicated over the two years as indicated by the comparable data set this year.

What became evident this year though, specifically within these fours careers that were listed in pairs on the survey last year, is the distribution of interest within each individual career by gender. The data indicates that close to 20% of the male students were interested in pursuing Engineering careers and only 4.7%of the female were interested in this field. This shows that the results have replicated over the two years, but it seems that the career combinations (Engineering/Physical Science and Computers/IT) deterred some female students interested in Physical Science alone from rating their interest in the listed Engineering/Physical Science career on the survey last year. This year, of the 5.8% of all participating private school students *"Very interested"* in pursuing Physical Science careers, that is actually 30 students in all, 10 of whom were females. That is 3.65% of the females and about 8.16% of the males were interested. This level of interest, even though very small, was not visible in the results last year due to the wording on the survey.

The same issue is evident with the Computer/IT combination, where last year the survey results indicated that more male students were interested in pursuing it upon high school graduation. This year, once the pair was split into two separate career fields, it became clear that female students interested in one of the two careers, Computers or IT, were skeptical in rating their interest for the paired career field that was listed on the survey last year. There were 2.2% females of the 5.6% total students interested in Computers and 1.5% females of the 4.8% total students interested in IT this year, indicating that even though the proportions of female interest in the two careers are low, this distribution of the female interest in the two separate career fields was not evident last year, and is larger for Computer careers.

Also, last year the survey included only two options for medical careers, Medical Practice and Medical Support, where as this year the Medical Other career was also listed on the survey. The resulting proportions of interested students this year in the three medical career fields indicated that the percentage of students interested in Medical Support careers last year might have been overstated due to the fact that some students who were interested in other medical careers were not given the option to select such other careers in medicine on the survey utilized last year. Even though the replication of a larger proportion of female students than male students interested in all three medical careers is evident this year, the distribution of student interests within the three medical career fields was much clearer this year than last. This year, there was a larger proportion of female students interested in all three medical careers than male students, with 23.36% females of 17.8% of the total private school students interested in Medical Practice compared to 11.42% males. 4.49% male students of the 7.7% of the total students and twice as many, 10.6% of female students were interested in pursuing Medical Support careers as apposed to 28% females of the 20% total students last year. It is therefore clear that with 12.4% female students of the 10.25% total students this year interested to pursue Medical Other careers upon high school graduation, that last year the proportion of females interested in Medical Support careers was overstated due to lack of the Medical Other career listing on the survey.

Last year the political careers, including Civil Service, City Administration, and Elected Political Office was largely of interest to the male population of the private school students, where as this year, with the addition of Government Service and International Political careers to the survey, the proportion of students interested in political and government careers overall this year has

reached far better gender distribution levels as far as the interest in the listed careers is concerned. I think that some of the careers that the male students were interested in last year were not always Civil Service, City Administration and/or Elected Political Office careers, but other political careers such as the two that were added to the survey this year, therefore overstating the proportions of male interest in some of the political careers listed on the survey used last year. This year, Civil Service careers were still a male domain, but there were more females than last year interested in pursuing this career, overall. City Administration showed less interest from the female students this year, but that could be due to the interest that these females expressed for the Government Service and International Political careers this year. Within the newly added careers, the proportion of males and females was approaching a 50/50 level of distribution, with almost 16% male and 14% female students interested in International Political careers and 14.75% male and almost 10% female students interested in Government Service careers.

Interest in Legal careers has defiantly replicated this year, showing a very close to a 50/50 distribution by genders within the career of Law. Last year there were exactly 20% of each gender interested in pursuing a Legal career, and even though the interest seemed to have simmered down for both genders this year, the distribution was also approaching a 50/50 balance, with 12.65% male and 12.77% female interested.

Business was another career that seemed to attract almost an equal number of students of both genders, but the overall student interest had increased over the two years, with 40% of the students interested last year (52% male and 32% female) to 47.39% this year (59% male and 37% female).

The Arts career was another one of the careers that was split into separate professional fields in the survey used for the 2005-2006 replication study, where the Visual, Performance, and Musical Arts were listed as the options for rating students' interest levels. There were twice as many female students interested in pursuing both the Performance and Visual Art careers than there were Musical Art careers. On the other hand, there were more male students pursuing careers in the Musical Arts, with 10.2% male students and only 7.6% female students expressing interest. This was not visible to us from the data collected last year, which also means that the wording on the survey used last year might have deterred some of the truly interested male students from rating their interest in the Arts profession.

Looking at the table of high interests for the 2005-2006 career replication study and comparing it to the results from last year, it can be noted that most of the findings have replicated and in the instances of wording changes the results were clarified and expressed a better picture in terms of gender proportions within each career field (i.e. Arts, Medical Support / Medical other, etc.). Teaching is still a female dominated career with little progress from the male population, just yet. The same is true for the Engineering professions, which are male domains, but the proportion of female students did rise over the two years. This year, female interest level was also quantified for the Physical Science careers where it was found to be still lower than that of the male students' interest, but still significant. Government and Political careers, those that were added to the survey this year, seemed to have attracted a proportional number of students of both genders, where their interest levels were approaching a 50/50 balance and in some instances

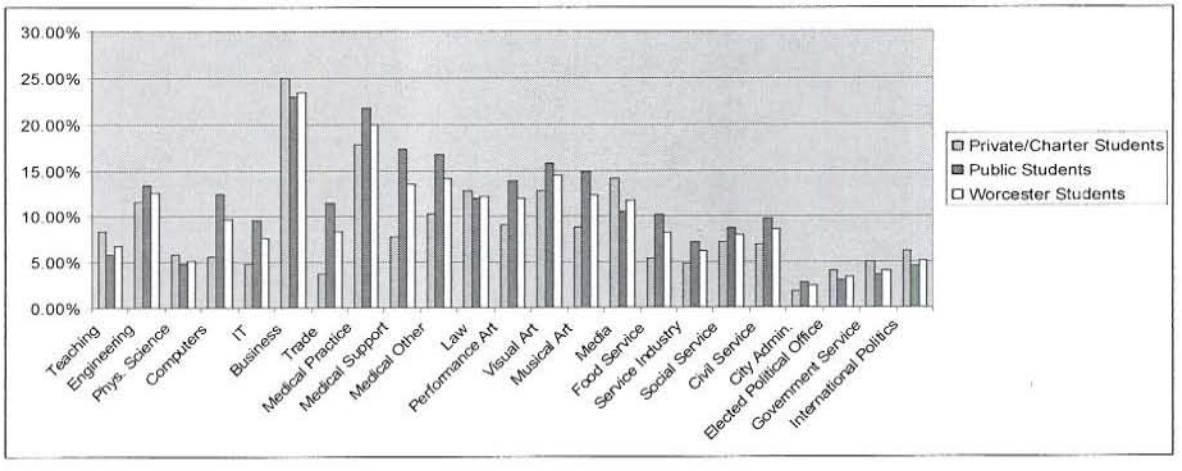
(International Politics), showed a balanced among the genders. Medicine has stayed a female domain for two years. Legal professions were also equally popular amongst the male and female students, but this year it was the female student population who expressed a little more of an interest in these careers, compared to last year where the proportions were dead even for both. Trade, as last year, has stayed a male domain and so have Engineering, Physical Science, Computers and Information Technology professions. To summarize, most of the results from last year have replicated this year, with some minor changes due to the wording on the survey utilized this year. It seems that with the results and the data collected over the two year span, females might in actuality become the dominant gender in some of the careers that our society perceives to be male domains.

### *Comparison of Public and Private Student Aspirations to 2003-2004 City, State, and National Labor Statistics*

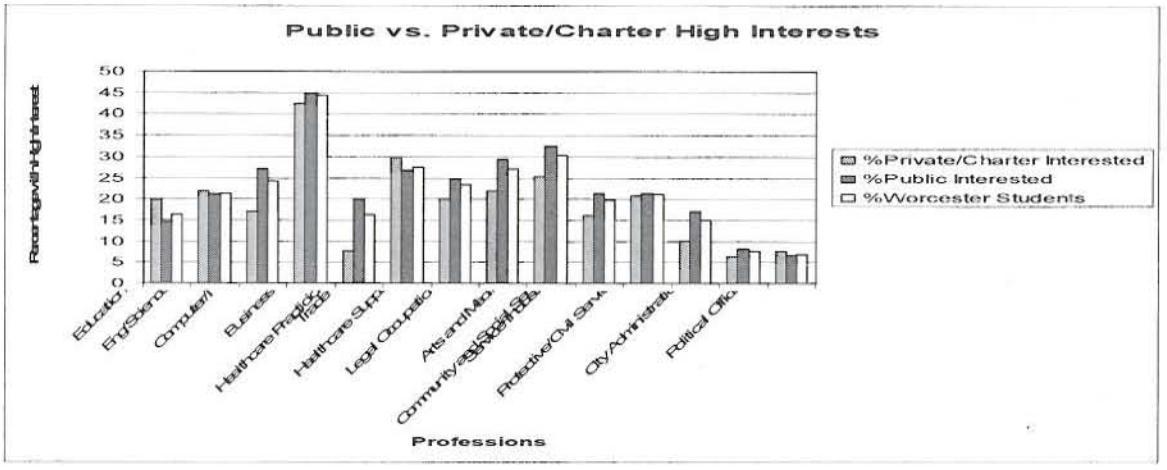
As mentioned earlier, the main part of the survey that was administered to the students in this year's study asked them to indicate their level of interest in 23 different occupational areas. Last year, the same section consisted of only 14 different occupational areas. This year the students were also asked to circle a number from 1 to 4 to specify their level of interest - 1 being "*No interest*" and 4 being "*Very interested*". Last year, they were asked to circle a number from 1 to 5 to specify their level of interest – 1 being "*No interest*" and 5 being "*Very interested*".

The graph shown below illustrates the students with high levels of interest (totals of students who chose a 4 in each occupational area). Each career is broken down into totals for the private/charter high school students, public high school students, and all students surveyed in the city of Worcester. The next graph demonstrates the same thing but for the results obtained from the study conducted last year, where totals of students who chose a 4 or a 5 in each occupational area were specified.

**2005-2006 Survey Results**




**2004-2005 Survey Results**




"From last year's graph, it is evident that the largest single group of students in Worcester are aspiring to enter a career in the Business field, followed by a career in Arts and Media and then Healthcare – especially for the private/charter school students. Some interesting things that may be observed are the comparisons of Education and Protective/Civil Services in the public and private/charter schools. We must also point out that the percentage of Worcester students (all students surveyed) leans more towards the aspirations of the public high school students since a larger number of the surveys were conducted in the public schools. Still, the striking thing is how similar the pattern is for the students in the public and private/charter high schools of Worcester." (Boudreau, Croteau 2005)

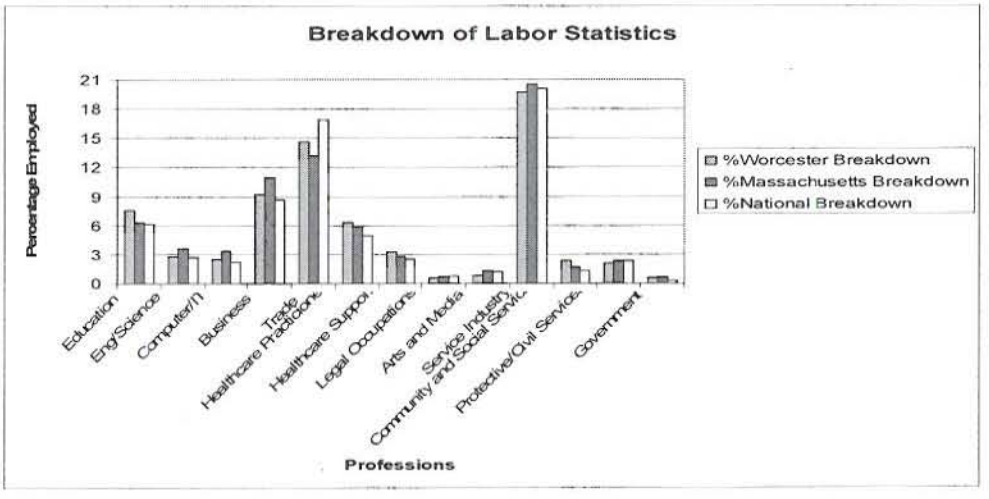
Last year, the striking finding when the public and private/charter high school students were compared was how similar their interests and aspirations were despite the likely difference in social class and ethnic background. The private/charter high school students were notably less interested in Computers, the Trades, the Arts, Civil Service and possibly the Law than the public school students, but exhibit only moderately more proportional interest in the Teaching and Medical professions, and possibly Political Office, distinguished the private school students. This year the interesting question is whether even those relative differences replicated? In 4 fields the relative proportions shifted. Engineering was tied and is now slightly more popular in the public schools, while Business was tied and now slightly favored in the private schools. Medicine favored the private schools last year and now the public schools, and Law favored the public schools last year and now the private schools. The private school students are still notably less interested in Computers, IT, the Trades, the Arts (but not Media) and Civil Service, than the public school students. They remain more interested in Teaching, Politics and City Administration and this year their disproportionately strong interest in the Media careers was revealed by a change in the format of the questions. So, with the Legal, Engineering and Medical professions shifting back and forth, as is interest in the Business world, the evidence suggests no real differences there, just random year to year variation in basically comparable populations. In short, the similarities are even more striking this year than they seemed to be last year. The real differences that are a bit surprising involve the lack of interest in Computer careers in the private/charter schools and the greater interest in Teaching and Political careers. The difference in the Trades, Arts, and Civil Service favoring the public school students are not surprising. The Physical Science and other Medical careers findings are interesting, but as yet, not replicated. This could be a result of the wording change since Engineering/Physical Science, were one

category last year. It is also worth noting most of these differences are small. The larger ones, (at least 5%), that replicated were Computers, Trade, and Medical Support. The Musical Arts and Food Service were also large, but not yet replicated. Teaching, Political Office and the Service Industry were small, but consistent, (replicated) differences.

"The next graph shows the percentages of residents of Worcester, Massachusetts, and the United States who are actually employed in the areas we asked the students to indicate their level of interest in. In order to be able to compare the information from these three regions with the data we collected, we combined some of the Worcester, MA, and US categories." (Boudreau, Croteau 2005) For this year, I found the same statistics from the website of Labor Statistics which were for the year of 2004, where as last year's statistics were obtained from the same source for 2003.

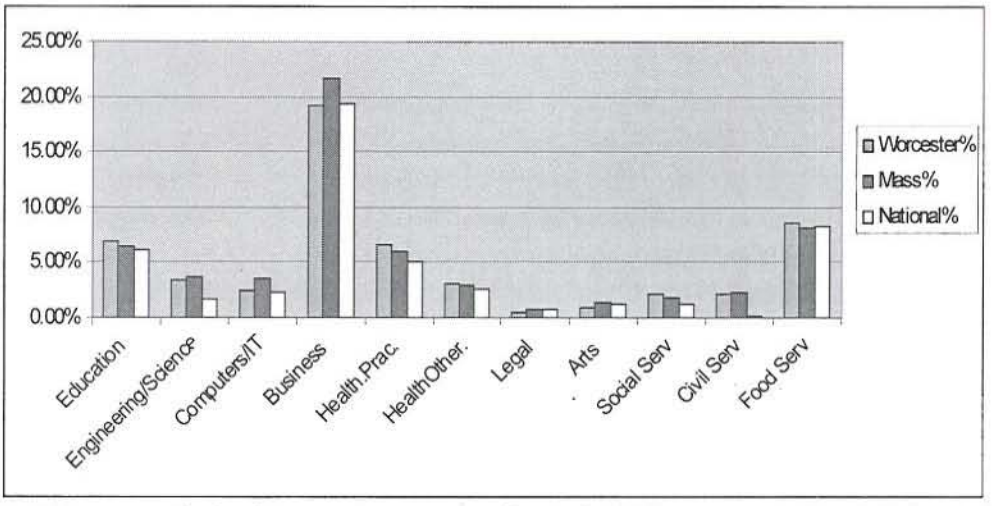
The first graph on this page is for the labor statistics that were used for comparisons in the 2004-2005 study. "Business in the graph below consists of Management and Business and Finance. Engineering/Physical Science consists of Architecture and Engineering and Life, Physical, Social Sciences. Trade consists of Construction, Installation, Maintenance, Repair, and Production Occupations. Service Industry consists of Food Prep/Serving Occupations, Personal Care and Service, and Sales. The Government category shown below should be compared with two of the categories in the student graph – City Administration and Political Office since there was no clear way of combining the student data into one category." (Boudreau, Croteau 2005) The same breakdown follows for the labor statistics used for the study this year.

**Labor Statistics 2003: 2004-2005 Study**




The next graph demonstrates Labor Statistics for 2004 used in this year's study. I was unable to find statistics on the number of people employed in careers of Trade, Social Service and Government. I did find a statistic on the proportion of people in Food Service careers, as it was not provided in last year's study as a separate profession.

**Labor Statistics 2004: 2005-2006 Study**




As last year, Worcester had a larger percentage of people (7% as apposed to 6.5% and 6% respectively) employed in Educational careers than both the state of Massachusetts and the Nation. It was also relatively high in Physical Science, the Health professions and Social Services and maybe Food Service. Worcester was notably lower than the national average in the Arts and Law careers. Civil Service jobs were plentiful by national (but not state) standards.

**Detailed Information on the Labor Statistics Obtained for 2004**

| | National | National% | Mass | Mass% | Worcester | Worcester% |
|---|---|---|---|---|---|---|
| **Business** | 25,053,210 | 19.40% | 675,050 | 21.57% | 43,910 | 19.15% |
| **Computers** | 2932790 | 2.27% | 108,940 | 3.48% | 5,610 | 2.45% |
| **Engineering** | 2385680 | 1.85% | 73,890 | 2.36% | 4,170 | 1.82% |
| **Science** | 1144240 | 0.89% | 41,870 | 1.33% | 3,720 | 1.62% |
| **Social Service** | 1680750 | 1.30% | 55,780 | 1.78% | 4,990 | 2.18% |
| **Legal** | 973970 | 0.75% | 24,660 | 0.79% | 1,160 | 0.51% |
| **Education** | 7969800 | 6.17% | 203,560 | 6.51% | 15,980 | 6.97% |
| **Arts** | 1645870 | 1.27% | 43,980 | 1.41% | 2,130 | 0.93% |
| **Health Practice** | 6469920 | 5.01% | 189,110 | 6.04% | 15,280 | 6.67% |
| **Health Other** | 3307150 | 2.56% | 91,850 | 2.94% | 7,090 | 3.09% |
| **Civil Service** | 305909 | 0.23% | 72,490 | 2.32% | 4,820 | 2.10% |
| **Food Service** | 10637260 | 8.24% | 255,210 | 8.16% | 19,630 | 8.56% |

The existence of some striking mismatches of student aspirations and regional occupational structure are revealed by these data. None are more striking than the 20% of students seeking access to a medical profession that provided about 5% of the jobs. Further, this field is

particularly attractive to females, so when the crunch hits many talented women will be looking for other career opportunities.

Last year, the WPI group which performed the initial study found that "for both sets of city/state/national census data, there are disproportionate number of people in the Worcester employed in Educational, Health Practitioner and Healthcare Other/Support (Nursing, etc) careers, and Community and Social Service career occupations. All of these trends most likely result from the large number of colleges/universities in Worcester as well as the number of clinics and hospitals." (Boudreau and Croteau, 2005) In the careers listed above there were similar trends noticed within the collected statistics for this year's replication study, except within this year's statistics educational careers were similarly distributed within city/state/national regional areas.

From the labor statistics used in both years of study and the results of the levels of career interest of students in private/charter high schools, I wanted to see how realistic the attainment of aspirations of these high school students really are. For this reason I searched for some more statistical analysis on the levels of dropping out within high schools, proportions of people actually enrolled in higher education, and also the percentage of students, both female and male, graduating with degrees in given careers.

**The Drop-out Rates of Students in High School from 1994 up to 2002 From Grades 10 through 12: National**

| | Total | | | Male | | | Female | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total Students | Dropouts | Dropout rate | Total Students | Dropouts | Dropout rate | Total Students | Dropouts | Dropout rate |
| Total - Grades 10-12 | | | | | | | | | |
| 2002 | 10,989 | 367 | 3.3 | 5,504 | 193 | 3.5 | 5,484 | 174 | 3.2 |
| 2001 | 10,777 | 507 | 4.7 | 5,534 | 293 | 5.3 | 5,243 | 214 | 4.1 |
| 2000 | 10,773 | 488 | 4.5 | 5,417 | 280 | 5.2 | 5,356 | 208 | 3.9 |
| 1999 | 11,067 | 520 | 4.7 | 5,659 | 243 | 4.3 | 5,411 | 277 | 5.1 |
| 1998 | 10,791 | 479 | 4.4 | 5,486 | 237 | 4.3 | 5,305 | 243 | 4.6 |
| 1997 | 10,645 | 454 | 4.3 | 5,330 | 251 | 4.7 | 5,313 | 203 | 3.8 |
| 1996 | 10,249 | 485 | 4.7 | 5,175 | 240 | 4.6 | 5,072 | 244 | 4.8 |
| 1995 | 10,106 | 544 | 5.4 | 5,161 | 297 | 5.8 | 4,946 | 247 | 5.0 |
| 1994 | 9,922 | 497 | 5.0 | 5,048 | 249 | 4.9 | 4,873 | 247 | 5.1 |

**Enrollment Status of Recent High School Graduates 16 to 24 Years Old, by Type of School, Attendance Status, Sex, Race, and Hispanic Origin: October 2004**

| | Both sexes | | | Male | | | Female | | |
|---|---|---|---|---|---|---|---|---|---|
| | Total | Graduated this year | Graduated earlier | Total | Graduated this year | Graduated earlier | Total | Graduated this year | Graduated earlier |
| Total | 23,261 | 2,752 | 20,509 | 11,295 | 1,327 | 9,968 | 11,967 | 1,425 | 10,541 |
| Enrolled in college | 10,696 | 1,835 | 8,862 | 4,875 | 815 | 4,060 | 5,821 | 1,020 | 4,802 |
| 2-year college | | | | | | | | | |
| Full time | 1,872 | 520 | 1,352 | 870 | 246 | 624 | 1,002 | 274 | 728 |
| Part time | 696 | 91 | 605 | 297 | 39 | 257 | 399 | 52 | 347 |
| 4-year college | | | | | | | | | |
| Full time | 6,654 | 1,184 | 5,470 | 3,051 | 514 | 2,537 | 3,604 | 670 | 2,934 |
| Part time | 665 | 32 | 632 | 309 | 12 | 297 | 356 | 21 | 335 |
| Graduate school | 809 | 6 | 803 | 349 | 3 | 346 | 460 | 3 | 457 |
| Not enrolled in college | 12,565 | 918 | 11,647 | 6,420 | 512 | 5,908 | 6,145 | 406 | 5,740 |
| Not employed | 12,253 | 879 | 11,374 | 6,248 | 490 | 5,758 | 6,004 | 389 | 5,615 |
| Enrolled in vocational school | 312 | 39 | 274 | 171 | 22 | 149 | 141 | 17 | 125 |

Both tables on this page were obtained from the National Center for Educational Statistics (NCES) website. The following statistics are in thousands.

**Students Who Graduated in 2004**

| | Male % | Female% |
|---|---|---|
| 2 year college full time | 28.28% | 27.35% |
| 4 year college full time | 16.85% | 18.59% |
| Graduate school | 0.86% | 0.65% |

In order to see if the aspirations of the students are reasonable and are a possibility in their near future, it is also important to see what the graduates from college are doing and which careers they are actually pursuing. The following table demonstrates that.

**Full-time Employment Status of Bachelor's Degree Recipients 1 Year after Graduation by Field of Study up to 2001.**

| | | Percent employed full time | Percent Employed in a career closely related to field of study | |
|---|---|---|---|---|
| | 1991 Graduates | 2001 Graduates | 1991 Graduates | 2001 Graduates |
| Total | 74 | 84 | 39 | 52 |
| Professional/technical fields | 80 | 88 | 48 | 63 |
| Arts and sciences fields | 64 | 77 | 26 | 39 |
| Other | 73 | 88 | 38 | 45 |
| Newly qualified to teach | 74 | 82 | 58 | 44 |
| Not newly qualified to teach | 73 | 86 | 36 | 56 |
| Professional/technical fields | 83 | 89 | 48 | 66 |

| | | | | |
|---|---|---|---|---|
| **Engineering** | 84 | 87 | 50 | 71 |
| **Business and management** | 83 | 93 | 42 | 62 |
| **Health** | 86 | 84 | 83 | 81 |
| **Education\1** | 67 | 81 | 39 | 30 |
| **Public affairs and services** | 66 | 87 | 49 | 58 |
| **Arts and sciences fields** | 64 | 77 | 23 | 42 |
| **Biological sciences** | 50 | 66 | 26 | 47 |
| **Physical sciences and mathematics\2** | 72 | 89 | 48 | 66 |
| **Psychology** | 59 | 80 | 22 | 37 |
| **Social sciences** | 68 | 76 | 16 | 25 |
| **Humanities** | 59 | 72 | 11 | 41 |
| **Other** | 73 | 89 | 37 | 48 |
| **Communications** | 75 | --- | 29 | --- |
| **Miscellaneous** | 73 | --- | 38 | --- |
| ---Not available. \2\ Includes Computer Science | | | | |
| †Not applicable. | | | | |
| NOTE: Data are from sample surveys of recent college graduates. | | | | |
| SOURCE: U.S. Department of Education, National Center for Education Statistics, "Recent College Graduates" surveys, 1976 through 1991 | | | | |

The next table, which I discovered in the "*Women, Men and Society*" book by Renzetti and Curran, shows the percentage of three types of degrees in selected fields received by females. The original table contained more fields of study but I chose to include the ones that are more comparable with the survey used this year. The results shown in this table were obtained in a study conducted during 1993-1994. The results were available through the US National Center of Education Statistics in 1996.

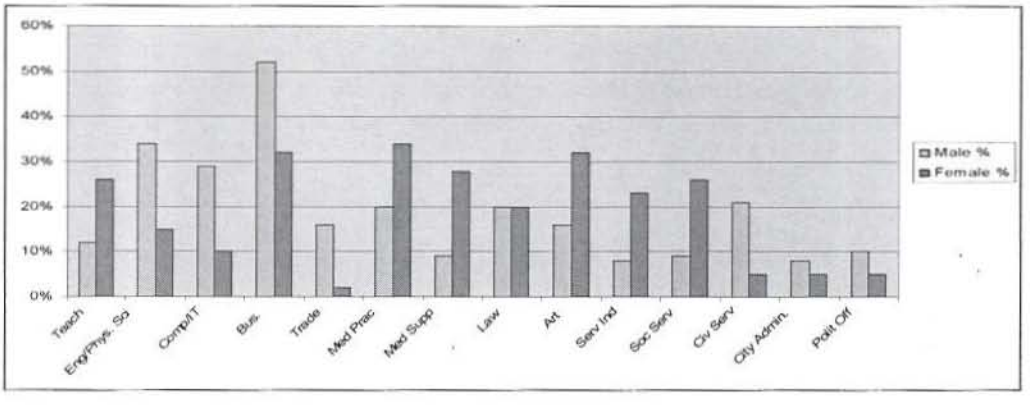
| | Bachelor % Female | Master's %Female | Doctor's % Female |
|---|---|---|---|
| **Accounting** | 55.1% | 45.7% | 46% |
| **Architecture** | 29.6% | 32.3% | 20.1% |
| **Art History** | 78.7% | 78.6% | 60.1% |
| **Astronomy** | 29.5% | 26.9% | 14.9% |
| **Banking & Finance** | 32% | 29.2% | 17.2% |
| **Biological & Life Sciences** | 52.1% | 52.6% | 41.1% |
| **Business Management** | 47.2% | 35.2% | 25.1% |
| **Chemistry** | 40.7% | 41.3% | 30.3% |
| **Computer & IT** | 28.4% | 25.8% | 15.4% |
| **Education** | 77.3% | 76.7% | 60.8% |
| **Engineering** | 16.4% | 15.4% | 11.1% |
| **Health Sciences** | 82.4% | 79.2% | 58.5% |
| **Home Economics** | 87.5% | 83.3% | 74.5% |
| **Mathematics** | 46.3% | 38.1% | 21.9% |
| **Music** | 51.7% | 51.6% | 37.9% |
| **Nursing** | 90.4% | 93.3% | 93.7% |
| **Physics** | 17.7% | 15.2% | 12.3% |
| **Political Science & Government** | 42.5% | 37.2% | 28.9% |
| **Social Work** | 85.8% | 82.9% | 69.5% |
| **Visual & Performance Arts** | 57% | 60.1% | 44.4% |

The next table compares the percentages of three types of degrees by gender for all ethnicities from the same study. The majority of recipients were White men and women.

| | Females% | Males% |
|---|---|---|
| **Bachelor's (Total=1,131,893)** | 54.8 | 45.02 |
| **Master's (Total= 339,102)** | 57.2 | 42.8 |
| **Doctor's (Total=31,611)** | 44.1 | 55.9 |

The table on the next page demonstrates the statistics of this year's students' career interests.

**2005-2006 Survey Results**




Looking at all the statistics on the previous pages it can be summarized that:

1. A larger percentage of women than men seem to want to enter the professions, medicine is especially popular among women.
2. Most years, fewer females than males drop out of High School, but the overall percentage of drop out rates for both men and women in High School is so low not to alter the picture of aspiration by sex.
3. It can also be noted that there were more women who graduated from a 4 year college in 2004 (514,000 males to 670,000 females). So, nearly 60% were female graduates in the pool from which professional and graduate schools could select candidates.
4. As seen on page 48, there were an equal number of graduate students of both sexes finishing degrees (i.e. 3,000), so the men caught up by being about 20% more likely to go to graduate school and complete their degrees.

5. The next table demonstrates that in 2001 there were more students who got jobs in the fields for which they trained than ten year earlier. Health careers were unchanged and already exceptionally high as over about 84% are employed and over 80% are employed in the field they studied.
6. I only had the statistics for male/female percentage of degree attainment from 1994 until 2001, which revealed a relationship between degree level and gender ratio, which was sort of reversed as degree level increased. The majority of the bachelor degrees going to females and the majority of doctoral degrees to males. It was 55% female bachelors and 45% male bachelors, where as 44% female and 56% male doctoral degrees.
7. There were also more female bachelor degrees in most of the careers listed on page 50 than doctoral degrees (in 1994).

Thus, we have data from 1994 on educational attainment indicating that higher percentages of men were following through 10 years ago. Additional figures based on 1991 and 2001 data indicate an increase from 40% to 50% of those who actually find employment in the field they trained for. But, part of that is due to a rise in the proportion employed from 74% to 84%, which probably reflects a tendency for more women to work, instead of training for a career and then deciding to raise a family full time instead. It may also have been a better job market that they entered, but that seems less likely.

The more interesting finding is that as of 2004 one still finds evidence that the men are more likely to go to graduate school and persist to get their graduate degrees. So, is there a trend toward gender equality in progress? High school age females seek to enter the professions in greater numbers than the men, and evidence suggests that they will go to college in larger proportion that their male peers, and graduate in greater numbers, but then the likelihood that they will go on to get graduate and professional degrees is lower. As of 2004, the total pool of professionals with degrees was leaning toward the females (460,000 to 349,000) with equal numbers of each sex entering the pool that year but not necessarily seeking or getting employed.

As the females currently in High School emerge (in about 2015) to enter the professions, will they change that picture? To do that, they will have to do one, two or all three of the following:

A. Totally dominate Bachelor graduate pool (65% and 35%), so that by a 2:1 margin they are the bulk of the candidates available for graduate school and the professions.

And/Or

B. Match the male rate of going to graduate school and finishing (ie. Move from 0.65% to 0.86% of High School graduates doing so).

And then,

C. Enter their intended professions, by getting employed, (preferably full time if advancement is in profession is to equalize), and must persist long enough to take over managerial/administrative leadership position.

Thus we have data from 1994 on educational attainment including that higher percentage of men were following through 10 years ago. Additional figures based on 1991 and 2001 data indicate an increase from 40% to 50% who actually find employment in the field they trained for, but part of that is due to a rise in the proportion employed from 74% to 84%, which probably reflects a tendency for more women to work, instead of training for a career and then deciding to raise a family full time instead. It may also have been a better job market that they entered, but that seems unlikely.

The more interesting finding is that as of 2005, one still finds evidence that the men are more likely to go to graduate school and persist to get their graduate degrees. So the question is, "Is there a trend toward gender equality in progress?" In fact, there is. Both the statistical findings as well as the current aspirations data support the trend of progressive movement by women towards the careers that are considered to be male domains in our society, still today.

What we are seeing is a trend from statement A (above) actually occurring at this time, where very recent statistics (from 2004) have indicated that there are more females graduating from 4-year colleges than there are male students. This presents 60% of the graduating population who are females for potential Doctorial degrees. We are also witnessing statement C (above) in action, as more and more females, as well as students in general, are pursuing and accomplishing further education and entering careers for which they trained. Current aspirations data also indicates that females are moving to dominate certain careers that were previously male domains, which makes it even more possible for statements A as well as C to continue further development. The possibilities, of women dominating some professions that are today are considered male dominated are becoming persistent and even attainable by 2015.

The data of this replication study supports this progressive movement, showing that since there are more females with masculine self-identities striving to enter counter-gender stereotypical professions, and statistical analysis indicates that there are more students entering careers for which they were trained, than by 2015, our current junior females will very possibly be the dominant group in many of the careers that we consider to be male domains today. But is it all still that realistic? There are still those statistics that indicate that there are more males persisting to continue their education to Doctorial levels and beyond. The fact is though that it is all up to the women themselves to continue with the movements and eventual domination of careers such as Engineering, Computers, and even Trades. There are an equal amount of males and females entering college after graduation, so if the females persist and learn to stay in school longer, than with a larger number of Bachelor degrees attained by females, there would follow more Doctorial graduates who are female also. The findings of this study as well as the supporting statistics indicate that if the women really want to become the majority gender in certain careers they actually can, and it is all in their hands, as they do possess the abilities. It is also in their hands to possibly postpone family matters or approach them differently and continue their education further, and possibly attain these positions in which they are under-represented still today.

## *Comparison of Private/Charter to Public High School Students' Career Interests for two year of study*

The survey was administered in all the public high schools in the city of Worcester between December 1st, 2005 and February 1st, 2006. Some of the follow-ups for the private/charter schools ran a bit later than that. The responses for the high interests within careers are demonstrated in the table below for the participating public schools for the 2005-2006 study (students who chose a 4 only were included in the table below):

**Career Interests of Public High School Juniors 2005-2006**

| | Male | Male % | Female | Female % | Total | Total % |
|---|---|---|---|---|---|---|
| **Teaching** | 14 | 3.6% | 35 | 8.1% | 49 | 5.9% |
| **Engineering** | 91 | 23.0% | 20 | 4.6% | 111 | 13.4% |
| **Phys. Science** | 17 | 4.3% | 23 | 5.3% | 40 | 4.8% |
| **Computers** | 73 | 18.6% | 29 | 6.7% | 102 | 12.4% |
| **IT** | 58 | 14.7% | 21 | 4.9% | 79 | 9.6% |
| **Business** | 100 | 25.3% | 90 | 20.8% | 190 | 23.0% |
| **Trade** | 81 | 20.5% | 14 | 3.2% | 95 | 11.5% |
| **Medical Practice** | 35 | 8.9% | 145 | 33.6% | 180 | 21.8% |
| **Medical Support** | 14 | 3.5% | 129 | 29.9% | 143 | 17.3% |
| **Medical Other** | 24 | 6.1% | 114 | 26.4% | 138 | 16.7% |
| **Law** | 37 | 9.4% | 62 | 14.4% | 99 | 12.0% |
| **Performance Art** | 23 | 5.8% | 92 | 21.3% | 115 | 13.9% |
| **Visual Art** | 32 | 8.1% | 99 | 22.9% | 131 | 15.8% |
| **Musical Art** | 61 | 15.4% | 61 | 14.2% | 122 | 14.8% |
| **Media** | 36 | 9.1% | 51 | 11.8% | 87 | 10.5% |
| **Food Service** | 41 | 10.4% | 43 | 10.0% | 84 | 10.2% |
| **Service Industry** | 14 | 3.5% | 45 | 10.5% | 59 | 7.2% |
| **Social Service** | 11 | 2.8% | 61 | 14.2% | 72 | 8.7% |
| **Civil Service** | 58 | 14.7% | 23 | 5.3% | 81 | 9.8% |
| **City Administration** | 13 | 3.3% | 10 | 2.3% | 23 | 2.8% |
| **Elected Political Office** | 17 | 4.3% | 8 | 1.9% | 25 | 3.0% |
| **Government Service** | 20 | 5.1% | 10 | 2.3% | 30 | 3.6% |
| **International Politics** | 16 | 4.1% | 22 | 5.1% | 38 | 4.6% |

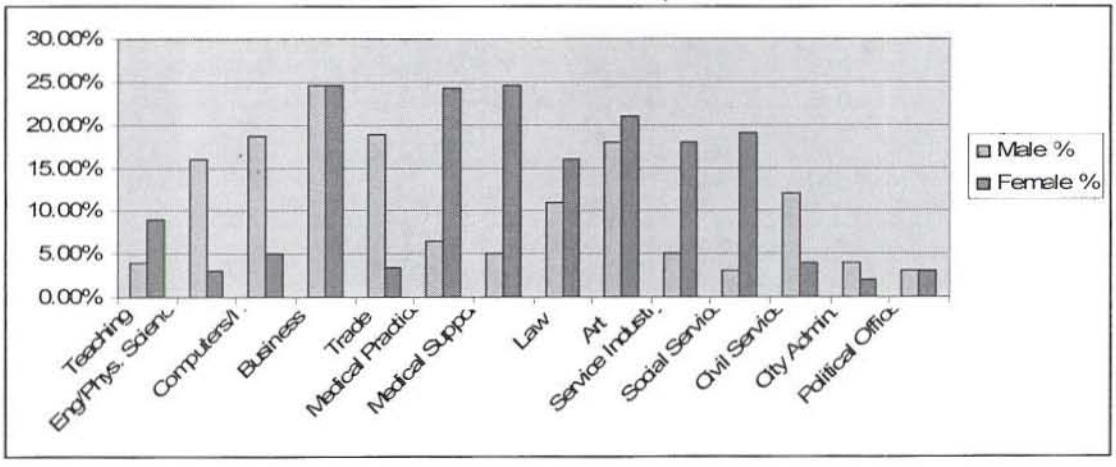
The high interest of students in public schools (those who chose a 4 or a 5) results for each one of the 14 careers on the survey used last year is demonstrated in the table found on the next page.

**Career Interests of Public High School Juniors 2004-2005**

| | Male | Male % | Female | Female % | Total | Total % |
|---|---|---|---|---|---|---|
| **Teaching** | 17 | 4.0% | 41 | 9.0% | 58 | 6.0% |
| **Eng/Phys. Science** | 80 | 16.0% | 15 | 3.0% | 95 | 10.0% |
| **Computers/IT** | 92 | 18.7% | 23 | 5.0% | 115 | 12.1% |
| **Business** | 121 | 24.6% | 112 | 24.6% | 233 | 24.6% |
| **Trade** | 93 | 18.9% | 16 | 3.5% | 109 | 11.5% |
| **Medical Practice** | 32 | 6.5% | 111 | 24.3% | 143 | 15.1% |
| **Medical Support** | 25 | 5.1% | 112 | 24.6% | 137 | 14.5% |
| **Law** | 53 | 11.0% | 73 | 16.0% | 126 | 13.0% |
| **Art** | 89 | 18.0% | 95 | 21.0% | 184 | 19.0% |
| **Service Industry** | 23 | 5.0% | 82 | 18.0% | 105 | 11.0% |
| **Social Service** | 14 | 3.0% | 86 | 19.0% | 100 | 11.0% |
| **Civil Service** | 61 | 12.0% | 16 | 4.0% | 77 | 8.0% |
| **City Admin.** | 20 | 4.0% | 7 | 2.0% | 27 | 3.0% |
| **Political Office** | 16 | 3.0% | 12 | 3.0% | 28 | 3.0% |

The two tables that follow are graphical views of the data demonstrated in the two tables for the two years of study.

**2004-2005 Survey Results: Public Schools**

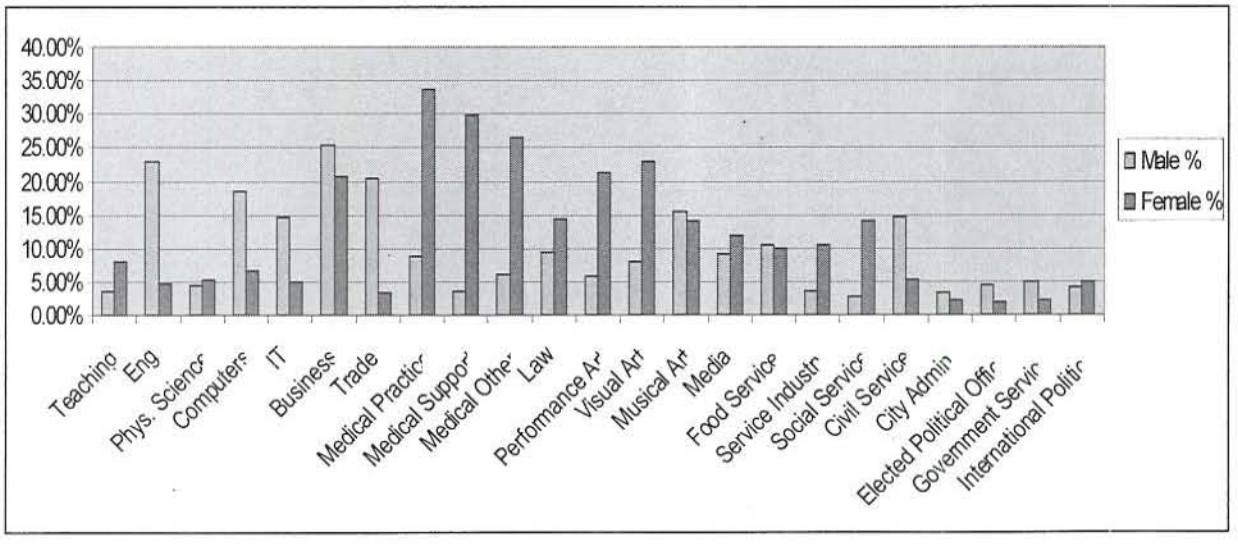



Last year, in the public schools, there were more male students interested in Engineering/Physical Science, Computer/IT, Trade, City Administrative and Civil Service careers. Females were more interested in Educational careers by about 50%. There were about an equal number of students, both female and male, aspiring towards Business careers. Females were also proportionately more interested in the two Medical fields compared to males. Political Office careers were also proportionally equal for males and females in the public schools last year. Social Service careers and Service Industry were very female dominated. The proportion of

females interested in Art careers was higher than that of male students' last year in the public schools.

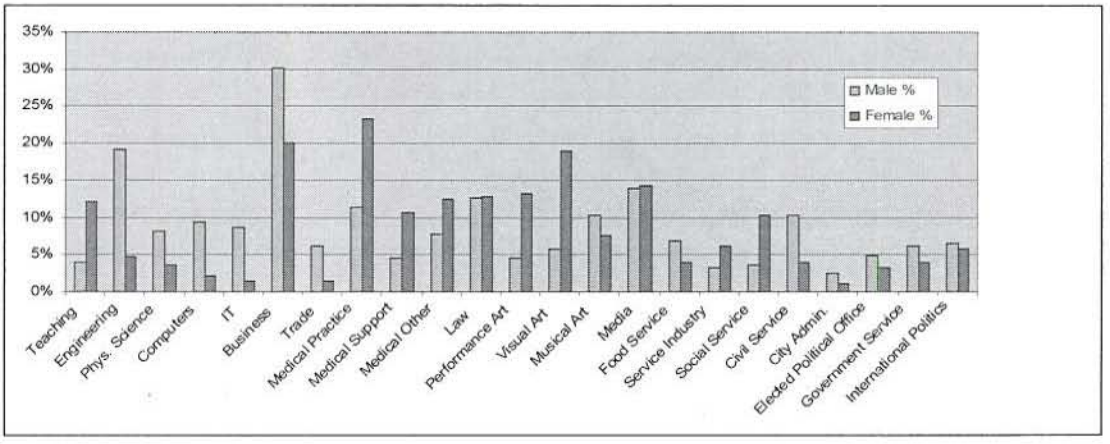
Looking at the graph below that demonstrates high interests of students for this year in the public schools (those who chose a 4 on the survey), career interests that were presented the same way seemed to replicate from last year. Once again more female students were interested in the following careers: Education, all three Medical fields, Social Service and Service Industry. More females were interested in Art careers last year in the public schools, but this year the Arts career was divided into three career choices, and within Performance Arts and Visual Arts, females still seemed to dominate. A slightly larger proportion of the male students than the female students were interested in pursuing careers in Musical Arts in public schools this year. For all the Art careers combined, a larger proportion of females, as last year, were interested in the public schools, but we now know that it is not across the board in all fields. The other careers which seemed to replicate as male dominated included: Engineering, Computers, Trade, Civil Service and City Administration. The Engineering and Physical Science careers were listed separately on the survey in the public schools also, and a slightly larger proportion of female students than male students were interested in pursuing Physical Science careers than Engineering, this year. International Politics was the only political career area with a larger proportion of female students than male students interested. The same pattern appeared in the area of Media. These two careers were not listed on last year's survey, so that is a new finding. Business did not replicate as a career with gender equity. This year, there were more male students interested to pursue a career in this field. Last year, the proportions were very close to equal. The results are graphed below:

**2005-2006 Survey Results: Public Schools**

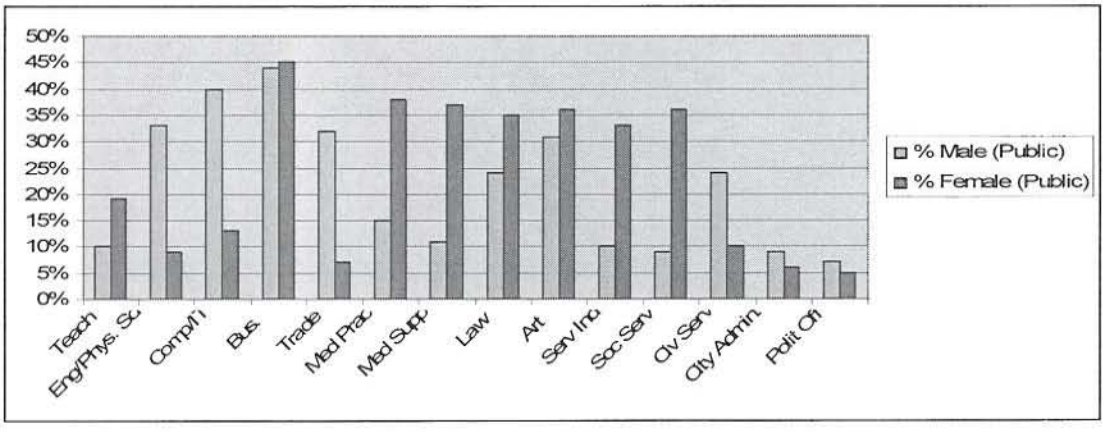


The following two tables show the results for this year's private/charter high interests by gender in each one of the 23 careers listed in the updated survey utilized this year.

**Male versus Female Career Interest for 2005-2006**



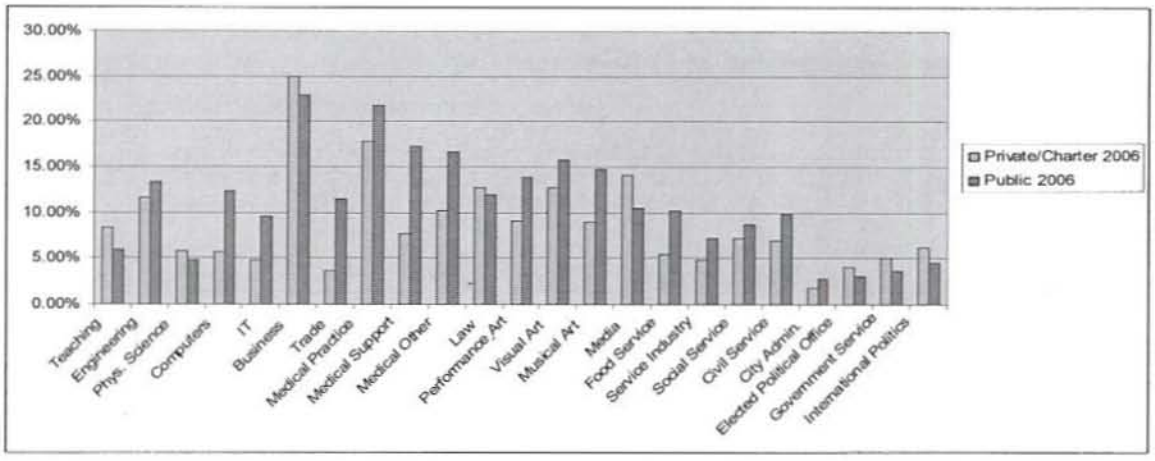

**Male versus Female Career Interest 2004-2005**




For both years of study, in both the public and the private/charter schools, most of the results replicated. There were a larger proportion of female students interested in: Education, Arts, all three Medical fields, and Social Service careers. The results indicate that female interest in these was stable, but not a female majority in all.

The graph on the next page demonstrates the comparison of high interest of students in private/charter and public schools for the 2005-2006 replication study.

**Public versus Private/Charter Schools High Interests Compared for 2005-2006**




In the comparison of both public and private/charter school career interests for this year, it is evident that there were more private school students interested in pursuing the following careers: Education, Physical Science, Business, Media, Elected Political Office, Government Service, and International Politics.

A table comparing public and private/charter school high interests are demonstrated below for the 2004-2005 year study. A similar table for the 2005-2006 year study follows onto the next page accompanied by the discussion of the results.

**2004-2005 High Interests of Public and Private/Charter High School Students**

| | % Male (Private/Charter) | % Male (Public) | %Female (Private/Charter) | % Female (Public) |
|---|---|---|---|---|
| **Teaching** | 12% | 10% | 26% | 19% |
| **Eng/Phys. Science** | 34% | 33% | 15% | 9% |
| **Computers/IT** | 29% | 40% | 10% | 13% |
| **Business** | 52% | 44% | 32% | 45% |
| **Trade** | 16% | 32% | 2% | 7% |
| **Medical Practice** | 20% | 15% | 34% | 38% |
| **Medical Supp** | 9% | 11% | 28% | 37% |
| **Law** | 20% | 24% | 20% | 35% |
| **Art** | 16% | 31% | 32% | 36% |
| **Service Industry** | 8% | 10% | 23% | 33% |
| **Social Service** | 9% | 9% | 26% | 36% |
| **Civil Service** | 21% | 24% | 5% | 10% |
| **City Admin.** | 8% | 9% | 5% | 6% |
| **Political Office** | 10% | 7% | 5% | 5% |

**2005-2006 High Interests of Public and Private/Charter High School Students**

| | % Male (Private/Charter) | % Male (Public) | %Female (Private/Charter) | % Female (Public) |
|---|---|---|---|---|
| **Teaching** | 4% | 3.6% | 12.04% | 8.1% |
| **Engineering** | 19.18% | 23.0% | 4.74% | 4.6% |
| **Phys. Science** | 8.16% | 4.3% | 3.65% | 5.3% |
| **Computers** | 9.39% | 18.6% | 2.19% | 6.7% |
| **IT** | 8.57% | 14.7% | 1.46% | 4.9% |
| **Business** | 30.20% | 25.3% | 20.07% | 20.8% |
| **Trade** | 6.12% | 20.5% | 1.46% | 3.2% |
| **Medical Practice** | 11.42% | 8.9% | 23.36% | 33.6% |
| **Medical Support** | 4.49% | 3.5% | 10.58% | 29.9% |
| **Medical Other** | 7.76% | 6.1% | 12.41% | 26.4% |
| **Law** | 12.65% | 9.4% | 12.77% | 14.4% |
| **Performance Art** | 4.49% | 5.8% | 13.13% | 21.3% |
| **Visual Art** | 5.71% | 8.1% | 18.98% | 22.9% |
| **Musical Art** | 10.20% | 15.4% | 7.66% | 14.2% |
| **Media** | 13.88% | 9.1% | 14.23% | 11.8% |
| **Food Service** | 6.93% | 10.4% | 4.01% | 10.0% |
| **Service Industry** | 3.26% | 3.5% | 6.20% | 10.5% |
| **Social Service** | 3.67% | 2.8% | 10.21% | 14.2% |
| **Civil Service** | 10.20% | 14.7% | 4.01% | 5.3% |
| **City Admin.** | 2.45% | 3.3% | 1.09% | 2.3% |
| **Elected Political Office** | 4.90% | 4.3% | 3.28% | 1.9% |
| **Government Service** | 6.12% | 5.1% | 4.01% | 2.3% |
| **International Politics** | 6.53% | 4.1% | 5.84% | 5.1% |

Last year, there were a larger proportion of female students interested in pursuing a career in Teaching in both the private/charter and public high schools. This finding replicated this year, but the overall percentage of male and female students, within both types of schools, has decreased. Last year, of all the students interested in Educational careers, 12% in the private/charter schools and 10% in the public schools, were male. There were 26% female students interested in Educational careers in the private/charter schools and 19% in the public schools. This year the proportions for both females and males interested in this profession decreased, but the fact that still more females were aspiring towards Educational careers remained. It is also evident that last year there were more females interested in the private/charter schools than in the public schools, as it was true this year also.

Engineering and Physical Science careers were listed as two separate career fields on the survey used in the public and private/charter high schools this year, where as last year the two professions were combined and listed as one career field. 33% of male students in the private/charter schools and 33% (almost identical proportion) the male students in the public schools were interested in pursuing careers in Engineering/Physical Science. The proportion of female students interested was much lower than that of male students in both the private/charter

and public high schools. Lat year, 15% of the females in the private/charter and 9% in the public high schools were *"Pretty interested"* and *"Very interested"* in Engineering/Physical Science careers. This year, the distribution of interest in both Physical Science and Engineering independently became clear for both genders in public and private/charter high schools. Within the two types of schools, there were still more male students interested in pursuing Engineering careers, but the proportions of female students interested in Physical Science careers, in both public and private/charter high schools was revealed and higher for the females in the public schools than the private/charter, (5.3% female students compared to 4.3% male students). In both schools, this year, there were almost 5% of female students interested in Engineering careers compared to 19% of all the male students in the private/charter and 23% in the public school males. Physical Science was more of an interest to the females in the public schools (5.3%) than to the females in the private/charter schools (3.65%), and even more than to the male students in the public schools (4.3%). For Physical Science the private/charter school interest was higher amongst the male students than the female students, as it was true for Engineering.

Computers/IT was another one of the careers field that was split into two separate professions this year. The results have replicated showing more male students in both the public and the private/charter schools to be more interested than the female students in both types of schools. This year though there were more males interested in both Computer and IT careers, where as gender distribution of interest within each one was not visible last year. As for the females, last year there were less of them in the private/charter high schools interested in the Computers/IT career field than in the public schools, and this finding replicated this year. These finding have replicated over the two years of study, but clarified some distribution by gender that was missing last year.

As far as interest in Business careers, the results last year showed that 52% of the male students were interested and 32% of the female students were interested in the private/charter schools, where as in the public schools the distribution was approaching a 50/50 balance amongst the two genders, with a slightly larger proportion of female students expressing their interest. This year 44% of the students interested were male students and 45% were female students. Also, in the public schools the gender proportion of students was also close to a 50/50 balance, but with a slightly larger proportion of male students interested (25.3% male versus 20.8% female students). As for the private/charter school students, of all those interested in Business, 30.2% were male students and only 20.7% were female students, indicating that the results have replicated this year.

Last year the two medical fields, Medical Practice and Medical Support, were a female domain. This year, even with the addition of the third Medical profession, referred to as Medical Other, there were still more female students interested than male students in both the private/charter and pubic high schools.

Legal careers were of the same interest to the students in the private/charter schools, both male and female, last year, with 20% male students and 20% female students expressing interest. In the public schools, the distribution of interest was very close to a 50/50 balance, but there were still slightly more females interested (35% female students interested compared to 24% male students interested). This year once again the results seemed to have replicated showing a 50/50

distribution of interest by gender in the private/charter schools, but slightly more females expressed their interest in Legal careers in the public schools (as last year), but still approaching a balanced distribution, with 9.4% male students interested and 14% female students interested.

Art careers were a female domain last year for both the public and private/charter school, but specifically in the public schools (with 31% male students interested and 36% female students interested), the distribution by gender seemed to be reaching a balance. This year though the interest of students were clarified, where the Arts career was split into three separate professions, Performance, Visual and Musical Arts. This year, both in the public and private/charter high schools, Visual and Performance Art careers were of more interest to the female student body than to the male student body, but within private/charter high schools, the male population seemed to be more interested in both compared to private/charter school male students. In the public high schools the distribution of interest by gender in Musical Arts was approaching a 50/50 balance with slightly more male students interested (15.4% male and 14.2% female). In the private/charter schools, also with more male students interested (10.2%), 7.66% of all female students expressed interest in Musical Art careers. Media was not listed as a separate profession last year, but this year it seems that in both the private/charter and public high schools the interest from female and male students was close to a balance, with slightly more females interested in both types of schools.

Service Industry and Social Service careers remained a female domain, revealing a replication of one more finding. Civil Service was once again a male domain for two year in the row, indicating just another replication. City Administrative and Political Office careers were slightly male dominated this year, as was true last year, which means that the findings have replicated for both the public and private/charter high schools. The two new political careers that were added to the survey this year indicate that there were more male students in the private/charter schools and in the public schools interested in Government Service careers, but female interest in International Political careers in the private/charter schools was greater than that of the female population in the public schools. In the public schools it was slightly larger from the male students than the female students, but approaching a 50/50 distribution, with 6.53% male students interested and 5.84% female students interested in International Political careers. Overall, the political careers remained mail domains for the second year in the row.

In general, most of the findings discovered in last year's study were replicated in the private/charter and in the public schools this year, with some slight changes in interest by gender in the careers that were written differently on the surveys used last year. For the second year of this study, it was once again striking to see how similar the pattern of career aspirations is in the public and private/charter high schools in Worcester. A more extensive analysis on career aspirations of the public schools was conducted by the second replication team sponsored this year by the ACSW this year.

## *Future Plans of Private/Charter vs. Public Schools for both years of study*

**Private/Charter Schools Compared to Public Schools:** This study includes the difference between the future plans of private/charter and public high school students, which were also compared for both years of study. The following table demonstrates the results for this year's study:

**2005-2006 Survey Comparison of Public and Private**

| | Statistically Significant | % Variance Explained | School System with Higher Level of Interest |
|---|---|---|---|
| **4 yr college** | YES | 62% | Private/Charter |
| **2 yr college** | YES | 68% | Public |
| **Vocational** | YES | 35% | Public |
| **Work** | YES | 13% | Public |
| **Military** | NO | 5.38% | |
| **Marriage** | YES | 9% | Public |

From the table above it can be noted that there was a statistically significant difference in the kind of school the students plan to attend and their future plans, except for plans about going into the military. Last year, there was a statistical significance in the choice of going into military, but there was none in marriage. This result is the main difference within the two years of study.

As last year, there was a statistically significant difference that showed that there were more private/charter school students than public school students interested in attending a 4-year college. Last year, 92.8% of all the private/charter school students were interested in attending a 4-year college after graduation. This year the percentage of students interested in attending a 4-year college is even higher at 96.5%. This year there was a significant difference in more private/charter school students choosing to attend a 4-year college upon high school graduation with a 0.79 correlation. This means that 62% of the variance is explained by the type of school, where as last year there was only 42% of the variance explained. The cross tabs for the two years of study for a 4-year college are shown on page 63 for both years.

**2005-2006 Survey Results**

**Crosstab**

| | | | 4-College | | |
|---|---|---|---|---|---|
| | | | No Interest | Interest | Total |
| School | Private/Charter Schools | Count | 18 | 499 | 517 |
| | | % within School | 3.5% | 96.5% | 100.0% |
| | Public Schools | Count | 194 | 647 | 841 |
| | | % within School | 23.1% | 76.9% | 100.0% |
| Total | | Count | 212 | 1146 | 1358 |
| | | % within School | 15.6% | 84.4% | 100.0% |

**2004-2005 Survey Results**

**Crosstab**

| | | | 4-College | | |
|---|---|---|---|---|---|
| | | | No interest | Interest | Total |
| School | Private/Charter Schools | Count | 31 | 398 | 429 |
| | | % within School | 7.2% | 92.8% | 100.0% |
| | Public Schools | Count | 271 | 735 | 1006 |
| | | % within School | 26.9% | 73.1% | 100.0% |
| Total | | Count | 302 | 1133 | 1435 |
| | | % within School | 21.0% | 79.0% | 100.0% |

For both last year and this year there was a significant difference among the type of school and the following after high school graduation plans: 2-year college, vocational school, and work. Last year, there was a significant difference in the type of school and the choice of going into military, where as this year there was no significant difference. This year though, there was a significant difference in more public school students choosing to pursue marriage after high school graduation. Last year there was no significant difference on that item. It is also important to note that both years there is a 20% difference in the proportion of interest among gender (i.e. last year: 92.8% private/charter and 73% public school students, where as this year 96.5% private/charter and 76.9% public school students), and the difference did replicate with only a 3-4% change.

The following table compares the results, significance levels, percentage of variance explained by type of school for both years of study in terms of students' future plans in both private/charter and public high schools.

| | **Statistical Significance 2006** | **School System with Higher Agreement-2006** | **Statistically Significance 2005** | **School System with Higher Agreement-2006** |
|---|---|---|---|---|
| **4 yr college** | YES, 62% | Private/Charter | YES,42% | Private/Charter |
| **2 yr college** | YES,68% | Public | YES,64% | Public |
| **Vocational** | YES,35% | Public | YES,18% | Public |
| **Work** | YES,13% | Public | YES,38% | Public |
| **Military** | NO | Public | YES,21% | Public |

| | | | | |
|---|---|---|---|---|
| **Marriage** | YES,9% | Public | NO | N/A |

It can be noted that for both years of study there was a significant difference in the choice of attending a 4-year college. In both studies, there were more private/charter school students choosing to go on to higher education upon graduation. For both years of study, there was also a significant difference in more public school students choosing to attend a 2-year college, vocational school and go to work. This year there was more variance explained in the choices of attending a 4-year college, a 2-year college, and vocational school but, it was smaller than last year for going to work after high school, but that difference is deceptive due to checking off multiple categories. Not all were going to work full time.

As noted earlier, there were a larger percentage of private/charter school students this year interested in attending a 4-year college than last year. The interesting thing to note here is that even though there were significantly more private/charter school students choosing to attend a 4-year college, the interest of the public school students in this future plan has also risen for this year. This change can be seen through the cross tabs on the previous two pages. The percentage of students interested in attending a 2-year college has not changed very much over the two years.

**2005-2006 Survey Results**

**Crosstab**

| | | | 2-College | | |
|---|---|---|---|---|---|
| | | | No Interest | Interest | Total |
| School | Private/Charter Schools | Count | 509 | 8 | 517 |
| | | % within School | 98.5% | 1.5% | 100.0% |
| | Public Schools | Count | 721 | 120 | 841 |
| | | % within School | 85.7% | 14.3% | 100.0% |
| Total | | Count | 1230 | 128 | 1358 |
| | | % within School | 90.6% | 9.4% | 100.0% |

**2004-2005 Survey Results**

**Crosstab**

| | | | 2-College | | |
|---|---|---|---|---|---|
| | | | No interest | Interest | Total |
| School | Private/Charter Schools | Count | 421 | 8 | 429 |
| | | % within School | 98.1% | 1.9% | 100.0% |
| | Public Schools | Count | 861 | 145 | 1006 |
| | | % within School | 85.6% | 14.4% | 100.0% |
| Total | | Count | 1282 | 153 | 1435 |
| | | % within School | 89.3% | 10.7% | 100.0% |

From the cross tabs above it can be noted that the interest in attending a 2-year college upon high school graduation has not changed very much over the two years of study, in fact showing that

the results have replicated. There were more public school students than private/charter school students interested for both years, and the proportion of students in private/charter schools interested in attending a 2-year college has slightly decreased this year.

**2005-2006 Survey Results**

**Crosstab**

| | | | Vocational | | |
|---|---|---|---|---|---|
| | | | No Interest | Interest | Total |
| School | Private/Charter Schools | Count | 509 | 8 | 517 |
| | | % within School | 98.5% | 1.5% | 100.0% |
| | Public Schools | Count | 793 | 48 | 841 |
| | | % within School | 94.3% | 5.7% | 100.0% |
| Total | | Count | 1302 | 56 | 1358 |
| | | % within School | 95.9% | 4.1% | 100.0% |

**2004-2005 Survey Results**

**Crosstab**

| | | | Vocational | | |
|---|---|---|---|---|---|
| | | | No interest | Interest | Total |
| School | Private/Charter Schools | Count | 421 | 8 | 429 |
| | | % within School | 98.1% | 1.9% | 100.0% |
| | Public Schools | Count | 961 | 45 | 1006 |
| | | % within School | 95.5% | 4.5% | 100.0% |
| Total | | Count | 1382 | 53 | 1435 |
| | | % within School | 96.3% | 3.7% | 100.0% |

The results for vocational school have not changed very much for the two years of study as well. The results have replicated this year, numerically showing the same number of private school students planning on attending a vocational school. Last year, 45 public school students (4.5%) wanted to attend a vocational school and this year there were 48 (5.7%), showing that the interest in vocational school has stayed roughly the same for students in both public and private/charter schools over the two years.

**2005-2006 Survey Results**

**Crosstab**

| | | | Work | | |
|---|---|---|---|---|---|
| | | | No Interest | Interest | Total |
| School | Private/Charter Schools | Count | 432 | 85 | 517 |
| | | % within School | 83.6% | 16.4% | 100.0% |
| | Public Schools | Count | 594 | 247 | 841 |
| | | % within School | 70.6% | 29.4% | 100.0% |
| Total | | Count | 1026 | 332 | 1358 |
| | | % within School | 75.6% | 24.4% | 100.0% |

**2004-2005 Survey Results**

**Crosstab**

| | | | Work | | |
|---|---|---|---|---|---|
| | | | No interest | Interest | Total |
| School | Private/Charter Schools | Count | 413 | 16 | 429 |
| | | % within School | 96.3% | 3.7% | 100.0% |
| | Public Schools | Count | 866 | 140 | 1006 |
| | | % within School | 86.1% | 13.9% | 100.0% |
| Total | | Count | 1279 | 156 | 1435 |
| | | % within School | 89.1% | 10.9% | 100.0% |

As mentioned earlier, there are significantly more students in both the private/charter and public schools this year interested in going to work after high school. The fact that there are more public school students than private/charter school students interested in working after graduation has replicated this year, but the proportion of students interested in working after graduation has increased over the two years in both private and public schools. This might be due to the rising cost of education and the need for many students to work while pursuing a higher education. There are many students interested in pursuing a higher education after high school and working simultaneously in both private/charter and public. This year double choices for the future seemed to be popular in both types of schools, even more so than last year. Combinations of students' future plans in the private/charter schools for this year will be examined in detail in the upcoming sub-section of this chapter.

The rest of the analysis in this section continues to look into the distribution of students' plan to go into the military within private/charter high schools and comparing them to the public high school students'. The choice of going into the military upon high school graduation is analyzed as follows:

**2005-2006 Survey Results**

**Crosstab**

| | | | Military | | |
|---|---|---|---|---|---|
| | | | No Interest | Interest | Total |
| School | Private/Charter Schools | Count | 499 | 18 | 517 |
| | | % within School | 96.5% | 3.5% | 100.0% |
| | Public Schools | Count | 795 | 46 | 841 |
| | | % within School | 94.5% | 5.5% | 100.0% |
| Total | | Count | 1294 | 64 | 1358 |
| | | % within School | 95.3% | 4.7% | 100.0% |

## 2004-2005 Survey Results

**Crosstab**

| | | | Military | | |
|---|---|---|---|---|---|
| | | | No interest | Interest | Total |
| School | Private/Charter Schools | Count | 419 | 10 | 429 |
| | | % within School | 97.7% | 2.3% | 100.0% |
| | Public Schools | Count | 946 | 60 | 1006 |
| | | % within School | 94.0% | 6.0% | 100.0% |
| Total | | Count | 1365 | 70 | 1435 |
| | | % within School | 95.1% | 4.9% | 100.0% |

This year, the number of students both within the private/charter and public schools who were interested in going into military decreased, but overall the proportions of students interested and not interested in going into the military have replicated this year.

The cross tab on the following page is of the marriage future plan for the study conducted this year. The one from last year was not available in the report written by the WPI team, since there was a significant difference by school type.

## 2005-2006 Survey Results

**Crosstab**

| | | | Marriage | | |
|---|---|---|---|---|---|
| | | | No Interest | Interest | Total |
| School | Private/Charter Schools | Count | 488 | 29 | 517 |
| | | % within School | 94.4% | 5.6% | 100.0% |
| | Public Schools | Count | 758 | 83 | 841 |
| | | % within School | 90.1% | 9.9% | 100.0% |
| Total | | Count | 1246 | 112 | 1358 |
| | | % within School | 91.8% | 8.2% | 100.0% |

In general, there are more public school students who are interested in marriage after graduation. There was not statistically significant difference in the type of school the students attend and their decision in marriage after graduation for last year's study. There was a statistically significant difference in choosing marriage for this year amongst the two types of schools.

**Private/Charter School Comparison by Gender for Future Plans:** It is very interesting to see the distribution by gender within each one of the future plans that the students were thinking about after high school graduation in the private/charter high schools. The analysis is discussed in this sub-section of the chapter. Future plan to attend a 4-year college on page 68 compared the aspirations of both male and female students in private/charter high schools for the 2005-2006 replication study.

## 4-Year College 2005-2006 by Gender

**Crosstab**

| SchoolType | | | | 4-College | | Total |
|---|---|---|---|---|---|---|
| | | | | No Interest | Interest | |
| Private/Charter Schools | Biolog. Sex | Male | Count | 16 | 229 | 245 |
| | | | % within Biolog. Sex | 6.5% | 93.5% | 100.0% |
| | | | % within 4College | 88.9% | 46.0% | 47.5% |
| | | Female | Count | 2 | 269 | 271 |
| | | | % within Biolog. Sex | .7% | 99.3% | 100.0% |
| | | | % within 4College | 11.1% | 54.0% | 52.5% |
| | Total | | Count | 18 | 498 | 516 |
| | | | % within Biolog. Sex | 3.5% | 96.5% | 100.0% |
| | | | % within 4College | 100.0% | 100.0% | 100.0% |

From the cross tab above it can be noted that from the private/charter school students who were interested in attending a 4-year college after high school graduation, 46% were male students and 54% were female students. There were therefore more female students this year in the private/charter school students interested in pursuing a 4-year college.

**Chi-Square Tests**

| SchoolType | | Value | df | Asymp. Sig. (2-sided) | Exact Sig. (2-sided) | Exact Sig. (1-sided) |
|---|---|---|---|---|---|---|
| Private/Charter Schools | Pearson Chi-Square | 12.824[b] | 1 | .000 | | |
| | Continuity Correction [a] | 11.161 | 1 | .001 | | |
| | Likelihood Ratio | 14.301 | 1 | .000 | | |
| | Fisher's Exact Test | | | | .000 | .000 |
| | Linear-by-Linear Association | 12.799 | 1 | .000 | | |
| | N of Valid Cases | 516 | | | | |

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 8.55.

From the Chi-Square test above it can be noted that there was a statistically significant difference by gender showing more females to be interested in attending a 4-year college upon graduation, with a 0.156 correlation. This means that 2.4% of the variance was explained by gender for the choice of attending a 4-year college in private/charter high schools this year not much, but significant.

## 2-Year College 2005-2006 by Gender

**Crosstab**

| SchoolType | | | | 2College | | Total |
|---|---|---|---|---|---|---|
| | | | | No Interest | Interest | |
| Private/Charter Schools | Biolog. Sex | Male | Count | 238 | 7 | 245 |
| | | | % within Biolog. Sex | 97.1% | 2.9% | 100.0% |
| | | | % within 2College | 46.9% | 87.5% | 47.5% |
| | | Female | Count | 270 | 1 | 271 |
| | | | % within Biolog. Sex | 99.6% | .4% | 100.0% |
| | | | % within 2College | 53.1% | 12.5% | 52.5% |
| | Total | | Count | 508 | 8 | 516 |
| | | | % within Biolog. Sex | 98.4% | 1.6% | 100.0% |
| | | | % within 2College | 100.0% | 100.0% | 100.0% |

As seen above, there was a statistically significant difference with more male students interested in pursuing a 2-year college education than female students in the private/charter schools, but

only 1% of the variation explained by the gender and the choice of attending a 2-year college was present. Not much, but still displaying that the difference is significant among the genders.

The table below demonstrates the significance levels, percent variance explained by gender, and the dominant gender for the rest of the future plans listed on the survey this year for the students in the private/charter schools this year.

**2005-2006 Comparison by Gender**

| | Statistically Significant | % Variance Explained | Gender with High Level of Interest in Private/Charter Schools |
|---|---|---|---|
| **Voc. School** | YES | 1% | Male |
| **Work** | NO | | |
| **Military** | YES | 2.4% | Male |
| **Marriage** | NO | | |

From the table on the previous page, it can be noted that there was no statistically significant difference among students' gender and their choice in marriage or work after school. But there was a statistical difference in both by the type of school the students attended (showing more public school students interested). Vocational school and military actually displayed a statistically significant difference by gender, with more male students pursuing each one after high school. 1% variance explained within the choice of more male students interested in vocational school and 2.4% in the choice of going into military was explained by gender this year, also with a larger proportion of male students interested in each.

In general, this analysis indicates that the type of school the students attend seems to be a better predictor of their choices for future plans than gender, at least as the private/charter high school resulting analysis discussed above demonstrates.

**Combination of 4-year College and Work for Private/Charter Students:** The table below demonstrates information comparing both decisions of students in private/charter and public schools to attend a 4-year college and to work upon high school graduation.

**4-Year College and Work:** The following describes the results for students who chose to work and attend a 4-year college by gender.

**Proportion of Students planning to pursue a 4-year Degree and Work**
***Private/Charter VS Public High School Students***

| | % Planning to Work and Among those panning to attend a 4-year college |
|---|---|
| **Private/Charter Males** | 12.7 will Work; 82.9 within 4 Year college |
| **Private/Charter Females** | 18.6 will Work; 100.0 within 4 Year college |
| **Public Males** | 24.8 will Work; 63.6 within 4 Year college |
| **Public Females** | 28.7 will Work; 75.0 within 4 Year college |

The table above is telling us that out of all the students who plan to attend a 4-year college, 12.7% are also planning on working within the males in the private/charter schools. 18.6% of the

private/charter school females are planning to attend a 4-year college and work. There are a few more females who are willing to commit to both activities upon high schools graduation. In the public schools the same is true, there are 28.7% females who want to attend a 4-year college and work at the same time, but there are only 24.8% public school males who are willing to do so. There are more females within the public schools planning on pursuing both simultaneously. As seen in the table above, there are more public schools females than private school females, and the same trend is visible for men among the two schools. Overall, there are more females interested in attending a 4-year college as well as working upon high school graduation in all the participating schools this year.

When looking at the other proportions, within the private schools, males who are planning on working, 83% are likely to be in a 4-year college. This also means that after high school graduation all the females that are working from the private/charter schools will also be attending a 4-year college (100%). The trend shift here, where from all the students who are planning on attending a 4-year college in the public schools, for both male and female, there were more than of both from the private/charter schools. Here there are actually smaller proportions found. From all the males in the public schools who will be working, only about 64% will actually be enrolled in a 4-year college. 75% of the females who will be working will also attend a 4-year college from all the graduating public school females, still a larger proportion than males from public schools, but much smaller than females and males from the private schools.

Work and 4-year college plans were not the only combination of plans the students were looking into upon their high school graduation. There were students who were also planning on attending a 2-year college and working, marrying and working, or even going into the military and working. The proportions of students interested in pursuing such plans in the private/charter schools are discussed below.

**2-Year College and Work:** The following is the analysis for students who chose to work and attend a 2-year college by gender.

**Proportion of Students planning to pursue a 2-year Degree and Work**
***Private/Charter Schools***

| | % Planning to Work and Among those Planning to attend a 2-year college |
|---|---|
| **Private/Charter Males** | 28.6% within 2-year college; 5.7% will work |
| **Private/Charter Females** | 0% within 2-year college; 0%will work |

A larger proportion of male students in the private/charter schools planning to attend a 2-year college (there was only 1 female interested) than females, and that one female that was interested in attending a 2-year college was not willing to work simultaneously. The table above is also telling us that of all the male private/charter school students who are willing to attend a 2-year college, 5.7% are also planning to work. The lack of female interest in attending a 2-year college is not surprising here due to the fact that most of the females in the private/charter schools this year were planning on attending a 4-year college (more than male students) upon high school graduation, and many of them also planned on working (18.6% female students compared to

12.7% male students). There was no statistically significant difference in the gender and the choice of pursuing both careers upon high school graduation, but the proportions of those interested are evidently different.

**Military and Work:** The next analysis demonstrates the proportions of female and male students in the private/charter schools who are planning to go into the military and work simultaneously. The table below reveals the comparison:

**Proportion of Students planning to go into Military and Work**
***Private/Charter Schools***

| | % Planning to go into the Military and Work |
|---|---|
| **Private/Charter Males** | 25.0% go into military; 11.4 will work |
| **Private/Charter Females** | 0% go into military; 0% will work |

As in the analysis with a 2-year college and work, no female students were interested in going into the military and working upon graduation, but of the 25% male students in the private/charter high school planning to go into the military, 11.4% were also planning to work. There was no statistically significant difference in the male students choosing to pursue both upon graduation, but it was statistically significant that no female students were pursuing to go into the military and work at the same time. The statistics are displayed below:

**Chi-Square Tests**

| Biolog. Sex | | | Value | df | Asymp. Sig. (2-sided) | Exact Sig. (2-sided) | Exact Sig. (1-sided) |
|---|---|---|---|---|---|---|---|
| Male | Pearson Chi-Square | | 1.605[b] | 1 | .205 | | |
| | Continuity Correction | [a] | .805 | 1 | .370 | | |
| | Likelihood Ratio | | 1.379 | 1 | .240 | | |
| | Fisher's Exact Test | | | | | .257 | .180 |
| | Linear-by-Linear Association | | 1.598 | 1 | .206 | | |
| | N of Valid Cases | | 245 | | | | |
| Female | Pearson Chi-Square | | .456[c] | 1 | .500 | | |
| | Continuity Correction | [a] | .000 | 1 | 1.000 | | |
| | Likelihood Ratio | | .819 | 1 | .365 | | |
| | Fisher's Exact Test | | | | | 1.000 | .664 |
| | Linear-by-Linear Association | | .454 | 1 | .500 | | |
| | N of Valid Cases | | 271 | | | | |

a. Computed only for a 2x2 table

b. 1 cells (25.0%) have expected count less than 5. The minimum expected count is 2.29.

c. 2 cells (50.0%) have expected count less than 5. The minimum expected count is .37.

**Marriage and Work:** The next analysis indicates that there were also students this year in the private/charter schools which were planning on working and starting a family simultaneously. Of all the students, 65.5% (both genders) were interested in marriage, of which 22.4% were also planning to work. The table with the obtained statistical data and the cross tab can be found on the next page, 72.

**2005-2006 Students Planning on Working and Getting Married**

**Crosstab**

| | | | Work | | |
|---|---|---|---|---|---|
| | | | No Interest | Interest | Total |
| Private/Charter Schools Marriage | No Interest | Count | 422 | 66 | 48 |
| | | % within Marriage | 86.5% | 13.5% | 100.0% |
| | | % within Work | 97.7% | 77.6% | 94.4% |
| | 1Interest | Count | 10 | 19 | 29 |
| | | % within Marriage | 34.5% | 65.5% | 100.0% |
| | | % within Work | 2.3% | 22.4% | 5.6% |
| | Total | Count | 432 | 85 | 51 |
| | | % within Marriage | 83.6% | 16.4% | 100.0% |
| | | % within Work | 100.0% | 100.0% | 100.0% |

It is therefore interesting to see the distribution of gender in the interest if pursuing both work and marriage upon high school graduation.

Of the 22.4% of the students who were planning to work and get married, there were more male students than female students. The following table breaks down the analysis by gender.

**Proportion of Students planning to pursue Marriage and Work**
***Private/Charter Schools***

| | **% Planning on Marriage and Planning to Work** |
|---|---|
| **Private/Charter Males** | 64.3% want marriage; 25.7% will work |
| **Private/Charter Females** | 66.7% want marriage of which 20.0% will work |

There were more male students than female students interested in working (25.7%) and marriage upon high school graduation, with 12.4% of the variation explained by male gender and only 8.3% by female gender. This is an interesting finding.

This year, there were 5 out of the 6 future plans that showed a statistically significant difference by school type. There were: 4-year college, 2-year college, vocational school, work and marriage. There were differences showing more public school students pursuing 2-year college education, voc vocational school, work as well as (surprisingly) marriage. Even though military showed no statistically significant difference among the two types of schools this year, it is still worth noting that those interested in a larger proportion (out of all participating students), were found within the public schools. 4-year college was the only future plan that demonstrated a statistical significance with more private/charter school students interested, as was true last year.

In general the differences and similarities of students' future plan patterns have replicated this year, but the only future plan that seemed not to replicate from last year is the choice of going into the military and marriage. Last year, there were significantly more public school students interested in pursuing to go into the military. This year there were once again proportionately more public school students interested but the difference was not significant. Marriage on the other hand did not show a significant difference by school type last year, but it did this year.

As for looking at the results by gender in the private/charter school for this year, there were more female students interested in a 4-year college than male students. Of the few students who were interested to go to a 2-year college, 1.6%, mostly were male (2.9%) compared to only 0.4% female students. There was also a statistically significant difference indicating that this year there were more male students in vocational school, but with only 1% variance explained by gender. Also, there were significantly more male students interested in military after high school than there were female students, with 2.4% of the variance explained by gender. Work and marriage did not reveal any significant difference among the two genders this year.

As mentioned in this section of the report, there were those students interested in pursuing college education, whether it be a 4-year college, 2-year college, vocational school, or even military along with working.

For students planning to attend a 4-year college, the analysis was competed to compare the students by gender as well as by the type of school they attend. There were many more of the female students interested in working and attending a 4-year college than there were male students, in both the private/charter and public high schools for this year's study. There seemed to be more female students in the public schools than in the private schools interested in pursuing both, and the same was true for the male students.

5.7% of the male students in the private/charter high schools this year were interested in pursuing a 2-year college degree and go to work, where there were no female students who were interested to pursue both. This might be due to the fact that of those that did want to go to a 2-year college (there was a very small proportion), none wanted to work, and it is also important to note that majority of them were also pursuing a 4-year college degree instead of a 2-year college.

From the 25% of the male students in the private/charter high schools interested in going to the military, 11.4% were interested to work at the same time. As with the 2-year college and work combination plan, there were also no female students in the private/charter high schools interested in going to the military and working simultaneously.

Marriage demonstrated no significant difference by gender, showing more female students to be interested in marriage and work upon graduation, but of those male students who wanted to work there were many more interested in marriage as well. This finding is not so surprising, but it makes me wonder if this result of larger proportion of female students being interested in this combination of future plans will potentially hinder the opportunity of females to one day dominate in some of the careers. This was discussed on pages 51-53, where I proposed that if less female students are to stay home and instead pursue higher education, as soon as 2015 is when we can see some changes taking place as far as gender equity is concerned, in such careers as Engineering, Sciences and Technology. But, even though proportionately there were more female students interested in having a family and working after graduation, that only represented 19 female students, which does not seem to be such of a dramatic number to reverse my proposal on the pages mentioned earlier.

## *Career Doubts of Private/Charter vs. Public Schools for both years of study*

Career doubts and reservations of students in private/charter and public schools were examined in this years' study and compared to the results of last year. It is very interesting to see whether the level of worries within each type of school are the same, as what the differences are for the two years of study among the individual types of schools are revealing about the reliability of the measure as well as the possibility of real change year to year.

**Career Reservations/Concerns by School Comparison:** The following table shows the results from last year where there were seven areas in which there was a significant finding that showed that the private/charter school students and public school students differed in their answers. There were seven concerns that were statistically significant last year, meaning that there was a difference in average levels of concern about this factor in the public and private/charter high schools. No significance simply means the students were equally concerned about it, not necessarily that they were not concerned about it.

**2004-2005 Survey Results**

| | Statistically Significant | % Variance Explained | School System with High Agreement |
|---|---|---|---|
| Gender 1 | NO | | |
| Gender 2 | YES | 30 | Public |
| Gender 3 | NO | | |
| Accept 1 | YES | 7 | Public |
| Accept 2 | YES | 4 | Public |
| Attend 1 | YES | 30 | Public |
| Attend 2 | YES | 16 | Public |
| Attend 3 | YES | 12 | Public |
| Unprepared 1 | NO | | |
| Unprepared 2 | YES | 10 | Public |
| Unprepared 3 | NO | | |

The "Questions" referred to in the chart above for last year's study were:

*Gender 1: *People of my gender don't usually go into "that field". ["the one that interests the most"]*

*Gender 2: *People of my gender don't usually get family support.*

*Gender 3: *People of my gender don't usually succeed in that field.*

*Accept 1: *I doubt I'll be accepted to college because my grades are too low.*

*Accept 2: *I doubt I'll be accepted to college because my test scores are too low.*

*Attend 1: *I doubt I'll be attending college because it's too expensive.*

*Attend 2: *I doubt I'll be attending college because it's too demanding / difficult.*

*Attend 3: *I doubt I'll be attending college because I dislike school.*

*Unprepared 1: *I feel unprepared for my career interest because I don't know anyone in that profession.*

*Unprepared 2: *I feel unprepared for my career interest because I don't know what education is required.*

*Unprepared 3: *I feel unprepared for my career interest because I don't know if I will succeed in that profession.*

The table below demonstrates the results for this year's analysis of the doubts and reservations that the students within private/charter and public schools had. This year there were six areas in which there was a statistically significant difference showing more students from public schools to be more concerned than private/charter school students. Five of them are the same ones that were significant last year, and the percent of variance explained is about the same and they are in the same rank order for four of them. The exceptions are Accept 1 (which was twice as powerful a correlate this year in terms of variance) and Accept 2, for which the reverse was the care and it was a much powerful predictor last year.

**2005-2006 Survey Results**

| | Statistically Significant | % Variance Explained | School System with Higher Agreement |
|---|---|---|---|
| **Accept 1** | YES | 13 | Public |
| **Accept 2** | YES | 4 | Public |
| **Accept 3** | NO | | |
| **Attend 1** | YES | 34 | Public |
| **Attend 2** | YES | 18 | Public |
| **Attend 3** | YES | 13 | Public |
| **Unprepared 1** | NO | | |
| **Unprepared 2** | NO | | |
| **Unprepared 3** | YES | 2 | Public |

The "Questions" referred to, in the chart above, for this year's study were:

*** "Accept 3" was an open ended question

*Accept 1: *I doubt I will be accepted to college because my grades are too low.*

*Accept 2: *I doubt I will be accepted to college because my test score are too low.*

*Accept 3: *I doubt I will be accepted to college because [other reasons.].*

*Attend 1: *I doubt I'll attending college because it's too expensive.*

*Attend 2: *I doubt I'll attending college because it's too demanding / difficult.*

*Attend 3: *I doubt I'll attending college because I dislike school.*

*Unprepared 1: *I feel unprepared for my career interest because I don't know anyone in that profession.*

*Unprepared 2: *I feel unprepared for my career interest because I don't know what education is required.*

*Unprepared 3: *I feel unprepared for my career interest because I don't know if I will succeed in that profession.*

**Gender 1, 2, and 3 were not part of the career related concerns section in the survey.

Last year, the two top significant responses by comparison of the level of variance explained were "Gender 2" and "Attend 1". This year "Gender 2" was reformatted and rewarded so the item from last year was not part of the reservation/doubt section of the survey administered to the schools participating in the study. This year the top two significant responses in terms of highest variance explained were "Attend 1" and "Attend 2". For both years of study, "Attend 1" displayed a significant difference amongst the students in private/charter and school students.

For both years of study "Attend 1" question asked the students if they doubted they will be attending college due to college being too expensive to attend. This question had a high percentage of variance for both years of study. Last year there was a statistically significant difference indicating more public school students were more concerned that college education is too expensive to afford. 30% of the variance was explained.

**2004-2005 Survey Results**

**Crosstab**

| | | | Attend1 | | |
|---|---|---|---|---|---|
| | | | Not checked | Checked | Total |
| school | Private/Charter Schools | Count | 389 | 40 | 429 |
| | | % within school | 90.7% | 9.3% | 100.0% |
| | Public Schools | Count | 742 | 264 | 1006 |
| | | % within school | 73.8% | 26.2% | 100.0% |
| Total | | Count | 1131 | 304 | 1435 |
| | | % within school | 78.8% | 21.2% | 100.0% |

**2005-2006 Survey Results**

Crosstab

| | | | Attend1 | | |
|---|---|---|---|---|---|
| | | | Not Checked | Checked | Total |
| School | Private/Charter Schools | Count | 464 | 53 | 517 |
| | | % within School | 89.7% | 10.3% | 100.0% |
| | Public Schools | Count | 588 | 252 | 840 |
| | | % within School | 70.0% | 30.0% | 100.0% |
| Total | | Count | 1052 | 305 | 1357 |
| | | % within School | 77.5% | 22.5% | 100.0% |

The cross tab on the previous page demonstrates that this year there was a statistically significant difference with roughly 3 times as many public school students being concerned with college education being too expensive and therefore doubting that they will pursue it. This year there was even more variance explained than last year, with a correlation of 0.58 and 34% explained variance.

"Gender 2" was not part of the doubt/reservation section of the survey, this year, so the concern that had the second highest variance explained was "Attend 2" where there was a statistically significant difference with more public school students being concerned with college being too demanding/difficult than private/charter school students. 18% of the variance was explained in this instance, as this was a rare concern, but twice as likely to concern the public school students than the private school students.

**2005-2006 Survey Results**

Crosstab

| | | | Attend2 | | |
|---|---|---|---|---|---|
| | | | Not Checked | Checked | Total |
| School | Private/Charter Schools | Count | 501 | 16 | 517 |
| | | % within School | 96.9% | 3.1% | 100.0% |
| | Public Schools | Count | 780 | 61 | 841 |
| | | % within School | 92.7% | 7.3% | 100.0% |
| Total | | Count | 1281 | 77 | 1358 |
| | | % within School | 94.3% | 5.7% | 100.0% |

The main difference this year was that there was no statistical significance found with the "Unprepared 2" question where as last year there was statistical difference with more public school students being more concerned with being unprepared due to their lack of knowledge of required education. Now, the private school students were as likely to express concerns in this area. The public school students expressed more concern this year than the private school students. The concerns also seemed to have replicated over the two years of study.

In general with all the about impediment to college (especially financial) questions that showed significance there were more public school students concerned than private/charter school students for both years of study. This is not a surprising finding though.

**Career Reservations/Concerns by Gender Comparison:** This year I also wanted to explore how different female and male career reservations/concerns were in the private/charter high schools. The analysis that was conducted is demonstrated starting on the next page.

The "Questions" referred to in this section were:

*** "Accept 3" was an open ended question

*Accept 1: *I doubt I will be accepted to college because my grades are too low.*

*Accept 2: *I doubt I will be accepted to college because my test score are too low.*

*Accept 3: *I doubt I will be accepted to college because [other reasons.].*

*Attend 1: *I doubt I'll attending college because it's too expensive.*

*Attend 2: *I doubt I'll attending college because it's too demanding / difficult.*

*Attend 3: *I doubt I'll attending college because I dislike school.*

*Unprepared 1: *I feel unprepared for my career interest because I don't know anyone in that profession.*

*Unprepared 2: *I feel unprepared for my career interest because I don't know what education is required.*

*Unprepared 3: *I feel unprepared for my career interest because I don't know if I will succeed in that profession.*

**Gender 1, 2, and 3 were not part of the career related concerns section in the survey

**2005-2006 Survey Results by Gender for Accept – 1**

**Crosstab**

| School | | | | Accept1 | | Total |
|---|---|---|---|---|---|---|
| | | | | No Interest | Interest | |
| Private/Charter Schools | Biolog. Sex | Male | Count | 209 | 36 | 245 |
| | | | % within Biolog. Sex | 85.3% | 14.7% | 100.0% |
| | | | % within Accept1 | 46.4% | 54.5% | 47.5% |
| | | Female | Count | 241 | 30 | 271 |
| | | | % within Biolog. Sex | 88.9% | 11.1% | 100.0% |
| | | | % within Accept1 | 53.6% | 45.5% | 52.5% |
| | Total | | Count | 450 | 66 | 516 |
| | | | % within Biolog. Sex | 87.2% | 12.8% | 100.0% |
| | | | % within Accept1 | 100.0% | 100.0% | 100.0% |

After comparing students' reservations in the public schools to those in the private/charter schools this year, it is also interesting to see the comparison by gender, especially in the private/charter schools. As seen above, a larger proportion of male students were concerned about not being accepted into college due to low grades, with 54.5% male students and 45.5%

female students in the private/charter high schools this year. This is interesting since in the previous analysis it was discovered that there were significantly more public school students concerned than private/charter school students. The proportions of concerned students are important to note, but it was not statistically significant. It is also interesting to see that from all the females participating in the study this year only 11.1% were concerned about their grades being low, but almost 15% the male students were. This implies that female students in the private/charter schools this year are more confident about their academic standing and have, or believe so at least, higher grades than the male students do. This also explains a higher percentage of female students this year pursuing a 4-year college education upon high school graduation.

**2005-2006 Survey Results by Gender for Accept – 2**

**Crosstab**

| School | | | | Accept2 | | Total |
|---|---|---|---|---|---|---|
| | | | | No interest | Interest | |
| Private/Charter Schools | Biolog. Sex | Male | Count | 227 | 18 | 245 |
| | | | % within Biolog. Sex | 92.7% | 7.3% | 100.0% |
| | | | % within Accept2 | 49.9% | 29.5% | 47.5% |
| | | Female | Count | 228 | 43 | 271 |
| | | | % within Biolog. Sex | 84.1% | 15.9% | 100.0% |
| | | | % within Accept2 | 50.1% | 70.5% | 52.5% |
| | Total | | Count | 455 | 61 | 516 |
| | | | % within Biolog. Sex | 88.2% | 11.8% | 100.0% |
| | | | % within Accept2 | 100.0% | 100.0% | 100.0% |

The statistical analysis and the Chi-Square test results are presented below for students' reservation about having low test scores and not getting accepted into college.

**2005-2006 Chi-Square Test for Accept - 2**

**Chi-Square Tests**

| SchoolType | | Value | df | Asymp. Sig. (2-sided) | Exact Sig. (2-sided) | Exact Sig. (1-sided) |
|---|---|---|---|---|---|---|
| Private/Charter Schools | Pearson Chi-Square | 8.961[b] | 1 | .003 | | |
| | Continuity Correction[a] | 8.162 | 1 | .004 | | |
| | Likelihood Ratio | 9.246 | 1 | .002 | | |
| | Fisher's Exact Test | | | | .003 | .002 |
| | Linear-by-Linear Association | 8.943 | 1 | .003 | | |
| | N of Valid Cases | 516 | | | | |

a. Computed only for a 2x2 table

b. 0 cells (.0%) have expected count less than 5. The minimum expected count is 28.96.

In the private/charter schools this year there was a statistically significant difference showing more female students being concerned that their low test scores could hinder their college acceptance chances after high school graduation, 16% female students were concerned compared

to 7.3% male students in the private/charter high schools. Overall though, there were still more public high school students who seemed to be concerned about their test scores as described in the previous sub-section of the report. The findings were significant but only 2% of the variation was explained by the gender difference in students' concerns for "Accept 2".

The table on the next page summarizes the results for the rest of the concerns that the students expressed in the private/charter high schools this year, by gender and with percentage of variance explained as well as states the more concerned gender in each of the reservations.

**2005-2006 Gender comparison in Private/Charter Schools**
**Concerns/Reservations**

| | Statistically Significant | % Variance Explained | Gender with Higher Agreement |
|---|---|---|---|
| **Accept 1** | NO | | |
| **Accept 2** | YES | 2% | Female |
| **Accept 3** | NO | | |
| **Attend 1** | NO | | |
| **Attend 2** | NO | | |
| **Attend 3** | NO | | |
| **Unprepared 1** | YES | < 1% | Male*** |
| **Unprepared 2** | NO | | |
| **Unprepared 3** | NO | | |

***Even though there were slightly more male students concerned, both genders were proportionally concerned with 5.3% male students and 5.2% female students.

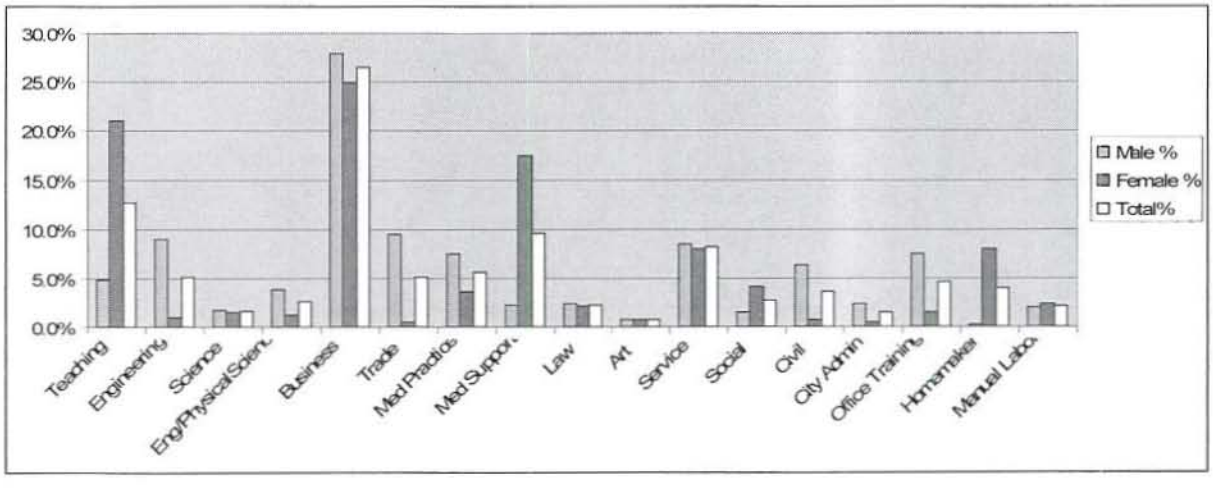
From the table above it is clear that only "Accept 2" (concern about low test scores) and "Unprepared 1" (not knowing anyone in the careers towards which a student is aspiring) show a significant difference by gender in the private/charter high schools this year. There was a statistically significant difference showing more male students being concerned about pursuing the career of their choice due to the fact that they do not know anyone in that profession. There was also a statistically significant difference showing more females being concerned on their college acceptance due to low test scores than males. The other reservations did not reveal a statistically significant difference, but the proportion of students of each gender experiencing these doubts is still worth noting. "Attend 1" was more of a concern for the male students in the private schools (11.4%), compared to the 9.2% of the female students. Twice as many male students than female students were also more concerned about college being very demanding and difficult. The females were also concerned in this area but with a lower proportion than the males, only 2.2%. College attendance seems to be hindered more for the males also, where more of them expressed their disliking for school (4.1%), compared to only 1.5% female students. Not

knowing if success will come to them in college and whether or not they have acquired the appropriate education to even go onto college was a common concern amongst the female student population (13.7% and 22.9%) in the private/charter schools this year. Even though there were more females concerned in both of these areas ("Unprepared 2" and "Unprepared 3"), there were still 12.7% and 21.2% of the male students who experiencing such reservations about college.

When analyzing students' concerns and reservations about their future plans it is evident that there were significantly more public school students experiencing them than there were private/charter school students for both years of study, with a minor shift in one or two of the concerns. This year, it has also become evident that within the private/charter high schools most of the concerns, even though not statistically significant, were experienced by the male students. This also draws a clearer picture of why a larger proportion of female students are aspiring towards a 4-year college upon high school graduation than the male students in the private schools. It is because they are less concerned and more confident about their abilities and high school credentials than the male students feel to be.

## Parental Influence on Private/Charter High School Students' Career Aspirations: Gender Comparison

**Current Careers of Private/Charter HS students' parents:** This year as well as last year, the survey asked the students to specify what their parents' (mother's, father's, or guardian(s)'s) current occupations are. As one of the recommendations of last year's private/charter team, I decided to actually go into this analysis and determine to what extent the parents of the students in the private/charter high schools are actually influencing their children in terms of their career aspirations. The table below demonstrated the career distribution of students' parents as obtained in the 2005-2006 replication study:




From this table it is obvious that the majority of the parents/guardians, specific to the population of the surveyed students' parents of course, are currently involved in a Business career, which was also one of the most aspired to careers among all the students within the private/charter high

school students this year. Business seems to still be a male dominated career amongst the parents, as it is also true amongst the students, but this difference is not as vast as in other occupational areas for both the students and their parents. Teaching is the next most popular occupation held by the parents of the surveyed students for this year, of which the great majority is female. For the students though, education was not the second most attractive career, but also a female domain as it seems to be true among their parents. This of course reflects the stall in the movement towards gender equity currently (hence parental distribution by gender in educational occupations) and the future (the aspirations of mainly female students towards educational careers.

The third majority of parental current occupations seem to lie in Medical Support and Service Industry, where both are female domains within the parents' sample. For the aspirations of students, these two careers were two of the highest but not the third highest, Computer/IT (comparable version pg. 39) was on the other hand; still both attracted more females then males as it seems to be true for the current situation as expressed by their parental current interest in these two occupations. The table below demonstrates the comparison between choices of students and the current occupations of their parents, and demonstrates which careers seem to be male versus female domains, and which careers are changing or not (in terms of students' aspirations).

***Present(parental occupations) versus Future (career aspiration of the students; their children)***[1]

| Career/Occupation[2] | Parents | Parental Rank[3] | Students | Students Rank[3] |
|---|---|---|---|---|
| Education/Teaching | Female | 2 | Female | 3 |
| Engineering | Male | 6 | Male | 2 |
| Sciences | ***Both ~*** | 11 | ***Male*** | 2 |
| Engineering/Physical Sciences combined career | Male | 9 | Male | 2 |
| Business | Male | ***1*** | Male | ***1*** |
| Trade | Male | 6 | Male | 11 |
| Medical Practice | ***Male*** | 5 | ***Female*** | 6 |
| Medical Support/Other | Female | 3 | Female | 5 |
| Law | Both ~ | ***10*** | Both ~ | ***10*** |
| Art | Both ~ | 13 | Both ~ | 8 |
| Service Industry | Both ~ | 4 | Both ~ | 7 |
| Social Service | Female | 8 | Female | 4 |
| Civil Service | Male | 7 | Male | 9 |
| City Administration | Male | ***12*** | Male | ***12*** |

[1] The following careers were not included because these career choices were not available on the survey for students to rate their interest in: Office training, homemaking, and manual labor careers. Homemaking was still a female dominated career, which is something that I would like to see change in the future.

[2] The occupations listed in this table are not all the occupations listed on the survey for the students to evaluate their interests in, instead all the careers fields that were found to be occupied currently by the parents of the students were only included.

[3] The Ranks of the career here is from (1) being the most popular career down until the larger number represents the least popular career, both among the students and the parents, only taking into consideration the careers listed in this table (for comparison purposes of the two data sets). This is in terms of totals not by gender.

From this comparison table it is visible that currently, as presented by the occupations that the parents of the students are in, the most popular career overall is Business, where it is still a male domain. It is also the most aspired to careers amongst the students. This trend of passing the career path of the parent to the child is also visible through the Legal and City Administrative careers, even though both are not as popular among the current population (parents) nor among the future population (children), the future seems to once again be influenced by the present as the parental occupation of these two careers seems to influence their children to pursue these careers in the future. Aspirations towards Educational, Medical Practice, and Civil Service are also correlated to the current occupations of the students' parents, and therefore demonstrate that parents influence their children in these careers as well as the three mentioned earlier in this paragraph. Also, from this table is become evident that students are not as interested in pursuing careers in Trade and seem to think that Engineering and Science careers are more important and probably more profitable, where as Educational careers are ranked on that level by the parents who are representing the current/present career situation.

It is interesting to note that parental influence for career aspirations does exist, specifically in the private/charter high schools, and it is also interesting to note that this influence is substantially different depending on the career field. Certain student aspirations seem to be influenced directly by the current parental occupations, where as others are on the contrary are not pursued by the students due to their parental current position in those careers, possibly due to the unsatisfactory pay or conditions (Trade vs. Engineering).

**Which Parent Influences which Child and of which Gender:** After looking at the data and determining that there is in fact an influential relationship that exists among students' career aspirations and their current parents' occupations, I was interested to find out which parent influenced which gender of their child the most, and which child is most influenced by which gender of a parent. The following table demonstrated the extent of parental influence based on gender:

| | Number of students 412 |
|---|---|
| Like Father | 143/412 => 34.71% |
| Like Mother | 120/412 => 11.39% |
| Different | 222/412 => 53.90% |

From this table is interesting to note that about 35% of the students' population (412 – students who actually seemed to be aspiring to a career and stating an example to which I could compare on whether or not their interests are similar or not their parents) is interested in careers similar to those of their father, and only 11.4% are interested to careers similar to their mothers. More than half of this student population is interested in careers different from those of either one or both parents. This 54% of students are aspiring towards careers different from either one or both parents, therefore leaving a lot of room for change in occupational attainment in the upcoming generation, hence by 2025.

**Which careers are students pursuing that are similar to the ones their parents are currently on:** From the observation made earlier on what proportions of students are pursuing

careers similar to those of their parents as well as which parent is most influential, I also wanted to see which careers in general are being pursued by which student by gender. The following tables demonstrate the results. The first table demonstrated female interest in careers of either the father or the mother, not both. The second table demonstrates the interest of male students in careers of either mother or father, and not both. The third table, not demonstrated in this report, revealed the careers that the females are interested in similar to both the mother and the father, and the fourth table revealed for the males interested in careers similar to both the mother and the father. From these four tables I was then able to conclude which parent the females are being influenced by the most and by which parent are the male students being influenced the most. Also, the careers which are most aspired to, based on parental influence for both the males and the females was revealed. It is also important to note that the examples of career aspirations were concluded from the written careers that the students were provided 9 spaces for on the bottom of the first page of the survey.

***Table1.***

FEMALE STUDENTS

| *Father* | *Mother* |
|---|---|
| | Medical Support |
| | Business |
| | Medical Support |
| | Office Automation |
| Office Automation | |
| | Education |
| | Education |
| | Education |
| | Medical Support |
| | Medical Support |
| Business | |
| Medical Practice | |
| | Education |
| Business | |
| Civil Service | |
| Engineering | |
| Science | |
| | Business |
| | Education |
| | Medical Support |
| | Business |
| | Education |
| | Business |
| | Medical Support |
| | Medical Support |
| | Medical Support |

From Table 1 it becomes obvious that females are most influenced by the careers of their mothers, and most of these careers are stereotypically believed to be female domains. Exceptions due exist, as in the case of a female aspiring to a career that is a male domain but is currently held by her mother, which constituted yet another supportive factor for the possibility of change for the future generations. Also, most of the careers which the females are aspiring to, similar to those of their father are mostly stereotypically believed to be male domains. If this number continued to grow, the change of females entering stereotypically male dominated occupation will seem not only to be affected by their gender role as explained in the previous sections of the report, but also by the current occupations of their fathers.

***Table2.***

MALE STUDENTS

| *Father* | *Mother* |
|---|---|
| Office Automation | |
| Civil Service | |
| | Civil Service |
| Engineering | |
| | Business |
| Business | |
| Business | |
| Business | |
| Office Automation | |
| Civil Service | |
| | Medical Support |
| | Office Automation |
| Business | |
| Engineering | |
| Civil Service | |
| Business | |
| Engineering | |
| Business | |
| Engineering | |
| | Medical Support |
| Art | |
| | Education |
| Medical Practice | |
| Engineering/Science | Medical Practice |
| Business | |
| Business | |
| Engineering/Science | |

| | |
|---|---|
| Civil Service | |
| Business | |
| Science | |
| Business | |
| Business | |
| Medical Practice | |
| Business | |
| Business | |

From Table 2 it is evident that the male students are most interested in pursuing careers in which their fathers are currently in. Even when the male students were aspiring towards careers similar to those of their mothers', the mother's career was a male dominated field. Also, if the male student was aspiring towards careers similar to his mother's and that career was a feminine domain, such cases were rare, and are also a hint that a change is happening and possible for the gender equity in certain careers by 2025.

The table I constructed for females interested in pursuing careers similar to both of their parents revealed that these female students aspired to careers of both parents, but both parents were also in similar career fields. The same was true for the males who were interested in careers similar to both parents.

From the data demonstrated in this section it is obvious that a trend is persisting in the career aspirations of both male and female students in the Private/Charter high school where their choices are greatly influenced by their parents. Even though these influences are not moving away greatly from the gender stereotypes persisting in our society, the fact remain that over 50% of the students are aspiring towards careers different from either both or one of their parents, therefore leaving room for change in the future generation, and even by 2025, when the students are parents.

## Stereotype Question

This year I also explored the results of the question on the survey that asked students the likelihood that they would enter a career that is dominated by the opposite sex. It is important that this be mentioned since it was discovered that career aspirations are significantly different amongst students of different genders, and the question was reworded for this year. It is also important to mention the results of this section since I am discussed the doubts that students possess about certain careers as well as about pursuing higher education. Their view on given types of careers might be the doubt or concern that is stopping them in the first place. On the survey the question asked the students:

- *How likely is it that you will pursue a career that relatively few females/males work in?*

Possible answers were:

- *Very Unlikely*
- *Pretty Unlikely*
- *Likely*
- *Very Likely*

There were a total of 517 private/charter school students who participated in the study this year. Of all the participating students, 121 stated that they would "*Likely*" enter a career that was counter gender stereotypical for them. Out of these students 91 were female and only 30 were male students. This shows that out of all the students who are interested in pursuing careers that counter our gender cultural stereotypes, three times more of the females are likely to do so. Only 23 students stated that they would "*Very Likely*" would pursue such a career. From these students 17 were female and only 6 were male students, again almost three times more females. From all the students participating in this year's private/charter high school study, 28% of the students were interested in pursuing a counter gender career. The percentage is low but it is still interesting to see those students that would agree to pursue such careers.

Since this study explored the "Self-Image" as one of the determinants for students' career aspirations, career doubts as well as future plans, I think it is also important to see the distribution of self-identities and their choices in regards to pursuing a counter gender stereotypical career. This analysis is continued on the next page.

**Students' Self-Identity Distribution in their choice of pursuing a Counter-Gender Career 2005-2006**

**Crosstab**

| SchoolType | | | | Enter field dom by other sex | | | | | Total |
|---|---|---|---|---|---|---|---|---|---|
| | | | | blank | very unlikely | unlikely | likely | very likely | |
| Private/Charter Schools | Bem with middle collapsed | MM | Count | 12 | 56 | 81 | 21 | 5 | 175 |
| | | | % within Bem with middle collapsed | 6.9% | 32.0% | 46.3% | 12.0% | 2.9% | 100.0% |
| | | | % within Enter field dom by other sex | 52.2% | 58.9% | 33.9% | 17.9% | 22.7% | 35.3% |
| | | MF | Count | 3 | 10 | 39 | 35 | 10 | 97 |
| | | | % within Bem with middle collapsed | 3.1% | 10.3% | 40.2% | 36.1% | 10.3% | 100.0% |
| | | | % within Enter field dom by other sex | 13.0% | 10.5% | 16.3% | 29.9% | 45.5% | 19.6% |
| | | Androg or Neutral | Count | 3 | 8 | 25 | 10 | 2 | 48 |
| | | | % within Bem with middle collapsed | 6.3% | 16.7% | 52.1% | 20.8% | 4.2% | 100.0% |
| | | | % within Enter field dom by other sex | 13.0% | 8.4% | 10.5% | 8.5% | 9.1% | 9.7% |
| | | FM | Count | 1 | 8 | 28 | 6 | 1 | 44 |
| | | | % within Bem with middle collapsed | 2.3% | 18.2% | 63.6% | 13.6% | 2.3% | 100.0% |
| | | | % within Enter field dom by other sex | 4.3% | 8.4% | 11.7% | 5.1% | 4.5% | 8.9% |
| | | FF | Count | 4 | 13 | 66 | 45 | 4 | 132 |
| | | | % within Bem with middle collapsed | 3.0% | 9.8% | 50.0% | 34.1% | 3.0% | 100.0% |
| | | | % within Enter field dom by other sex | 17.4% | 13.7% | 27.6% | 38.5% | 18.2% | 26.6% |
| | Total | | Count | 23 | 95 | 239 | 117 | 22 | 496 |
| | | | % within Bem with middle collapsed | 4.6% | 19.2% | 48.2% | 23.6% | 4.4% | 100.0% |
| | | | % within Enter field dom by other sex | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% | 100.0% |

From the cross tab above it can be noted that there was a statistically significant difference showing more masculine-females (46.5%) being interested to pursue a counter – gender career, more so than the feminine-males and the androgynous/neutral students combined. 12% of the variation was explained by the self-identity of the students and their choice to pursue a counter – gender career. The next largest group of students interested to go into careers that were stereotypically identified to be for the opposite gender, were the feminine-females (37.1%), surprisingly so. As the analysis for the career aspirations by self-identity is to follow in this report, it is safe to say that the masculine-females are the ones who will one day potentially change the stereotype that has prevailed out societies for hundreds of years in regards to certain careers being only male or only female domains. But the fact remains, a large proportion of feminine-females are also interested in pursuing such careers, therefore indicating that female students are the students with the most potential to bring upon change to the labor force.

## *Gender vs. Career Interest in Private/Charter Schools for both years of study*

Last year, it was determined that the sex variable played an important role in students' choices of career aspirations and that this was especially true in the private/charter high schools, which tended to be parochial schools. This year the influence of gender on career choice was re-examined and compared to the results of last year.

There are certain careers that are stereotypically thought to be dominated by males and/or females in our culture, such as males pre-dominate in Engineering and females pre-dominate in Educational careers. This year I wanted to see if the students in the schools of Worcester were moving away from the typical stereotypes present in our culture and were moving towards gender equity. After observing the trends with careers aspirations by gender overall, I also replicated the school by school comparison. And as seen in the previous section, female students have already began this change.

**Private/Charter Schools:** Last year there were 13 out of 14 careers in which gender was a statistically significant predictor of student career aspirations. The table of results for last year is reproduced below:

**2004-2005 Survey Results**

| | Statistical Significance | % Variance Explained | Gender of Majority |
|---|---|---|---|
| **Teaching** | YES | 14% | Female |
| **Engineering/Science** | YES | 13% | Male |
| **Computers/IT** | YES | 23% | Male |
| **Business** | YES | 11% | Male |
| **Trade** | YES | 49% | Male |
| **Medical Practice** | YES | 10% | Female |
| **Medical Support** | YES | 12% | Female |
| **Law** | NO | | |
| **Art** | YES | 9.2% | Female |
| **Service Industry** | YES | 11% | Female |
| **Social Services** | YES | 24% | Female |
| **Civil Service** | YES | 13% | Male |
| **City Administration** | YES | 14% | Male |
| **Political Office** | YES | 8.1% | Male |

From the table above, it is clear that only in the field of Law was gender not a factor towards which private school students aspired. In the public schools the majority of students aspiring to Legal careers were female so it is not clear whether that field is really going to be gender neutral for the next generation, but it was a balanced or neutral field in gender terms for the private schools. The rest all had a majority of one sex dominating where the Trades displayed the greatest balance.

Last year, there was a statistically significant difference (with 50% of the variance explained by gender) of more male students aspiring towards careers in the Trades. Social Service careers are generally considered to be female dominated careers and in last year's results there were indeed significantly more females than males interested in Social Service careers. On the other hand, Computer and Information Technology careers are stereotypically considered to be male dominated. The results from last year confirmed that there were more males interested in these careers than females. So, the pattern of student aspiration fit prevailing stereotypes for the most part though Business, Medicine, Art, the Service Industry and Political Office all hovered around having only 10% of the variance explained by gender, making sex only a minor variable in terms of shaping their career aspirations.

The table that follows demonstrates the results for this year's study:

**2005-2006 Survey Results**

| | Statistical Significance | % Variance Explained | Gender of Majority |
|---|---|---|---|
| **Teaching** | YES | 14 | Female |
| **Engineering** | YES | 41 | Male |
| **Science** | YES | 11 | Male |
| **IT** | YES | 24 | Male |
| **Computers** | YES | 19 | Male |
| **Business** | YES | 6 | Male |
| **Trade** | YES | 33 | Male |
| **Med Practice** | YES | 12 | Female |
| **Med Support** | YES | 4 | Female |
| **Med Other** | YES | 11 | Female |
| **Legal** | NO | | |
| **Art Performance** | YES | 26 | Female |
| **Art Visual** | YES | 32 | Female |
| **Musical** | NO | | |
| **Media** | NO | | |
| **Food Ser** | NO | | |
| **Service Industry** | NO | | |
| **Social Service** | YES | 25 | Female |
| **Civil Service** | YES | 19 | Male |
| **City Admin** | YES | 12 | Male |
| **Elected Political** | YES | 6 | Male |
| **Gov't Service** | YES | 7 | Male |
| **International Political** | YES | 2 | Male |

Starting with the technical fields, this year there was again a statistically significant difference with more males choosing to aspire towards Engineering careers than females. However, it was 3 times as large as last year's, 13% of variance explained. 41% of the variance is explained by gender within the Engineering career choice this year. Last year, the Engineering career choice

was combined with Physical Science career, whereas this year these two careers were listed separately. This separation showed a clearer picture of the gender distribution in aspirations towards this career. Last year there was only 13% of variance explained by gender. This year, there was also a statistically significant difference with more males aspiring towards Physical Science careers than females but there was only 11% of the variance explained by gender. Clearly last year, Physical Science and Engineering were treated as Physical Science was this year. By itself, Engineering is much more gender loaded.

Information Technology and Computer careers were also listed as two separate career choices on the survey used this year. There is also statistically significant difference showing more males interested in aspiring towards these careers as it was true last year. There was no where near as much distortion created by lumping those two together last year as was in the case of Physical Science and Engineering.

Trade was also a male dominated career, but there was less variance explained by gender this year than last year. This year there was only 33% variance explained by gender where as last year almost 50% of the variance was explained by gender.

Again, Legal careers showed gender equity as they did last year, meaning that gender did not influence student's decision in aspiring towards legal careers significantly.

There were also other careers where there was no statistical difference by gender. These included the students' choices in aspiring towards Musical Art, Media and Food Service careers. Last year, these gender neutral areas were not visible due to the fact that Arts careers were all presented as one career categories, whereas this year the Arts career was divided into four separate careers in Music, Performance, Visual and Media careers. Last year Arts careers were significantly more often aspired to by females than males. The results this year showed that the Visual and Performance arts careers are not gender neutral, being female fields, but Music and Media are gender neutral.

This year there was no significant difference by gender in terms of pursuing a Food Service career, where as last year this career was not listed as a separate choice. Instead it was implicitly part of the Service Industry career choice. For both years of study there was a statistically significant difference in the private/charter schools with more females being interested in Social Service careers than male students. Business, Medical Support and Politics were all mostly correlated to gender with less than 10% of the variance explained by the variable. Thus, a pattern of replicated findings is emerging in which at least some previously male dominated fields (Business, Law and Politics) are essentially gender neutral, and in the case of Medicine, have reversed from male to becoming female as far as the aspirations data are concerned.

**By School Comparison:** This section of the analysis explores gender versus career aspiration by individual private high schools, as it was done last year. "YES" indicates that there is statistical significance by sex, that gender differences are predictive. The tables for the results of both years of study also show the percentage variance explained and the predominant sex within each choice of careers listed in the survey for each year of the study.

The results of last year indicated that St. Peter Marian had the most careers with statistically significant differences by sex whereas Bancroft had the smallest number, none – but also one of the less complete samples. Legal careers and Social Service career did not show statistically significant difference among the gender and the aspiration towards the career in any of the private/charter schools.

The table below demonstrates the results for last year's study, and the table on the following page, page 77, demonstrates the results of the 2005-2006 replication study.

**2004-2005 Survey Results**

| | Bancroft | Holy Name | Mass Academy | St. Peter-Marian | Worcester Academy |
|---|---|---|---|---|---|
| **Teaching** | NO | YES, 14%, Female | NO | YES, 36%, Female | NO |
| **Engineering/ Science** | NO | NO | NO | YES, 32%, Male | NO |
| **Computers/IT** | NO | NO | YES, 35%, Male | YES, 41%, Male | YES, 43%, Male |
| **Business** | NO | NO | YES, 19%, Male | YES, 22%, Male | NO |
| **Trade** | NO | YES, 51%, Male | NO | YES, 79%, Male | YES, 25%, Male |
| **Medical Practice** | NO | YES, 11%, Female | NO | YES, 29%, Female | NO |
| **Medical Support** | NO | YES, 17%, Female | NO | YES, 26%, Female | NO |
| **Law** | NO | NO | NO | NO | NO |
| **Art** | NO | NO | NO | YES, 24%, Female | NO |
| **Service Industry** | NO | NO | NO | NO | NO |
| **Social Services** | NO | YES, 23%, Female | NO | YES, 37%, Female | YES, 35%, Female |
| **Civil Service** | NO | YES, 21%, Male | NO | YES, 29%, Male | NO |
| **City Administration** | NO | NO | NO | YES, 20%, Male | NO |
| **Political Office** | NO | NO | NO | YES, 32%, Male | NO |

**2005-2006 Survey Results**

| | Bancroft | Holy Name | Mass Academy | St. Peter-Marian | Worcester Academy |
|---|---|---|---|---|---|
| **Teaching** | YES, 48%, Female | NO | NO | YES,15%, Female | YES,18%, Female |
| **Engineering** | NO | YES,57%,Male | YES,52%, Male | YES,41%, Male | YES,35%, Male |
| **Science** | NO | YES,16.24%,Male | NO | NO | YES,11%, Male |
| **IT** | YES,68%,Male | YES, 35%,Male | NO | YES,35%, Male | YES,11%, Male |
| **Computers** | NO | YES, 31%,Male | NO | YES,18%, Male | NO |
| **Business** | NO | YES,7%,Female | NO | NO | NO |
| **Trade** | NO | YES,67%,Male | NO | YES,70%, Male | NO |
| **Med Practice** | NO | YES,28%,Female | NO | YES,14%, Female | NO |

| | | | | | |
|---|---|---|---|---|---|
| **Med Support** | NO | YES,13.25%, Female | NO | NO | NO |
| **Med Other** | NO | YES,19.45%, Female | NO | NO | NO |
| **Legal** | NO | NO | NO | NO | NO |
| **Art Performance** | NO | YES,24.3%,Female | NO | YES,37%, Female | YES,37%, Female |
| **Art Visual** | NO | YES,34%,Female | NO | YES,28%, Female | YES,29%, Female |
| **Musical** | NO | YES, 2%, Female | NO | NO | NO |
| **Media** | NO | NO | NO | NO | NO |
| **Food Ser** | NO | NO | NO | NO | NO |
| **Serv Industry** | NO | NO | NO | NO | NO |
| **Social Service** | YES, 71%, Female | YES,38%,Female | NO | YES,16%, Female | NO |
| **Civil Service** | NO | YES,32%,Male | NO | YES,37%, Male | NO |
| **City Admin** | NO | YES,38%,Male AND 38% Female | NO | YES,23%, Male | NO |
| **Elected Political** | NO | YES,16%,Male | NO | NO | NO |
| **Govt Service** | NO | YES, 27%, Male | NO | NO | NO |
| **International Political** | NO | NO | NO | YES,9%, Male | NO |

From the above table it can be noted that this year gender had the strongest career aspiration impact on the students at Holy Name. The students at Massachusetts Academy were least affected by gender differences as Engineering, their specialty, had a (male) gender skew. Careers that did not produce a significant difference by gender at any one of the participating schools were Law, Media, Food Service, and the Service Industry. Business, Music and International Politics had only a small impact at one school each. Medical Support and Medical Other were gender coded only at Holy Name. Bancroft had three fields with a gender skew this year, with much better sample coverage, which were still fewer than the 5 at Worcester Academy.

The major replication this year was that a significant variation by school was found and the students at Holy Name and St. Peter Marian, the two parochial schools, were much more influenced by gender expectations than those of secular schools. This was evident both years of study.

## *How different are the Aspirations of Women and Men in Catholic vs. Non-Catholic Schools?*

Last year catholic and non-catholic schools were compared to determine if there was a trend in their aspirations towards career aspirations that were gender stereotypical in each type of school. The findings were that catholic schools students were more likely to have sex be a predictor of career choice.

This year the results were replicated. The first table demonstrates the results for last year's study and the following table on the following page shows the results for this year's study.

**2004-2005 Survey Results**

| | Catholic | %Catholic Variance Explained | Non-Catholic | %Non-Catholic Variance Explained |
|---|---|---|---|---|
| **Teaching** | YES | 24 | | |
| **Engineering/Science** | YES | 17 | YES | 7 |
| **Computers/IT** | YES | 20 | YES | 26 |
| **Business** | YES | 12 | | |
| **Trade** | YES | 62 | YES | 24 |
| **Medical Practice** | YES | 19 | | |
| **Medical Support** | YES | 22 | | |
| **Law** | | | | |
| **Art** | | | | |
| **Service Industry** | YES | 19 | YES | 3 |
| **Social Services** | YES | 30 | YES | 16 |
| **Civil Services** | YES | 25 | | |
| **City Administration** | YES | 11 | | |
| **Political Office** | YES | 6 | | |

The results last year indicated that there was a statistically significant difference by gender in aspiring to a career in Computing or the Trades in both the secular and parochial private schools. Computers/IT was distinctive in that it was the only field in which gender differences were greater in the secular than the parochial schools. The Trades fit a larger pattern in which the proportion of the variance explained was at least twice as great in the parochial schools than in the secular high schools. This pattern of much greater differences in the parochial schools extended to Engineering/Physical Science and the Service Industry as well as the Social Services.

The table on the following page demonstrates the results for the 2005-2006 replication study.

**2005-2006 Survey Results**

| | Statistical Significance | % Variance Explained | School of Majority |
|---|---|---|---|
| **Teaching** | YES | 5 | Catholic |
| **Engineering** | YES | 3 | Non Catholic |
| **Science** | YES | 5 | Non Catholic |
| **IT** | YES | .4 | Non Catholic |
| **Computers** | YES | 1 | Non Catholic |
| **Business** | YES | 3 | Catholic |
| **Trade** | YES | 3 | Catholic |
| **Med Practice** | YES | .2 | |
| **Med Support** | YES | 2 | Catholic |
| **Med Other** | NO | | |
| **Legal** | YES | 2 | Catholic |
| **Art Performance** | NO | | |
| **Art Visual** | NO | | |
| **Musical** | NO | | |
| **Media** | NO | | |
| **Food Ser** | NO | | |
| **Service Industry** | NO | | |
| **Social Service** | YES | 2 | Catholic |
| **Civil Service** | YES | 18 | Catholic |
| **City Administration** | YES | 1 | Non Catholic |
| **Elected Political** | YES | 7 | Non Catholic |
| **Gov't Service** | YES | 1 | Catholic |
| **International Political** | YES | 8 | Non Catholic |

This year I examined the difference between catholic and non-catholic schools a little differently as well as the way it was done last year. I think that there is a different pattern of aspirations that can occur in schools that are catholic and non-catholic without taking gender into consideration.

From the result I found out that there were small (2-5%) differences in the likelihood of career aspirations amongst catholic and non-catholic private schools for ten career options, no difference (0-1%) for 10 more career options. These were primarily the Medical careers, Medical other careers, and all the Arts careers. except for within Medical careers, Medical Other careers, all the Arts careers, Media and Service careers. Only in the cases of the Civil Service, Political careers and International Politics were the differences in the (7-18%) range and worth noting. The 18% of variance explained in the case of the Civil Service favored the catholic schools. The greater interest in Political careers and International Politics favored the secular private schools.

There were statistically significant differences with more Catholic high school students interested in the following careers than the non-catholic students: Education, Business, Trade, Medical Support, Legal, Social Service, Civil Service, and Government Service.

There were also statistically significant differences showing more students from the non-catholic schools students aspiring towards the following careers: Engineering, Physical Science, Information Technology and Computers, City Administration, Elected Political careers and International Political careers.

In general there are more non-catholic school students interested in pursuing careers that are more Technical and more Political, where as the catholic schools students aspire towards careers that are more Business, Trade or Service oriented. This is before one ever taken gender differences into account.

To see if the results of last year replicated, I also wanted to see the gender differences in the results of each of the types of schools. Last year, there were more differences explained within the Catholic schools in terms of gender and the choice in career aspirations. There were only 7 careers which showed a statistically significant difference in gender and the choice in career aspiration within the non-catholic private schools, as seen in the table on page 90.

**2005-2006 Survey Results**

| | Catholic | %Catholic Variance Explained | Non-Catholic | %Non-Catholic Variance Explained |
|---|---|---|---|---|
| **Teaching** | YES | 8 | YES | 24 |
| **Engineering** | YES | 50 | YES | 30 |
| **Science** | YES | 10 | YES | 9 |
| **IT** | YES | 32 | YES | 15 |
| **Computers** | YES | 23 | YES | 13 |
| **Business** | YES | 6 | NO | |
| **Trade** | YES | 0.23 | NO | |
| **Med Practice** | YES | 22 | NO | |
| **Med Support** | NO | | NO | |
| **Med Other** | YES | 14 | NO | |
| **Legal** | NO | | NO | |
| **Art Performance** | YES | 31 | YES | 20 |
| **Art Visual** | YES | 32 | YES | 33 |
| **Musical** | NO | | NO | |
| **Media** | NO | | NO | |
| **Food Ser** | NO | | NO | |
| **Service Industry** | NO | | NO | |
| **Social Service** | YES | 27 | YES | 21 |
| **Civil Service** | YES | 33 | NO | |
| **City Admin** | YES | 29 | NO | |
| **Elected Political** | YES | 10 | YES | 2 |
| **Gov't Service** | YES | 16 | NO | |
| **International Political** | YES | 9 | NO | |

All the careers except Medical Support, Law, Musical Arts, Media, Food Service and Service Industry produced a statistically significant difference by gender in career aspirations in the catholic schools. By contrast, only Education, Engineering, Physical Science, Computers, IT,

Business, Performance Art, Visual Arts, Social Service, and Elected Political careers had a statistically significant difference by gender of a non-catholic school student aspiring to these careers. A greater difference in gender affecting Educational career aspirations was observed within the non-catholic schools, where 24% of the variance was explained by gender compared to only 8% in the catholic schools. The gender difference in Physical Science was comparable in the parochial and secular schools. This was not the case for Engineering, where it was 50% of the variance explained compared to a still high percent of explained variation, 30% in the non-catholic schools. Trade showed a larger difference by gender within catholic schools last year, but this year there was no significant gender difference found in non-catholic schools and with the very small variation percentage explained this year in catholic schools, the Trade's career finding being the strongest gender difference found in the catholic school data set, it seemed to be far away from being replicated. This year also there was a larger difference by gender in aspiring towards Computer and/or IT in catholic schools, whereas last year the larger difference was found among students in the non-catholic schools. In general, about seven of the findings seemed to have replicated, and six others have clearly changed, due to the wording changes on the survey and a few are hard to call as they have changed in degree but not direction.

Overall, it seems best to say that the catholic – non – catholic variable that seemed clearly related to gender in the first study now seems questionable. There are still differences, but they are not the same differences, so it would be inappropriate to say that the pattern of results had replicated. As shown by the analysis in this section, it is not a variable with a stable relationship to the gender and career aspirations variables.

There are differences by school that are worth noting among the private schools, but that does not mean that the secular, or parochial schools, are very similar to one another, and differ in predictable ways from the other "kind" of school.

## *Future Plans of Private/Charter Students*

**Individual Private/Charter High School Analysis:** This year as well as last year, the students in private/charter high schools were asked to specify their future plans upon high school graduation. The results of last year's study are demonstrated in the initial table and the following table shows the results for last year. They were very similar – except for plans to work.

**2004-2005 School Year**

| | Percentage of Students |
|---|---|
| 4-year college | 92.8% |
| 2-year college | 1.9% |
| Vocational/trade school | 1.9% |
| Work | 3.7% |
| Military | 2.3% |
| Marriage & Family | 2.6% |

**2005-2006 School Year**

| | Percentage of Students |
|---|---|
| 4-year college | 96.5% |
| 2-year college | 1.5% |
| Vocational/trade school | 1.5% |
| Work | 16.4% |
| Military | 3.5% |
| Marriage & Family | 5.6% |

The results for this year showed that the majority of students were interested in attending a 4-year college. The same was true last year also. The cross tabs for both years are shown on the following page. The results in this category of future plans showed to replicate. When adding the total percentages of students interested in planning certain things for their future, it can be noted that last year it was 105.2% whereas this year it is 125.0%. As demonstrated earlier in this report this is simply due to the fact that students are planning two plans for the future to be performed simultaneously upon graduation, such as work and attend college. Over the past two years this total percentage changed by 20% and that is due to more students planning on pursuing two future plans at a time, sometimes even three.

On the next page you will find the crosstabs for this year as well as last year demonstrating the proportions of students within each one of the private schools that want to attend a 4-year college upon high school graduation. In this year's cross tabs the names of the schools were coded as follows (refer to top of page 94):

**BC- Bancroft High School**
**HN- Holy Name High School**
**MA – Massachusetts Academy School**
**SPM – St. Peter Marian High School**
**WA – Worcester Academy High School**

**2004-2005 Survey Results**

**Crosstab**

| | | | 4-College | | |
|---|---|---|---|---|---|
| | | | No interest | Interest | Total |
| School | BC | Count | 2 | 31 | 33 |
| | | % within School | 6.1% | 93.9% | 100.0% |
| | HN | Count | 15 | .140 | 155 |
| | | % within School | 9.7% | 90.3% | 100.0% |
| | MA | Count | 0 | 46 | 46 |
| | | % within School | .0% | 100.0% | 100.0% |
| | SPM | Count | 13 | 106 | 119 |
| | | % within School | 10.9% | 89.1% | 100.0% |
| | WA | Count | 1 | 75 | 76 |
| | | % within School | 1.3% | 98.7% | 100.0% |
| Total | | Count | 31 | 398 | 429 |
| | | % within School | 7.2% | 92.8% | 100.0% |

**2005-2006 Survey Results**

**Crosstab**

| | | | 4 -College | | Total |
|---|---|---|---|---|---|
| | | | No Interest | Interest | |
| School | BC | Count | 2 | 39 | 41 |
| | | % within school | 4.9% | 95.1% | 100.0% |
| | HN | Count | 6 | 161 | 167 |
| | | % within School | 3.6% | 96.4% | 100.0% |
| | MA | Count | 0 | 30 | 30 |
| | | % within School | .0% | 100.0% | 100.0% |
| | SPM | Count | 8 | 148 | 156 |
| | | % within School | 5.1% | 94.9% | 100.0% |
| | WA | Count | 2 | 121 | 123 |
| | | % within School | 1.6% | 98.4% | 100.0% |
| Total | | Count | 18 | 499 | 517 |
| | | % within School | 3.5% | 96.5% | 100.0% |

The percentage of students interested in attending a 4-year college is higher this year. Things may have changed over the two years of study, but it is also possible that we have a better sample this year. It is the parochial schools that have moved up about 5% each, so this could be a real change. The sample improvements were primarily at Bancroft and Worcester Academy.

Last year, Massachusetts Academy had the highest rate of interest in attending a 4-year college than any other private/charter schools. The lowest percentage was found at St. Peter Marian.

For this year, the school with the highest percentage of students interested in attending a 4-year college was once again Massachusetts Academy. The lowest percentage once again was at St. Peter Marian. The overall picture is that the findings have replicated with a moderate shift toward 4-year college plans in the parochial schools where the students were less likely to aspire to a 4-year college last year – but there is no difference this year.

For this year there was no statistical significance in the type of schools and the choice of attending a 4-year college, where as last year there was significant difference. Statistical results for this year are shown below:

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 3.845[a] | 4 | .427 |
| Likelihood Ratio | 5.010 | 4 | .286 |
| N of Valid Cases | 517 | | |

a. 3 cells (30.0%) have expected count less than 5. The minimum expected count is 1.04.

Last year St. Peter Marian had the highest percentage of students who were interested in attending a vocational school upon high school graduation. That is no longer the case, but we are still talking about 6 students, 1 in 20 cases at the private school with the most interested student body. That it was, St. Peter Marian last year and Holy Name this year, means that we are picking up random variation among the parochial school students. Still, these schools are more likely to have students with vocational interests than the secular private schools, where in 2 years not one person has expressed interest in this career line.

**2004-2005 Survey Results**

**Crosstab**

| | | | Vocational School | | |
|---|---|---|---|---|---|
| | | | No interest | Interest | Total |
| School | BC | Count | 33 | 0 | 33 |
| | | % within School | 100.0% | .0% | 100.0% |
| | HN | Count | 153 | 2 | 155 |
| | | % within School | 98.7% | 1.3% | 100.0% |
| | MA | Count | 46 | 0 | 46 |
| | | % within School | 100.0% | .0% | 100.0% |
| | SPM | Count | 113 | 6 | 119 |
| | | % within School | 95.0% | 5.0% | 100.0% |
| | WA | Count | 76 | 0 | 76 |
| | | % within School | 100.0% | .0% | 100.0% |
| Total | | Count | 421 | 8 | 429 |
| | | % within School | 98.1% | 1.9% | 100.0% |

This year Holy Name had the highest percentage of students interested in vocational school, but no statistically significant difference was found this year.

**2005-2006 Survey Results**

**Crosstab**

| | | | Vocational School | | Total |
|---|---|---|---|---|---|
| | | | No Interest | Interest | |
| School | BC | Count | 41 | 0 | 41 |
| | | % within School | 100.0% | .0% | 100.0% |
| | HN | Count | 161 | 6 | 167 |
| | | % within School | 96.4% | 3.6% | 100.0% |
| | MA | Count | 30 | 0 | 30 |
| | | % within School | 100.0% | .0% | 100.0% |
| | SPM | Count | 154 | 2 | 156 |
| | | % within School | 98.7% | 1.3% | 100.0% |
| | WA | Count | 123 | 0 | 123 |
| | | % within School | 100.0% | .0% | 100.0% |
| Total | | Count | 509 | 8 | 517 |
| | | % within School | 98.5% | 1.5% | 100.0% |

Last year statistically significant differences were found between the schools only in terms of 4-year college plans and vocational school plans. This year there was only a statistically significant difference found in work plans by school. This means that none of the differences are replicating. They might not exist, despite the significance levels indicated in the individual tables.

**2005-2006 Survey Results**

**Crosstab**

| | | | Work | | Total |
|---|---|---|---|---|---|
| | | | No Interest | Interest | |
| School | BC | Count | 35 | 6 | 41 |
| | | % within School | 85.4% | 14.6% | 100.0% |
| | HN | Count | 124 | 43 | 167 |
| | | % within School | 74.3% | 25.7% | 100.0% |
| | MA | Count | 26 | 4 | 30 |
| | | % within School | 86.7% | 13.3% | 100.0% |
| | SPM | Count | 134 | 22 | 156 |
| | | % within School | 85.9% | 14.1% | 100.0% |
| | WA | Count | 113 | 10 | 123 |
| | | % within School | 91.9% | 8.1% | 100.0% |
| Total | | Count | 432 | 85 | 517 |
| | | % within School | 83.6% | 16.4% | 100.0% |

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 17.644[a] | 4 | .001 |
| Likelihood Ratio | 17.607 | 4 | .001 |
| N of Valid Cases | 517 | | |

a. 1 cells (10.0%) have expected count less than 5. The minimum expected count is 4.93.

**Symmetric Measures** [c]

| | | Value | Asymp. Std. Error [a] | Approx. T [b] | Approx. Sig. |
|---|---|---|---|---|---|
| Nominal by Nominal | Phi | .185 | | | .001 |
| | Cramer's V | .185 | | | .001 |
| Ordinal by Ordinal | Gamma | -.304 | .080 | -3.578 | .000 |
| N of Valid Cases | | 517 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Correlation statistics are available for numeric data only.

The largest percentage of students interested in working after graduation was at Holy Name. This difference was statistically significant with 9.24% of variance explained by the type of school. Last year, there was no statistically significant difference on this variable.

The other choices for future plans were not significantly different amongst the schools.

**By Gender Analysis in Each Individual Private/Charter High School:** This is year I also wanted to explore, in each one of participating private schools, the difference by gender, and students' future plans. The analysis and the cross tabs for each individual private/charter high school are demonstrated in the following sub-sections.

**Bancroft High School:** The table below demonstrates the distribution of each gender in the future plans that were listed on the survey utilized in the private/charter high schools this year.

**Bancroft High School Future Plans 2005-2006**

| | Percentage of Students | Significant/Pre-Dominant Gender |
|---|---|---|
| **4-year college** | 95.1% | NO |
| **2-year college** | 0.00% | NO |
| **Vocational/trade school** | 0.00% | NO |
| **Work** | 14.6% | NO |
| **Military** | 0.00% | NO |
| **Marriage & Family** | 4.9% | NO |

This year in Bancroft High School most of the students were interested in pursuing a 4-year college degree after high school graduation. Out of all those planning on attending a 4-year college, 48.7% were male and 51.3% were female students. Once again, as in all private/charter schools, there were more female students interested to go onto a 4-year college than the male students. From all the females in Bancroft, 100% wanted to attend a4-year college, where as there were 90.5% male students who were interested. The proportions are worth noting, but the

difference among the two genders and their choice in pursuing a 4-year degree was not statistically significant.

It is very interesting to see that none of the students were interested in pursuing a 2-year degree, neither the male students nor the female students this year in Bancroft High School. The same was true for vocational school upon high school graduation. The other future plan which revealed that there were no students interested in this school was that of going into the military.

Work on the other hand showed more female students interested, even though the difference was not found to be statistically significant. Out of all the female students in this school, 20% were planning to work compared to only 9.5% male students. Within the future plan work itself, the gender distribution was also skewed towards the females, with 66.7% female students interested and 33.3% male students interested. Overall, 14.6% of all Bancroft High School students were interested to work upon high school graduation.

Marriage was another future plan that seemed to be more popular among the female population of this school, and there were no males interested in marriage after high school at all. 10% of all the females in school expressed their interest in marriage, and there were only 2 female students who actually selected marriage as their future plan in the whole school, but the difference was not statistically significant.

**Holy Name High School:** The next analysis demonstrates the distribution by gender in each one of the future plans listed on the survey this year in Holy Name High School. The table below summarizes the results for this school.

**Holy Name High School Future Plans 2005-2006**

| | Percentage of Students | Significant/Pre-Dominant Gender | % Variance Explained |
|---|---|---|---|
| **4-year college** | 96.4% | YES, Female | 3% |
| **2-year college** | 1.2% | YES, Male | 2% |
| **Vocational/trade school** | 3.6% | YES, Male | 3% |
| **Work** | 25.7% | NO | |
| **Military** | 4.8% | YES, Male | 8% |
| **Marriage & Family** | 4.8% | NO | |

In Holy Name High School, just as in Bancroft, there were more female students than male interested in pursuing s 4-year degree, with 62.7% female students interested and only 37.3% males interested. Of all the female students in this school, 99% were interested in going to a 4-year college after high school, compared to 92.3% of all the male students interested in a 4-year degree. Overall, there were 96.4% of all students within the school interested in going into a 4-year college, compared to 95.1% in Bancroft High School this year. 3% of the variation was explained by gender in this case.

Plans to attend a 2-year college showed a statistically significant difference at a 0.10 significance level with more male students interested, and no female students interested. 2% of the variation was explained by gender, not much but still significant enough to note the difference.

There were more male students interested in attending a vocational school upon high school graduation, and the difference was statistically significant with 3% of the variance explained by the gender of the student. Of all the 3.6% students who were interested in a vocational school, 83.3% were male students. From all the male students in the school, only 7.7% were interested in this future plan and even less of the female population expressed interest, only 1% of all female students were interested in vocational school at Holy Name High School.

Majority of the students interested in working after high school were female (67.4% female students compared to 32.6% male students), but there was no statistical difference for this future plan within gender. What is interesting to note here is that among all the male students, there were 21.5% interested in working, and among the female students there were 28.4% interested in working, slightly more females but almost at balance among the genders.

There was a statistically significant difference, with 8% of the variation explained by gender in the choice of going into the military, with more male students (12.3%) interested than females students, of which there were none.

There was no statistically significant difference among gender and the choice of marriage upon high school graduation, but the distribution of interest by gender is still worth noting. Of the 4.8% of all students interested in marriage, there were 50% male and 50% female students. Within the female population though, only 3.9% expressed interest in marriage, compared to a surprisingly higher proportion of all Holy Name male student, of which there were 6.2%, almost twice as many, interested in marriage after high school.

It seems that gender was a better predictor of student future plans at Holy Name, with 4 out of 6 future plans showing small, but statistically significant difference by gender, compared to Bancroft High School, where none of the future plans showed significant difference.

**Mass Academy High School:** The following table demonstrates the results for the future plans of the students in Mass Academy, including the percent variance explained by gender, if any, the pre-dominant gender, and the significance of the difference, if any, for each one of the six future plans.

**Massachusetts Academy High School Future Plans 2005-2006**

| | Percentage of Students | Significant/Pre-Dominant Gender | % Variance Explained |
|---|---|---|---|
| **4-year college** | 100% | NO | |
| **2-year college** | 0.00% | NO | |
| **Vocational/trade school** | 0.00% | NO | |
| **Work** | 13.3% | NO | |
| **Military** | 6.7% | NO | |
| **Marriage & Family** | 10% | YES(on 0.1 level), Male | 11% |

In Mass Academy High School there was no statistically significant difference among the genders choosing to go into a 4-year college, but that is only because there was an equal proportion of each, the male students and female students interested, it was actually at a balance.

In this school, 100% of the students, which means all students, were interested in attending a 4-year college upon high school graduation. None of students in this school expressed interest in attending a 2-year college or in attending a vocational school after high school this year. 13.3% of all the students expressed interest in working after graduation, of which 50% were male and 50% were female students. Within all the female students at this school, 13.3% were interested in working, and from all the male students in the school, 13.3%, as well, were interested in working. There was no statistically significant difference due to the balance of genders in this future plan.

6.7% of the students were interested in going into the military from Mass Academy, and even though there no statistically significant difference among the gender and this choice for the future, it is worth noting that there was a 50/50 balance amongst the genders, where only one male and only one female were interested in pursuing this future plan.

Marriage was interesting to explore, especially in this school, due to the fact that there was a statistically significant difference at the 0.10 significance level revealing more male students than female students being interested in pursuing marriage upon high school students. There were actually no female students interested at all within this school, but there were 20% of all the males in the school who were interested in marriage after high school. This is an unexpected finding with 11% of the variation explained by gender.

**Saint Peter Marian High School:** The results for Saint Peter Marian follow the same format as the ones for the three previous schools discussed above. The table below summarizes the statistics obtained from the cross tabs for this high school.

**Saint Peter Marian High School Future Plans 2005-2006**

| | Percentage of Students | Significant/Pre-Dominant Gender | % Variance Explained |
|---|---|---|---|
| **4-year college** | 94.9% | YES, Female | 6% |
| **2-year college** | 3.8% | YES, Male | 2% |
| **Vocational/trade school** | 1.3% | NO | |
| **Work** | 14.1% | NO | |
| **Military** | 3.2% | NO | |
| **Marriage & Family** | 7.1% | NO | |

As seen above, there were only two future plans in this school with a statistically significant finding. Of all the students who participated in the study from Saint Peter Marian, 94.9%expressed interest in attending a 4-year college. There was a statistically significant difference showing more female students (54.7%) interested in this school than male students (45.3%). 6% of the variation was explained by gender in the 4-year college future plan this year.

As for the plans for a 2-year college, there was a statistically significant difference with more male students (83.3%) interested than females students (16.7%), but overall there were only 3.8% of all Saint Peter Marian students who were interested in pursuing this plan in their future. Only 2% of the variation was explained by gender within the 2-year college future plan,

compared to the 6% within the 4-year college choice for the future. This indicates that gender was a better predictor within the 4-year college future plan, than within the 2-year college future plan.

Vocation school, work, military and marriage did not reveal any statistically significant difference by gender in Saint Peter Marian this year, but it is still interesting to note the interest by gender in each one of these future plans. Within the 1.3% interested students in pursuing a vocational school education after high school, they were all male students. No female student expressed interest in this future plan at all, and within all the male students at this school, only 2.7% expressed interest in vocational school upon graduation.

As far as work is concerned, this year there were proportionately more male students (54.5%) than females students (45.5%) interested, and 14.1% of all Saint Peter Marian students expressed interest in this future plan.

Of the 3.2% of students, there were proportionately more male students (80%), about 4 times more, than the female students (20%), interested in going into the military after high school. But, the proportion of these male students out of the male population of the school was minor, with only 5.3% interested in going into the military.

For marriage it seemed that there were 7.1% of all the students interested, and the larger proportion of women in this school expressed interest (72.7%), compared to only 23.7% of the men. Within all the women in this school though, about 10% constituted those that were planning on marriage after high school graduation, compared to 4% male students from the total male population of the school.

**Worcester Academy High School:** The following table demonstrated that within Worcester Academy High School, gender was not a great predictor of students' future plans, but the proportions of gender choosing to pursue each one of the future plans will be discussed below.

**Worcester Academy High School Future Plans 2005-2006**

| | Percentage of Students | Significant/Pre-Dominant Gender |
|---|---|---|
| **4-year college** | 98.4% | NO |
| **2-year college** | 0.00% | NO |
| **Vocational/trade school** | 0.00% | NO |
| **Work** | 8.2% | NO |
| **Military** | 2.5% | NO |
| **Marriage & Family** | 4.1% | NO |

Of all Worcester Academy high school students, 98.4% were planning to attend a 4-year college, 8.2% were planning to work. 2.5% were planning to go into the military, and 4.1% to get married upon high school graduation.

From all those students interested in a 4-year college, 56.7% were male and 43.3% were female, indicating that proportionately there were more male students interested. None of the students

expressed interest in attending a 2-year college or vocational school after high school in Worcester Academy this year.

There were proportionately more female students interested in working, 9.4%, compared to the 7.2% of all male students interested in working, but within work, interest from both gender was balances at 50/50 level. There were no female students interested in going into the military, and of all the male population 4.3% was interested.

In Worcester Academy, as in Mass Academy there were proportionately more male students (80%) interested in marriage than female students (20%). There was no statistically significant difference by gender and the choice of getting married in Worcester Academy this year, but it also interesting to note that of all the male student population, 5.8% were interested in marriage, and of all the females only 1.9% were interested.

This section demonstrated the analysis of students' future plan within the five participating private/charter high school as well as within each one of these high schools, a comparison was made by gender. As stated earlier, there were more students this year overall interested in attending a 4-year college after high school, but most of these students, both in the private/charter and in the public high school consisted of females. This increase in interest from students demonstrates that fact that job finding is more competitive and also that more females will potentially study far enough to receive Doctoral degrees and pursue more of the careers that don't demonstrate gender equity just yet.

From the five participating schools, 100% of the Massachusetts Academy students were pursuing a 4-year college degree, and that I think is mainly because they were already in the college atmosphere and their senior year of high school is in actuality their freshman year in college. This same result was found in last year's study, even though the participation rate was higher for this school. The lowest interest was expressed by St. Peter Marian for both years of study, indicating just another replication, but a much larger proportion this year than last year were interested in this school, 94.9% this year compared to only 89.1% last year. Interest to pursue a 4-year college degree has increased four of the five schools, and it stayed proportionately similar for Worcester Academy over the two year, but the fact that this was the most pursued plan for the future by the students from all five schools has replicated. There was no statistical significance by the type of private/charter school the student attends and their choice of attending a 4-year college upon high school graduation.

Interest for vocational school seemed to have replicated over the two year period, but Holy Name expressed a larger interest than last year by two times, 1.3% last year compared to 3.6% this year. This year also, students in Holy Name expressed more interest towards pursuing work, most probably during college, than any of the other four schools.

In this section, I also explored the interest of each gender in each of the five participating schools, hence a gender comparative study. In Bancroft this year there was no statistical significance indicating a difference by gender and the choice of pursuing any of the six future

plans listed on the survey. It is also interesting to note that most of the students were planning to attend a 4-year college after high school.

In Holy Name, out of the six plans, there was a statistically significant difference indicating more male students to be interested to pursue a 2-year college, vocational school, and military after high school. A statistically significant difference was also revealing that more female students were interested in pursuing a 4-year college than the male students, but with only 3% of the variation being explained by gender. 8% of the variation was explained by gender where more males were interested in going to the military, the other two where the male population dominated in interest showed a small percentage of variation explained by gender, only 2% for a 2-year college and a 3% for vocational school. Gender was a better predictor of students' future plans in Holy Name than in Bancroft high school for this year's study.

Gender was also a better predictor in Mass Academy than in Bancroft high school with marriage and family indicating a larger proportion of female students to be interested, with 11% variance explained by gender. As stated earlier, 100% of the students in Mass Academy were interested to go into a 4-year college, but they also expressed to pursue other plans such as work, go to the military and have a family. This means that students were planning some combinations for their future after high school, as discussed earlier in the report.

In St. Peter Marian there were significantly more female students interested in a 4-year college, just like in Holy Name, but a larger variance was explained, 6% compared to only 3% in Holy Name. This indicated that gender is an even better predictor in St. Peter Marian for students' choice in attending a 4-year college. The other plan that indicated a significant difference with more male students interested in attending a 2-year college, also seen at Holy Name with 2% variance explained in both instances. The other four future plans did not show a significant difference in St. Peter Marian by gender.

In general it can be concluded that, as stated in the earlier section of the report, there was a statistically significant difference showing more students in the private/charter high schools to be interested in pursuing a 4-year college degree. As seen in the by-gender analysis in each one of the five private/charter high schools in this sub-section, of all those that were interested, mostly were female students, and in two of the five participating private schools there was a statistically significant difference indicating more female interest.

On the other hand, public school students were more interested in the four of the five plans, and only in two of the private/charter high school was gender a determinant of students' decision in some of the four. Gender seemed to be a better predictor of students future plans in Holy Name high school and somewhat better than in the other three, in Mass Academy. But the type of school was a much better predictor of student's plans, indicating more public school students to be aspiring to a wider range of future plans. Private/charter high school students were mostly aspiring towards a 4-year degree after graduation, which is not surprising at all.

## *Career Reservations in Private/Charter Schools*

Career reservations were also observed for each individual school for both years of study.

Last year there were three career reservations that were found to have statistical significance, where as this year only one reservation was found to be significantly different amongst schools. Last year they were:

1. *"I doubt I'll be accepted to college because my grades are too low."*
2. *"I doubt I'll be attending college because it's too expensive."*
3. *"I doubt I'll be attending college because it's too demanding / difficult."*

The question that was significantly different amongst schools was "*Unprepared 1*" for this year's study. The wording of the concern was:

"*I feel unprepared for my career interest because I don't know anyone in that profession.*"

**By School Comparison:** This was not a replication from last year's results.

**2005-2006 Survey Results**

**Crosstab**

| | | | Unprepared 1 | | |
|---|---|---|---|---|---|
| | | | Not Checked | Checked | Total |
| School | BC | Count | 41 | 0 | 41 |
| | | % within School | 100.0% | .0% | 100.0% |
| | HN | Count | 161 | 6 | 167 |
| | | % within School | 96.4% | 3.6% | 100.0% |
| | MA | Count | 25 | 5 | 30 |
| | | % within School | 83.3% | 16.7% | 100.0% |
| | SPM | Count | 150 | 6 | 156 |
| | | % within School | 96.2% | 3.8% | 100.0% |
| | WA | Count | 113 | 10 | 123 |
| | | % within School | 91.9% | 8.1% | 100.0% |
| Total | | Count | 490 | 27 | 517 |
| | | % within School | 94.8% | 5.2% | 100.0% |

Refer to page 94 for the school name acronyms used in the table above.

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 13.791[a] | 4 | .008 |
| Likelihood Ratio | 13.034 | 4 | .011 |
| N of Valid Cases | 517 | | |

a. 2 cells (20.0%) have expected count less than 5. The minimum expected count is 1.57.

**Symmetric Measures** [c]

| | | Value | Asymp. Std. Error[a] | Approx. T[b] | Approx. Sig. |
|---|---|---|---|---|---|
| Nominal by Nominal | Phi | .163 | | | .008 |
| | Cramer's V | .163 | | | .008 |
| Ordinal by Ordinal | Gamma | .264 | .130 | 1.903 | .057 |
| N of Valid Cases | | 517 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Correlation statistics are available for numeric data only.

There were significantly more students from Massachusetts Academy concerned that they did not know anyone in the careers of their interest and therefore they felt unprepared to pursue that career. As seen in the results from last year, this finding was not a replication. Last year, student from Massachusetts Academy were the least concerned about this variable.

The cross tab for this "Unprepared 1" from last year is demonstrated below:

**2004-2005 Survey Results**

**Crosstab**

| | | | Unprepared 1 | | |
|---|---|---|---|---|---|
| | | | Not checked | Checked | Total |
| School | BC | Count | 28 | 5 | 33 |
| | | % within School | 84.8% | 15.2% | 100.0% |
| | HN | Count | 154 | 1 | 155 |
| | | % within School | 99.4% | .6% | 100.0% |
| | MA | Count | 44 | 2 | 46 |
| | | % within School | 95.7% | 4.3% | 100.0% |
| | SPM | Count | 109 | 10 | 119 |
| | | % within School | 91.6% | 8.4% | 100.0% |
| | WA | Count | 68 | 8 | 76 |
| | | % within School | 89.5% | 10.5% | 100.0% |
| Total | | Count | 403 | 26 | 429 |
| | | % within School | 93.9% | 6.1% | 100.0% |

Last year, there were more students concerned about their grades and there was a statistically significant difference by the schools. Last year there were more students in Bancroft and St.

Peter Marian who were concerned about their acceptance into college due to low grades. This year, there were more at Holy Name high school. At the level of individual schools this variable is unstable with year to year random variation.

**2004-2005 Survey Results**

**Crosstab**

| | | | Accept1 | | |
|---|---|---|---|---|---|
| | | | Not checked | Checked | Total |
| School | BC | Count | 26 | 7 | 33 |
| | | % within school | 78.8% | 21.2% | 100.0% |
| | HN | Count | 145 | 10 | 155 |
| | | % within school | 93.5% | 6.5% | 100.0% |
| | MA | Count | 44 | 2 | 46 |
| | | % within school | 95.7% | 4.3% | 100.0% |
| | SPM. | Count | 89 | 30 | 119 |
| | | % within school | 74.8% | 25.2% | 100.0% |
| | WA | Count | 67 | 9 | 76 |
| | | % within school | 88.2% | 11.8% | 100.0% |
| Total | | Count | 371 | 58 | 429 |
| | | % within school | 86.5% | 13.5% | 100.0% |

This year, there was no statistically significant difference, but from all the students that were concerned about their acceptance into college due to low grades in high school, the majority were found to be within Holy Name and St. Peter Marian high schools. Overall there were fewer students from the private/charter schools concerned about their grades, than there were in the Public schools. The overall findings for this concern have replicated but the results for each individual school have changed. This is probably due to the year to year random variation among classes.

**2005-2006 Survey Results**

**Crosstab**

| | | | Accept1 | | |
|---|---|---|---|---|---|
| | | | Not Checked | Checked | Total |
| School | BC | Count | 40 | 1 | 41 |
| | | % within School | 97.6% | 2.4% | 100.0% |
| | HN | Count | 141 | 26 | 167 |
| | | % within School | 84.4% | 15.6% | 100.0% |
| | MA | Count | 29 | 1 | 30 |
| | | % within School | 96.7% | 3.3% | 100.0% |
| | SPM | Count | 134 | 22 | 156 |
| | | % within School | 85.9% | 14.1% | 100.0% |
| | WA | Count | 107 | 16 | 123 |
| | | % within School | 87.0% | 13.0% | 100.0% |
| Total | | Count | 451 | 66 | 517 |
| | | % within School | 87.2% | 12.8% | 100.0% |

**By Gender Comparison in Each School:** The analysis that follows will analyze the career reservations of students in each one of the five participating private/charter high schools for this year by gender, and determine if gender is in fact a good predictor of high school reservation in the private/charter high schools.

The "Questions" referred to in the survey mean the following:

*** "Accept 3" was an open ended question

*Accept 1: *I doubt I will be accepted to college because my grades are too low.*

*Accept 2: *I doubt I will be accepted to college because my test score are too low.*

*Accept 3: *I doubt I will be accepted to college because [other reasons.].*

*Attend 1: *I doubt I'll attending college because it's too expensive.*

*Attend 2: *I doubt I'll attending college because it's too demanding / difficult.*

*Attend 3: *I doubt I'll attending college because I dislike school.*

*Unprepared 1: *I feel unprepared for my career interest because I don't know anyone in that profession.*

*Unprepared 2: *I feel unprepared for my career interest because I don't know what education is required.*

*Unprepared 3: *I feel unprepared for my career interest because I don't know if I will succeed in that profession.*

**Gender 1, 2, and 3 were not part of the career related concerns section in the survey.

**Bancroft High School:** The table that follows summarizes the concerns of all the students in this school by gender for the 2005-2006 year study, and it indicates whether the findings were significant and if they were, it states the percentage of variance explained by gender.

**Bancroft High School Concerns by Gender**

| | Percentage of Students Concerned | Significance level Pre-dominant Gender | % Variance Explained |
|---|---|---|---|
| **Accept 1** | 2.4% | NO | |
| **Accept 2** | 2.4% | NO | |
| **Attend 1** | 2.4% | NO | |
| **Attend 2** | 0.0% | NO | |
| **Attend 3** | 2.4% | NO | |
| **Unprepared 1** | 0.0% | NO | |
| **Unprepared 2** | 4.9% | NO | |
| **Unprepared 3** | 7.3% | YES (On 0.10 Sig. Level),Female | 8.3% |

There was no statistically significant difference within "Accept 1", but the larger proportion of male students (100%), and no female students, indicates that male students in this school were more concerned about their grades being too low than females were. Of all the male students in this school, 4.8% actually expressed to be concerned that their grades are too low to even get accepted into college.

As far as students' concerns about their test scores being too low in this school, or "Accept 2", there was no statistically significant difference, but there were proportionately more females (100%) concerned and no male students at all. Of all the females, this concerned group constituted 5% of the female population.

"Accept 3" was a fill-in question and due to many different responses it will not be analyzed in this section.

The concern of college being too expensive was more popular amongst the female students, 100%, compared to no male students being concerned about this matter. There was also no statistical difference here, but the proportions are interesting to view. Lack of male concern in this are simply suggests that the male population in this school considers themselves well prepared to afford to go to college, but that is of they are planning to do so, and most of them were planning to pursue an inexpensive education. With a larger percentage of female student planning to attend the more expensive, 4-year colleges, would explain the proportionately larger amount of concern on this subject coming from them.

It seems that the students of this school are very confident in the education they have received and they feel that they are most prepared, as they were not al all, not the male students nor the female students, concerned over college being difficult and/or demanding.

4.8% of all the male students in this school stated that they were not going into college because they dislikes school, where as there were no females who expressed such a concern. The finding was not significant by gender, but the proportions are worth noting.

None of the students in Bancroft seemed to feel that they were unprepared for the career towards which they chose to aspire to due to lack of knowledge of someone in that career.

Once again, there was no statistically significant difference among the genders at this school this year, but the proportions of students, male and female, was at balance for the concern in being unprepared for college due to lack of the knowledge of what education is required for the career towards which they have aspired. Overall, 4.9% of the students were concerned that they were not aware of the proper education needed to pursue the career of their dreams, the second most popular concern within this school this year. Of all the Bancroft female students, 5% were concerned, compared to 4.8% of all the male students who were concerned. There were slightly more females concerned than males in this case.

The most popular student reservation and the one that indicated a statistically significant difference in Bancroft this year, with more female students being concerned that they won't succeed in their career, where none of the male students in this school were at all concerned, was "Unprepared 3". 7.3% of all the Bancroft students, of which 100% marked as being concerned in this are on the surveys. Of all the females in the school, 15% were concerned on this matter. Since there was a statistically significant finding showing that gender does serve as a predictor in students' post high school reservation and/or concerns, 8.3% of the variance is therefore explained by gender.

It can therefore be noted, that with only one concern indicating a statistically significant difference by gender, gender was not such a great predictor of students' reservation about college and future plans.

**Holy Name High School:** The analysis of Holy Name students experiencing some of the concerns and reservations listed on the survey used this year are explored on the next page. "Accept 3" is not part of the analysis since there were too many fill-in questions to explore.

**Holy Name High School Concerns by Gender**

| | Percentage of Students Concerned | Significance level Pre-dominant Gender | % Variance Explained |
|---|---|---|---|
| **Accept 1** | 15.6% | NO | |
| **Accept 2** | 16.8% | YES, Female | 3% |
| **Attend 1** | 9.6% | NO | |
| **Attend 2** | 4.2% | NO | |
| **Attend 3** | 4.2% | NO | |
| **Unprepared 1** | 3.6% | NO | |
| **Unprepared 2** | 17.4% | NO | |
| **Unprepared 3** | 26.9% | NO | |

From all 8 career reservations/concerns, there was only one that indicates a statistically significant difference with more females students (78.6%) being concerned than the male student

(21.4%) about being able to go to college due to their low test scores. Of all the female students in the school, 21.6% expressed to be concerned for their test scores being too low, where as only 9.2% of all the males felt that way. With only one statistically significant difference by gender with the students' concerns, it is therefore important to say that, here too, gender was not as good of a predictor for students' concerns and reservations. Only 3% of the variance was explained by gender in this case, weak, but it is important to be mentioned.

The second most popular concern in this school, even though gender did not serve as a good predictor, was that of students, almost proportionately, concerned about not getting accepted into college due low grades from high school. Of all those concerned 54.5% were male, slightly larger proportion, and 45.5% female students.

26.9%, which was the most students concerned compared to the other 7 reservation, indicated that there were more a proportionate amount of students worried about not succeeding in the careers of their choice.

Many students, unlike in Bancroft, were concerned about not knowing the appropriate education, with 17.4% students expressing concern compare to only about 5% in Bancroft. This indicates that the students in Bancroft has prepared their students with the necessary information about continuation of their education, where as the students in Holy Name seem to fell that they were not prepared enough, both male and female students were almost equally concerned.

"Attend 2" and "Attend 3", college being too demanding and dislike towards school, were concerns that seemed to be of a concern to a similar amount of student, both indicating 4.2% of the students expressing their concern. Both also showed more male students being concerned than female students. Almost 10% of all Holy Name students were also concerned with college being more expensive.

**Mass Academy High School:** The following is an analysis for Massachusetts Academy.

**Mass Academy Concerns by Gender**

| | Percentage of Students Concerned | Significance level Pre-dominant Gender | % Variance Explained |
|---|---|---|---|
| **Accept 1** | 3.3% | NO | |
| **Accept 2** | 10% | NO | |
| **Attend 1** | 23.3% | NO | |
| **Attend 2** | 0.00% | NO | |
| **Attend 3** | 0.005 | NO | |
| **Unprepared 1** | 16.7% | NO | |
| **Unprepared 2** | 10% | YES (0.10 Sig. Level), Female | 11.1% |
| **Unprepared 3** | 23.3% | YES, Female | 30.4% |

From the table above it can be noted that only two of the eight reservations being examined in this section for Mass Academy showed a significant difference with more female student, for both, the "Unprepared 2" and "Unprepared 3" careers. Doubt in their success and the feeling that they lack the education required to succeed in the careers of their choices showed a significantly

larger proportion of females being concerned than male students. Significantly more female students in Bancroft were also concerned. For "Unprepared 3" this year, 30.4% of the variance was explained by gender, and in Bancroft only about four times less or only 8%, of the variance was explained by gender. So in both schools gender was a significant predictor, but it was a much stronger predictor in "Unprepared 3" concern in Mass Academy than in Bancroft high school this year.

Mass Academy also seems to have the most of the students, compared to Holy Name and Bancroft, who were concerned about "Attend 1", college being too expensive. More females were concerned in Holy Name and 100% of the female students were concerned about financial aspects of entering college, where as there were more male students in this school concerned than there were female student.

There were no students concerned about college being too demanding and that is primarily due to the fact that the students of Mass Academy are taking college level courses at WPI as it is, therefore they already know what to expect and their abilities are also better equipped at grasping academic material. The same was evident with "Attend 3", where only 0.005% (almost no one) of the students, were concerned about not going to college because they dislike college.

**Saint Peter Marian High School:** The following explains the results for the St. Peter Marian high school and students' concerns.

**Saint Peter Marian High School Concerns by Gender**

| | Percentage of Students Concerned | Significance level Pre-dominant Gender | % Variance Explained |
|---|---|---|---|
| **Accept 1** | 14.1% | NO | |
| **Accept 2** | 10.9% | YES, Female | 3% |
| **Attend 1** | 10.9% | NO | |
| **Attend 2** | 2.6% | NO | |
| **Attend 3** | 1.3% | NO | |
| **Unprepared 1** | 3.8% | NO | |
| **Unprepared 2** | 14.2% | NO | |
| **Unprepared 3** | 21.2% | NO | |

As you can see above, there was a statistically significant difference by gender in only one career reservation/concern, "Accept 2", in St. Peter Marian this year. There were more female students being concerned (76.5%) than male students (23.5%) about their test scores being too low to get accepted into college. This 76.5% represented 16% of the entire female population where as only 5.3% of the male population in this school expressed this concern.

What is becoming evident is that "Accept 2" seems to reveal that gender does play a role in students' concerns about their test scores being too low in only two of the participating private/charter high school, St. Peter Marian and Holy Name, the two catholic schools. That could simply mean that their test scores have a similar distribution than the other students', but the standards that are being set by the schools that they are applying to are much higher, and therefore they view their test scores as being too low. Other possibility could be that their test

scores were indeed too low, and even much lower among the women than the men in the two catholic schools.

The other eight of the concerns/reservations did not reveal a significant difference by gender, but the proportions of female and male students is interesting to note. Most of the students were concerned about "Unprepared 2" and "Unprepared 3", as it was also true in Holy Name. "Accept 1" revealed the next highest proportion of students in this school concerned.

Of the 14.1% of the students being concerned about their grades to be too low to get accepted into college, almost 60% were male and even though distribution of concerned students is almost proportionate, the female students were more confident about their grades.

"Accept 2" and "Attend 1" each showed 10.9% of all the students, a total of 22%, to be concerned that their test scores are too low and that schools is expensive. From the 10.9% of the students being concerned about their school being too expensive, the proportion of male and female students was approaching a balance, with 52.9% male and 47.1% female students expressing this concern.

Gender was not such a good predictor of St. Peter Marian students' career reservations this year, but it was interested to see what each gender was more concerned about.

**Worcester Academy High School:** The following analysis is for Worcester Academy, where it seems like gender was not a statistically significant predictor in any of the eight career reservations/concerns.

**Worcester Academy Concerns by Gender**

| | Percentage of Students Concerned | Significance level Pre-dominant Gender |
|---|---|---|
| **Accept 1** | 13.1% | NO |
| **Accept 2** | 9.8% | NO |
| **Attend 1** | 9.8% | NO |
| **Attend 2** | 4.1% | NO |
| **Attend 3** | 3.3% | NO |
| **Unprepared 1** | 8.2% | NO |
| **Unprepared 2** | 9.8% | NO |
| **Unprepared 3** | 21.3% | NO |

None of the concerns indicated a significant difference by gender, but most of the students in this school (21.3%) were concerned about not being prepared enough to succeed in their professions. In general this seemed to be the issue in each one of the five schools, where the majority of the students in each school were concerned about their success rate in the career of their choice. "Accept 1" also displayed that the concern was almost at a balance among female (43.8%) and male (56.3%) students.

Of the 9.8% students who were concerned about their school being to expensive, 75% were male students, where as in St. Peter Marian the number of concerned students was approaching a balance by gender.

50% of the female students and 50% of the male students, those who expressed concern for their reservation for disliking school and therefore not attending college, constituted the 3.3% of the entire population. The overall proportion of students disliking school was important, but still low, but the distribution within "Attend 3" seems to be at a balance between female and male students. So, students of Worcester Academy, both female and male, equally likely dislike school.

The proportions of students are interesting to see, but as mentioned earlier gender was not such a great predictor of students' career reservation or concerns in Worcester Academy.

This section revealed many interesting things about the concerns the students were experiencing in each one of the five private/charter high schools. Some of the results seems to have replocated and others were different for to years.

What I found to be very interesting in this section is that within each individual private/charter high school, gender was not such a great predictor of students' career reservations, and the only concern that revealed a statistically significant difference with more female students being concerned was in "Accept 2", which states that students are concerned about their test score to be too low to get accepted into college. It was also interesting to see that this was true in the two catholic high schools participating in this study.

Last year there was a statistically significant difference among the schools and students' concern for having low grades, where as this year the result did not replicate. This variable seems to be unstable. In general, there was some random variation among classes in this particular comparison as the results were different from last year, and therefore did not constitute a major replication.

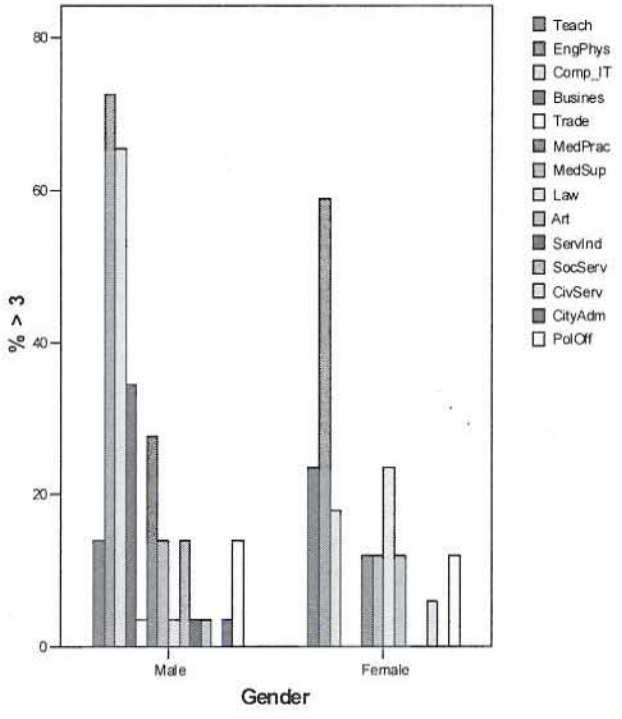
As I wrote earlier, the analysis went a little further this year to see the by gender career reservation in each one of the five schools. Gender was a much better predictor in Mass Academy than in the other four schools, with 2 of the career reservations displaying a difference by gender, one on a 0.05 and the other on 0.10 significance levels. Analysis for Worcester Academy indicated that gender was not a factor in career reservations of the students, therefore an unreliable predictor. The other three high schools showed only one career reservation with gender being a factor in prediction of that concern, with one gender being more concerned than the other. But, among these schools "Unprepared 3" and "Accept 2" showed significant gender difference most often than the other career reservations and they were mostly female students.

In general, it seems that the catholic school students were concerned about their test scores, where as the other students were concerned about "Unprepared 3", where they thought they will not succeed in the profession of their choice. Holy Name revealed that gender is a better predictor there than in the other schools, but overall gender was not as good of a predictor for students' career concerns and reservations as expected, not was the type of school.

## *Mass Academy vs. Bancroft + Worcester Academy*

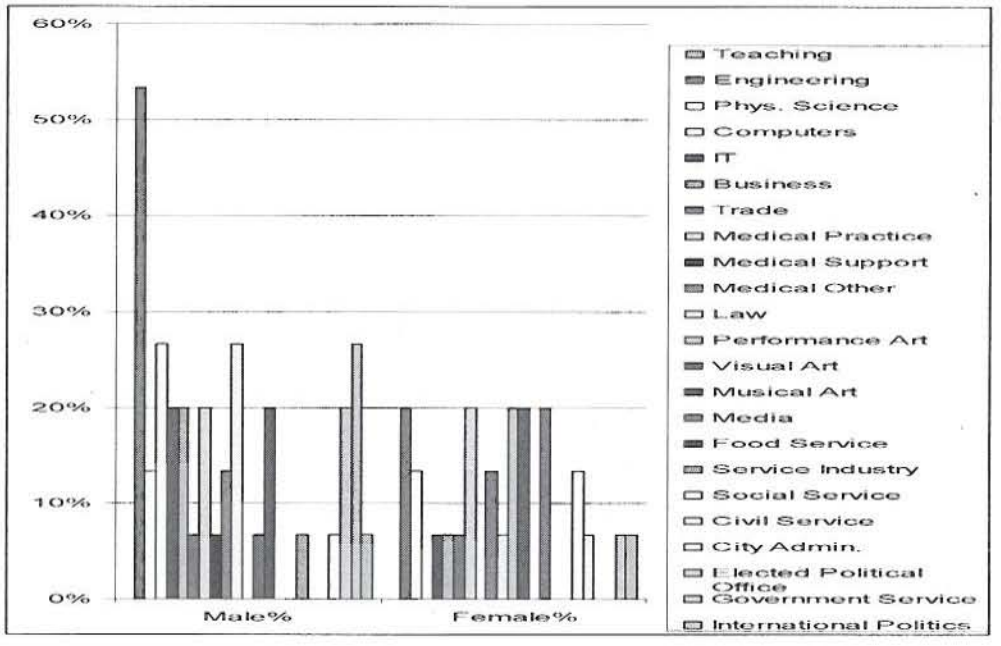
Last year Massachusetts Academy was compared to the pattern of career interests found at of Bancroft and Worcester Academy combined, the two other non-catholic schools within this study. The reason for this comparison was that Massachusetts Academy is a publicly supported technical high school where students interested in Engineering, Math and Science are encouraged to apply – with competitive admissions. Last year the private/charter school group found that even within this technically inclined schools gender stereotypes prevented females and males from moving towards gender equity. Equity might have been expected to be occurring in this school more than in the other participating schools. The group last year found that there were more female students interested in Educational careers and there were few female students interested in Medicine and fewer still interested in Computer/IT careers and none at all in Business and Trade careers. The graph of high interest for this school by gender is demonstrated below:

**Mass Academy Careers by Gender: 2004-2005**



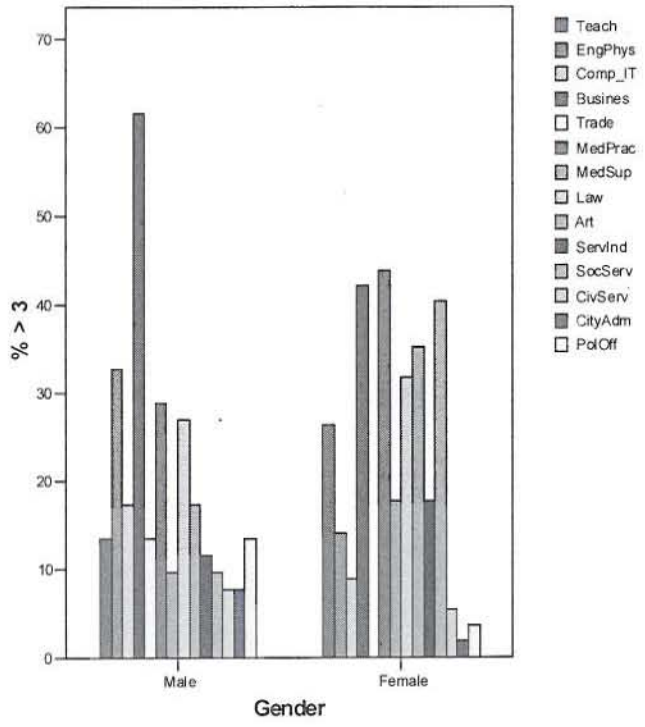

I was interested to see what the aspirations pattern in this school are for this year's study and the results are given in graph format on the next page:

**Mass Academy Careers by Gender: 2005-2006**

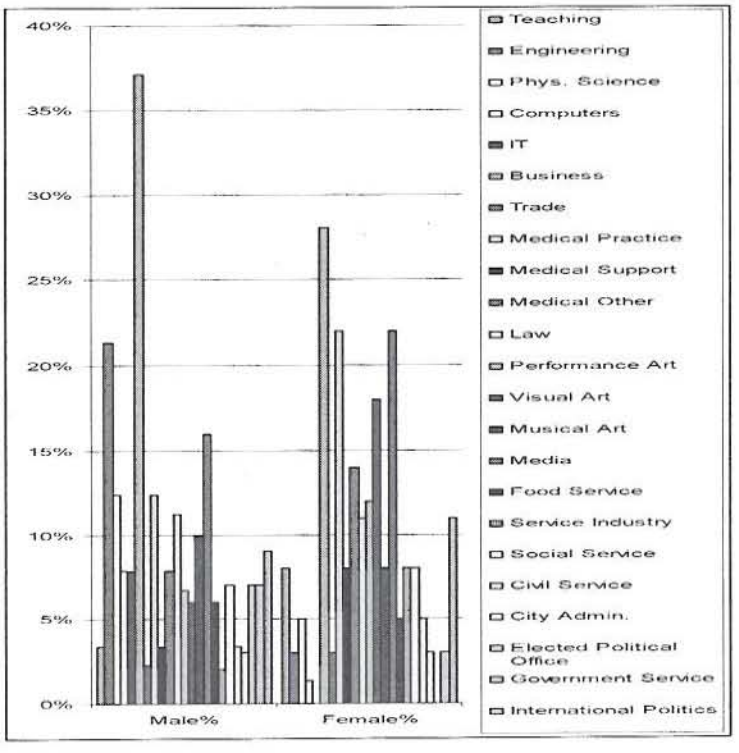



This year's results demonstrate more equity between the genders within this school. There are no male or female students interested in Educational careers, but there are also fewer female students interested in Engineering careers than males this year and females last year. Interest in Physical Science is almost equal between the two genders. The difference in interest amongst females in Engineering might be due to, Engineering being listed as an individual career, instead of being paired with Physical Science as it was last year. This shows that last year the high proportion of female interest in engineering was actually interest in Physical Science careers. Careers in Arts are equally likely to be pursued within both genders. Government careers are more likely to be aspired towards by males than females. Legal careers are very male dominated in this school, demonstrating that some gender based expectations are still operating within this school, though the pattern differs from that found elsewhere in the private school sample.

## Bancroft + Worcester Academy Careers by Gender: 2004-2005




## Bancroft + Worcester Academy Careers by Gender: 2005-2006



As last year the comparison among gender differences in aspirations of students were observed within the other two non-catholic schools. Last year the group found that there were still more females students interested in Educational and Social Service careers than male students, but by excluding Massachusetts Academy students it became evident that there are more females aspiring towards Arts and medicine than in the technical high school. The Legal career aspirations were also very close to equal among the genders.

The results of this comparison for this year follow the graph of last year's results on the previous page. For this year there are also more females aspiring towards Educational, media and Social Service careers than the males. There are also equal proportions of both genders aspiring to go into Legal careers. Gender stereotype persist, however, in that there are still more men interested in Engineering careers and Physical Science careers.

## *Self-Image section results for private/charter schools 2005-2006*

This year the survey contained a new section referred to as the "Self-Image" section. This section, in actuality, is the Bem Sex Role Inventory developed by Sandra Lipitz Bem in the 1970's. This instrument measures individual gender identities. The BSRI classifies gender roles as the extent to which an individual expresses his/her masculine and/or feminine characteristics, in their self image or self identity. Traits that are referred to as masculine in BSRI, are the traits that are considered to be more suitable for a male, where as those that are considered feminine are more suitable for a female, by the standards of cultural gender stereotypes. There are also categories that are referred to as androgynous and neutral. Neutral individuals are those who score low on both masculine and feminine trait possession and someone who is androgynous scores high on both masculine and feminine traits.

Below, there are some statistical tables and frequencies to demonstrate some of the main findings amongst the many results that involve BSRI. The first aspect that I wanted to observe was the distribution of career aspirations of masculine and feminine students overall, meaning all the masculine females and masculine males in the sample combined career aspirations versus all the feminine males and the feminine females combined career aspirations. Students who chose a 4, "*Very interested*", within the career were compared by gender identity in this section as well as section to come.

The following table presents the breakdown of all the Bem Sex Scores within private/charter school sample:

| | Frequency |
|---|---|
| **Masculine Male** | 175 |
| **Masculine Female** | 97 |
| **Neutral + Androgynous** | 49 |
| **Feminine Males** | 44 |
| **Feminine Females** | 133 |

From the above frequency table it is evident that there are almost twice as many masculine males as there are masculine females. It can also be noted that there are almost three times as many feminine females as there are feminine males. For this reason the frequencies of students by gender identity within each one of the 23 careers were weighted to facilitate comparison of different size groups and make the results of the Bem Sex Role Inventory section results.

The table on the next page demonstrates the non-weighted total frequencies of students in each of the gender roles who are very interested, or chose a 4 on the survey, in each one of the 23 careers listed in the first section of the survey.

**Raw Frequencies – Private School Sample 2005-2006**

| | MM | MF | AN | FM | FF |
|---|---|---|---|---|---|
| **Teaching** | 7 | 7 | 5 | 2 | 22 |
| **Engineering** | 34 | 7 | 3 | 8 | 5 |
| **Phys. Science** | 16 | 4 | 2 | 3 | 4 |
| **Computers** | 14 | 3 | 3 | 2 | 2 |
| **IT** | 14 | 2 | 4 | 4 | 4 |
| **Business** | 58 | 28 | 10 | 11 | 20 |
| **Trade** | 14 | 2 | 1 | 0 | 2 |
| **Medical Practice** | 21 | 21 | 12 | 3 | 32 |
| **Medical Support** | 9 | 9 | 3 | 1 | 18 |
| **Medical Other** | 17 | 8 | 3 | 1 | 24 |
| **Law** | 25 | 22 | 4 | 3 | 10 |
| **Performance Art** | 3 | 18 | 4 | 6 | 13 |
| **Visual Art** | 8 | 17 | 9 | 5 | 25 |
| **Musical Art** | 18 | 10 | 2 | 7 | 9 |
| **Media** | 19 | 18 | 10 | 11 | 14 |
| **Food Service** | 14 | 6 | 1 | 2 | 5 |
| **Service Industry** | 7 | 7 | 1 | 1 | 9 |
| **Social Service** | 4 | 10 | 5 | 3 | 16 |
| **Civil Service** | 22 | 3 | 2 | 1 | 2 |
| **City Admin.** | 5 | 2 | 0 | 1 | 0 |
| **Elected Political Office** | 11 | 6 | 0 | 0 | 3 |
| **Government Service** | 16 | 6 | 1 | 0 | 2 |
| **International Politics** | 15 | 11 | 1 | 1 | 2 |

From the table on page 113 it can be noted that 35% of the students fell into the category of being Masculine Males, that is, single largest category of all the private school students. 27% of all the students were Feminine Females, which is the second largest group of students. Masculine Females constituted 20% of the population. Students, both male and female, who were coded to be Neutral and/or Androgynous constituted 10% of the population and Feminine Males, the smallest group constituted about 9% of the population in question. In order for me to compare the aspirations, future plans as well as concerns about their future education correctly and proportionally, I needed to weight the raw data obtained from the Self- Image section in a matter that would allow me to demonstrate the responses of the students within each category as if each category contained the same number of participants. For example, when looking at the aspirations of Feminine Females, of which there were 133, and comparing these aspirations to

Masculine Males, of which there were 175, I weighted the data for Feminine Females in a way that showed their interest levels as if there were as many as there were Masculine Males.

The following table demonstrates the weights that were applied to each category listed on page 114:

**Self-Image Weights**

| | Weight |
|---|---|
| **Masculine Male** | 1.00 |
| **Masculine Female** | 1.75 |
| **Neutral/Androgynous** | 3.50 |
| **Feminine Males** | 3.50 |
| **Feminine Females** | 1.40 |

The reasoning behind the chosen weights is the following:

35% of all the students were identified to fall into the Masculine Male category of the BSRI and since it was the largest group its weight is 1. There were 20% Masculine Females, which means that there were 1.75 times more Masculine Males than Masculine Females, and therefore 1.75 was the weight assigned to the raw results of Feminine Females. There were about 3.5 times as many Masculine Males as both the Neutral/Androgynous category and Feminine Male category, therefore the weight assigned was 3.50. There were 1.40 times as many Masculine Males than Feminine Females therefore the weight assigned to this category was 1.40.

The table with the weighted number of students in each category who are "*Very Interested*" in the provided careers as defined by the BSRI is provided on the following page:

**Private School Aspirations Survey 2005-2006**
**Weighted Distribution of students "Very Interested" in the 23 careers listed on the survey**

The acronyms for each column in the table below refer to the following:

**MM – Masculine Male**
**MF – Masculine Female**
**FM – Feminine Male**
**FF – Feminine Female**
**AN – Androgynous and/or Neutral**

| | MM | MM% | MF | MF% | AN | AN% | FM | FM% | FF | FF% |
|---|---|---|---|---|---|---|---|---|---|---|
| Teaching | 7 | 9.21% | 13 | 17.11% | 18 | 23.68% | 7 | 9.21% | 31 | 40.79% |
| Engineering | 34 | 36.56% | 13 | 13.98% | 11 | 11.83 | 28 | 30.11% | 7 | 7.53% |
| Phys. Science | 16 | 34.04% | 7 | 14.89% | 7 | 14.89% | 11 | 23.40% | 6 | 12.77% |
| Computers | 14 | 33.33% | 6 | 14.29% | 11 | 26.19% | 7 | 16.67% | 3 | 7.14% |
| IT | 14 | 26.92% | 4 | 7.69% | 14 | 26.92% | 14 | 26.92% | 6 | 11.54% |
| Business | 58 | 33.53% | 49 | 28.32% | 35 | 20.23% | 39 | 22.54% | 28 | 16.18% |
| Trade | 14 | 56.00% | 4 | 16.00% | 4 | 16.00% | 0 | 0.00% | 3 | 12.00% |
| Medical Practice | 21 | 13.46% | 37 | 23.72% | 42 | 26.92% | 11 | 7.05% | 45 | 28.85% |
| Medical Support | 9 | 13.64% | 16 | 24.24% | 11 | 16.67% | 4 | 6.06% | 26 | 39.39% |
| Medical Other | 17 | 19.32% | 14 | 17.50% | 11 | 13.75% | 4 | 5.00% | 34 | 42.50% |
| Law | 25 | 24.27% | 39 | 37.86% | 14 | 13.59% | 11 | 10.68% | 14 | 13.59% |
| Performance Art | 3 | 3.37% | 32 | 35.96% | 14 | 15.73% | 21 | 23.60% | 19 | 21.35% |
| Visual Art | 8 | 6.50% | 30 | 24.39% | 32 | 26.02% | 18 | 14.63% | 35 | 28.46% |
| Musical Art | 18 | 22.22% | 18 | 22.22% | 7 | 8.64% | 25 | 30.86% | 13 | 16.05% |
| Media | 19 | 13.10% | 32 | 22.07% | 35 | 24.14% | 39 | 26.90% | 20 | 13.79% |
| Food Service | 14 | 32.56% | 11 | 25.58% | 4 | 9.30% | 7 | 16.28% | 7 | 16.28% |
| Service Industry | 7 | 17.07% | 13 | 31.17% | 4 | 9.76% | 4 | 9.76% | 13 | 31.17% |
| Social Service | 4 | 5.41% | 18 | 24.32% | 18 | 24.32% | 11 | 14.86% | 23 | 31.08% |
| Civil Service | 22 | 52.38% | 6 | 14.29% | 7 | 16.67% | 4 | 9.52% | 3 | 7.14% |
| City Admin. | 5 | 38.46% | 4 | 30.77% | 0 | 0.00% | 4 | 30.77% | 0 | 0.00% |
| Elected Political Office | 11 | 40.74% | 11 | 40.74% | 0 | 0.00% | 0 | 0.00% | 5 | 18.52% |
| Government Service | 16 | 47.06% | 11 | 32.35% | 4 | 11.76% | 0 | 0.00% | 3 | 8.82% |
| International Politics | 15 | 32.61% | 20 | 43.48% | 4 | 8.70% | 4 | 8.70% | 3 | 6.52% |

The following section explores in detail the interests of feminine and masculine students and compares their interests in a graphical format.

**Masculine students versus Feminine Students:** In this section we will ignore biological sex and focus on gender identity. Feminine students are students who are feminine males and feminine females. Masculine students are students who are masculine males and masculine females (The androgynous were dropped from the analysis). These data needed to be weighted also since there are 1.5 as many masculine students than feminine students, therefore the raw data for feminine students were weighted by 1.50. The proportions are expressed in percent of students of a given category interested in a given career amongst all the masculine students/feminine students. There were a total of 272 masculine students and 177 feminine students.

**Private Schools 2005-2006 Aspirations Survey**
**Masculine Students VS. Feminine Students**

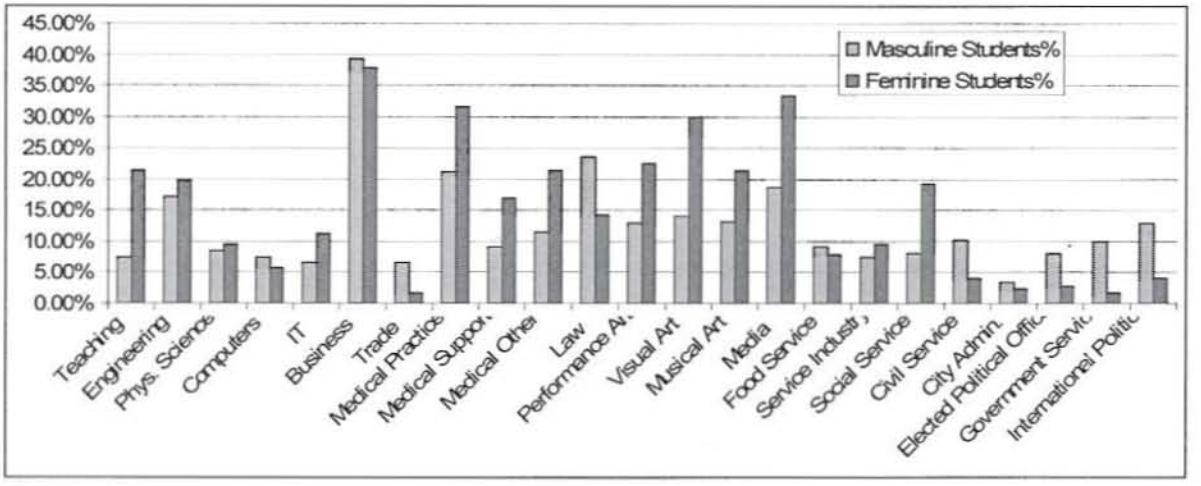
| Career*** | Masculine Students | Masculine Students% | Feminine Students | Feminine Students% |
|---|---|---|---|---|
| Teaching | 20 | 7.35% | 38 | 21.47% |
| Engineering | 47 | 17.28% | 35 | 19.77% |
| Phys. Science | 23 | 8.46% | 17 | 9.60% |
| Computers | 20 | 7.35% | 10 | 5.65% |
| IT | 18 | 6.62% | 20 | 11.30% |
| Business | 107 | 39.34% | 67 | 37.85% |
| Trade | 18 | 6.62% | 3 | 1.69% |
| Medical Practice | 58 | 21.32% | 56 | 31.64% |
| Medical Support | 25 | 9.19% | 30 | 16.95% |
| Medical Other | 31 | 11.40% | 38 | 21.47% |
| Law | 64 | 23.53% | 25 | 14.12% |
| Performance Art | 35 | 12.87% | 40 | 22.60% |
| Visual Art | 38 | 13.97% | 53 | 29.94% |
| Musical Art | 36 | 13.24% | 38 | 21.47% |
| Media | 51 | 18.75% | 59 | 33.33% |
| Food Service | 25 | 9.19% | 14 | 7.91% |
| Service Industry | 20 | 7.35% | 17 | 9.60% |
| Social Service | 22 | 8.09% | 34 | 19.21% |
| Civil Service | 28 | 10.29% | 7 | 3.95% |
| City Admin. | 9 | 3.31% | 4 | 2.26% |
| Elected Political Office | 22 | 8.09% | 5 | 2.82% |
| Government Service | 27 | 9.93% | 3 | 1.69% |
| International Politics | 35 | 12.87% | 7 | 3.95% |

The percentages in the above table refer to the proportion of all students in the category who are *"Pretty interested"* and *"Very interested"* in each one of the 23 careers, and will not add up to 100%.

*** The numbers of feminine students were also rounded up after being weighted because a half of a person being interested is not realistic.

The following graph compares career aspirations of Masculine students and Feminine Students (proportions based on weighted data), followed by a graph that compares male and females students:

**Masculine Students versus Feminine Students**

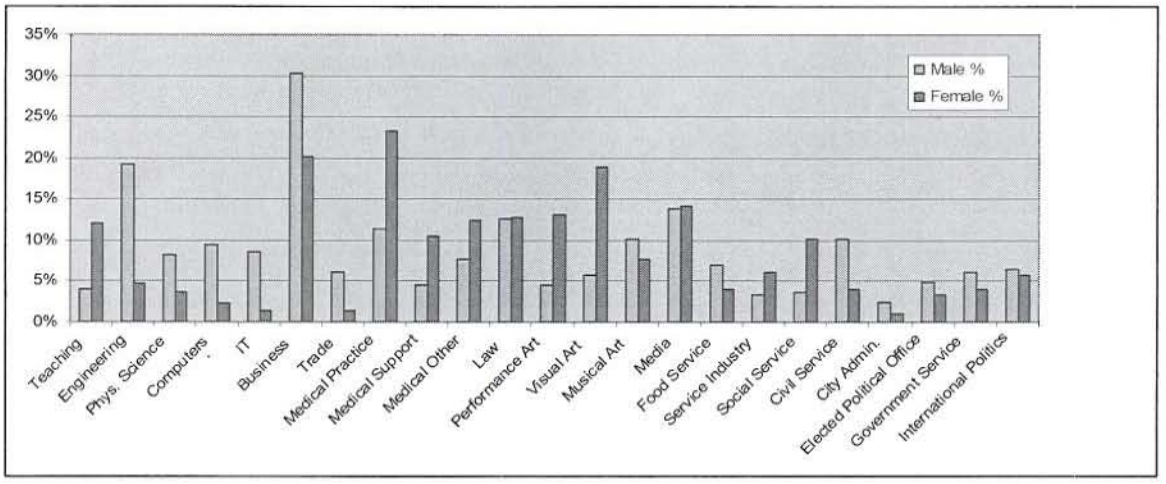



The reason I wanted to explore the differences among feminine students' and masculine students' career aspiration was because I hypothesized that masculine students would display a similar patter in their career aspirations as male students, and the hypothesis also applied for the feminine students and females. The percentages applied in this table refer to the proportion of feminine students interested in the given career out of all the feminine students. For masculine students the proportion of the masculine students interested in the given career out of all the masculine students was calculated. For example, of all 272 masculine students, 7.35% were interested within the Teaching careers, and of all 177 feminine students, 21.47% were interested in Educational careers. Basically this graph examines the distribution of interest for each career within the masculine and feminine student groups.

What is interesting to note is that a large proportion of masculine and feminine students were interested in Business career, as there were also almost a proportionately balanced distribution of interest in this career among the male and the female students also. The next largest proportion of masculine students expressed interest in Legal careers, where as the proportion of feminine student interest in these careers was not one of the highest. Larger proportions of interest from the feminine population of students can be observed in the Media and Art careers. This means that most of the males (of whom there was a larger proportion among genders in the private/charter high schools) who expressed interest for Musical careers were feminine-males.

It is also important to note for the interest towards pursuing a majority of the careers, the students seemed to be feminine. Only the political careers seemed to attract the masculine population at a larger proportion than the feminine students in the private schools this year.

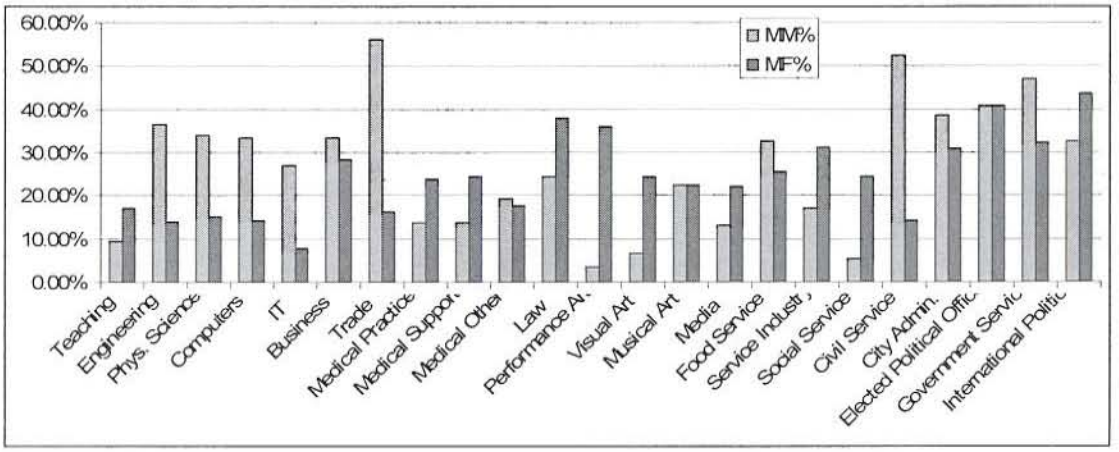
**Male Students versus Female Students**



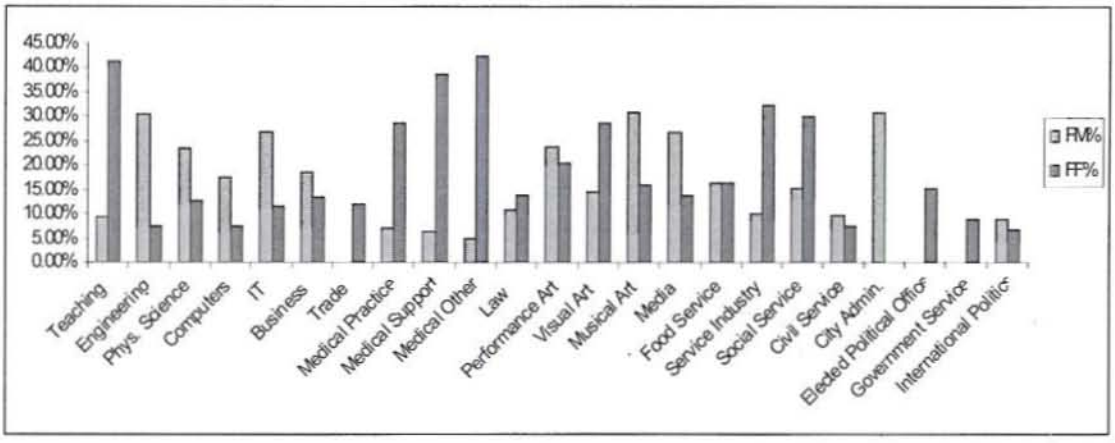

The graph above presents the high interests of students by gender. From all those that were female, also a majority gender, interested in educational careers they were feminine females as suggested by the graph on the previous page. It is also interesting to see that the majority of the students who were interested in Engineering, Physical Science, IT, the medical fields, in all of the three art careers as well as Media careers, were feminine students. But, ender wise, Engineering was mostly of interest to the male students. The same was true for Physical Science, IT, and Musical Art careers. This also means that of all the students interested in Business careers, the majority were masculine students.

The graph below and the one on the tope of the following page compare masculine-male to masculine-female career aspirations, and feminine-male to feminine-female career aspirations. I hypothesized that the distribution of their interest will look similar. It is interesting to look at these graphs and note that there are certain careers where male students seemed to dominate, but the distribution was largely of the feminine students within that career, or even close to a balance among the feminine and masculine students.

**Masculine-Male versus Masculine-Females**



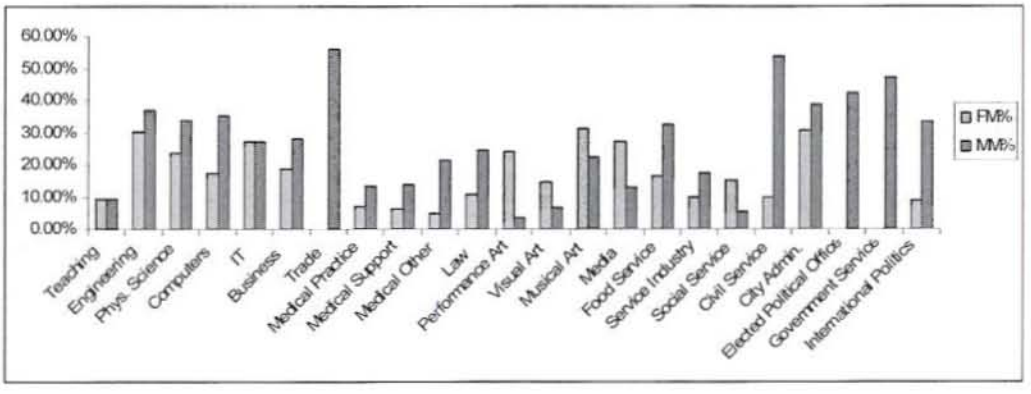
**Feminine –Males versus Feminine-Females**



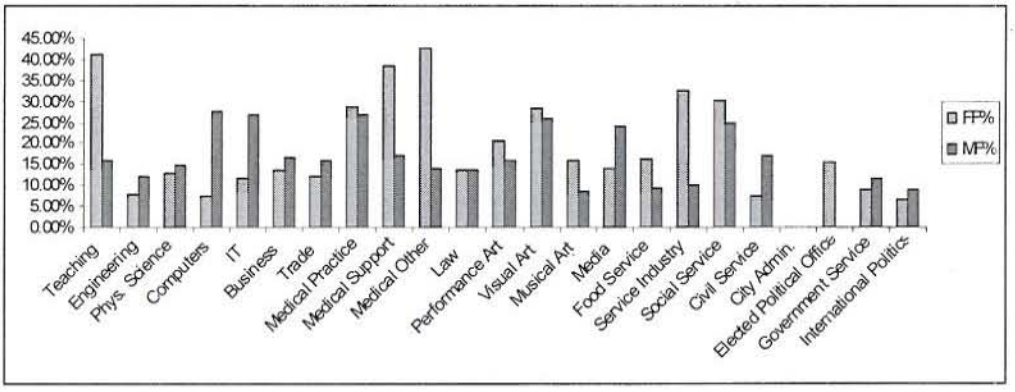

The graph below was created to see how the students with stereotypical gender identities expressed their career interests. I also expected that the distribution of interest in this graph will look similar to the one comparing male and female students in general. It can be noted that there were more feminine-females than feminine-males interested in the following careers: Education, Medical Practice, Medical Support, Medical Other, Visual Art, Service Industry, and Social Service. This result indicates that the majority of the female students interested in these careers were of feminine self-identity. But there were more feminine-male students than feminine-female students interested in the following careers: Musical Art, Media, Civil Service, International Political, Engineering, Physical Science, Computer, IT, and Business careers. This also indicates that the male students who were interested in these careers, the majority were masculine-males. It is also interesting to see that there were no feminine-males at all interested in Government Service, Trade and Elected Political Office. And, there were no feminine-female students at interested in City Administrative careers. This observation implies that of all the female students that were interested in this career they possessed other self-images, probably mostly masculine.

The next graph and the one following graphs demonstrate the distribution of career interest of males with two self-identities and than females with the masculine and feminine self-identities.

**Feminine-Males versus Masculine Males**



**Feminine Females versus Masculine Females**



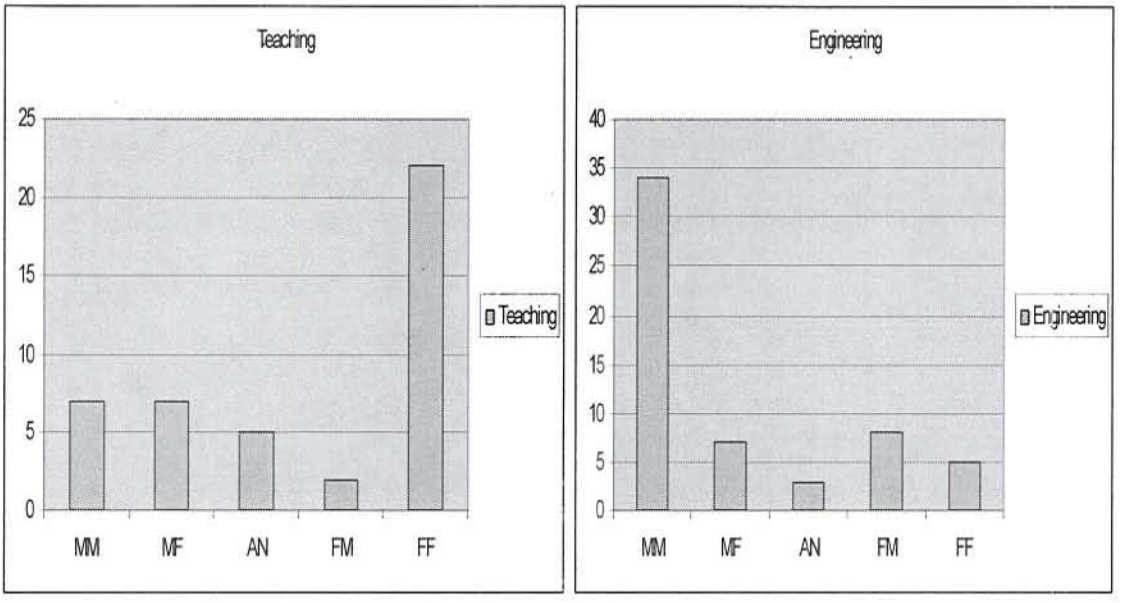

These tables are important and demonstrate interesting findings as we can see the distribution of masculine and feminine self-identities in the male and female dominated careers. Education, a female dominated career, seems to have more feminine-females interested, where as male dominated careers such as Engineering, Physical Science, Computers and IT show more masculine-males and masculine-females interested. From the graph on page 125 it can be noted that within all the males interested in Elected Political and Government Service as well as in Trade careers, none were feminine as far the self-identity of the students is concerned. From the graph above, there were no females who were feminine or masculine interested in City Administration, but as seen on page 124 there were a few female students interested in pursuing these careers. This means that their self-identities were either neutral or androgynous, which were combined into one category this year for better analysis purposes. Also in the Government Service there were no females interested who possesses a feminine self-identity. In general, this career seemed to be an aspiration for the masculine students only, at least in the schools that participated in the replication study this year.

## *Distribution of Self-Images within each career: Not weighted totals*

After observing how gender effects career aspirations of private/charter school students as well as observing the distribution of each gender within the 23 careers I decided to explore the self-image distribution within each career on the survey.

The following graphs demonstrate the self-image distribution within each career. The percentages refer to the students of each type interested in each one of the 23 careers.

**Very Interested in Teaching and Very Interested in Engineering**

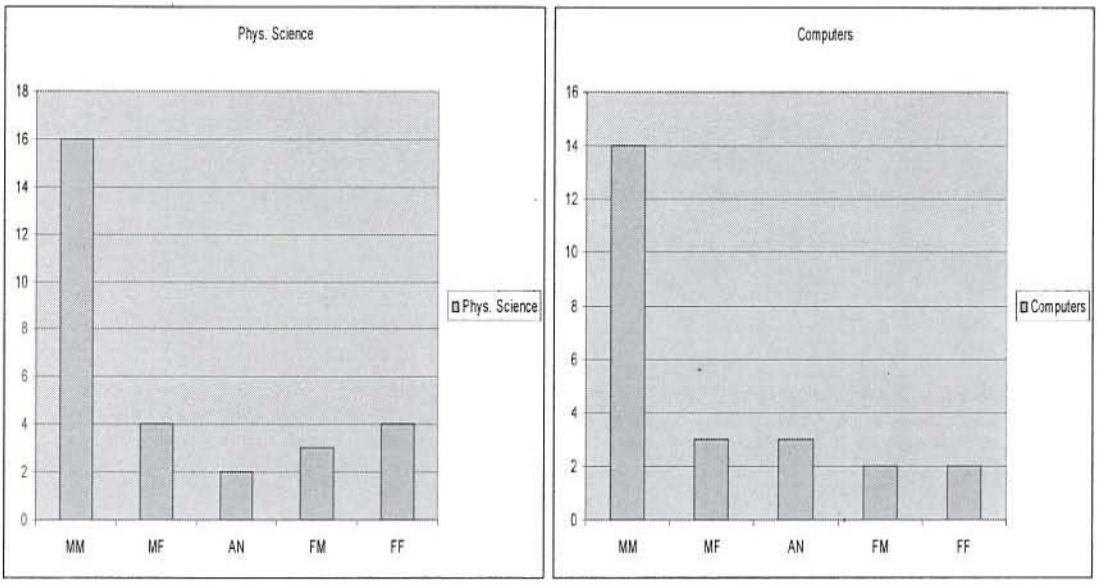



Within the teaching career, most of the students very interested were students with a feminine-female self-image. The next highest group of *"Very interested"* students was very evenly distributed between the masculine-males and the masculine females, but far lower percentages of them aspire to this career than one finds among feminine-females. There are about a third as many masculine-females as feminine-females.

The students who were very interested in pursuing an engineering career were disproportionately masculine males, and the next largest percentage was for the feminine-males. This demonstrates that no matter what the self-image of the male students is, Engineering careers are still much more likely to be pursued by the male population of students. However, the difference between the masculine males and females is large, that between the masculine-females and feminine-males is small, about 1% probably not a statistically significant difference. We will consider these groups about equally likely to aspire to this career and focus on the fact that 5 time as many masculine-males as feminine-males or masculine-females expressed strong interest in this field.

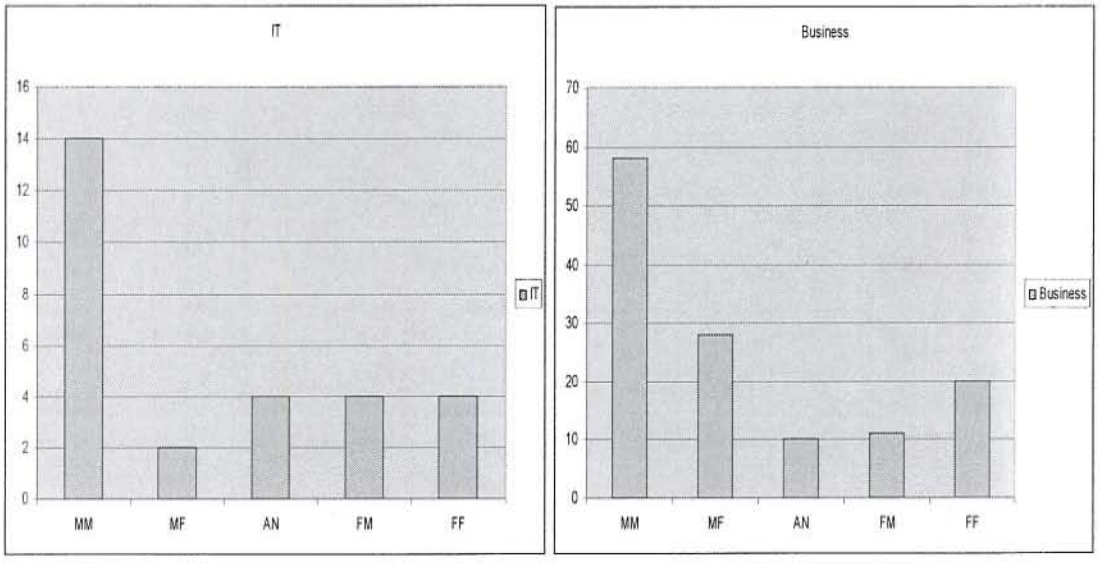
The two graphs on the following page show the distribution within physical science and computer careers:

**Very Interested in Physical Science and Very Interested in Computers**




Masculine-males dominate the *"Very interested"* group of students in both careers above. There are a few more feminine-females *"Very interested"* in a Physical Science career than a Computer career. There is only slightly more feminine and androgynous interested in IT, which is presented below – along with Business.

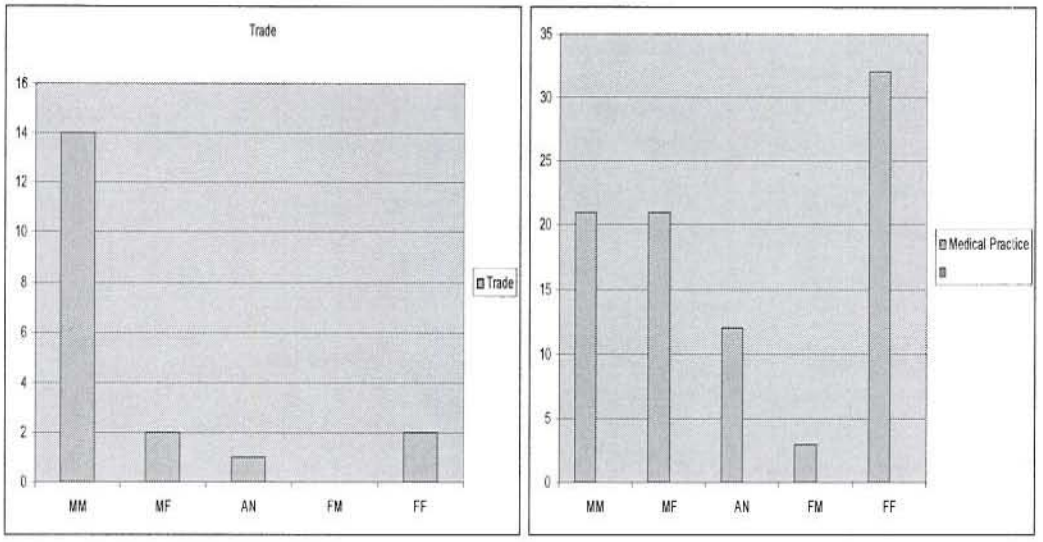
**Very Interested in IT and Very Interested in Business**



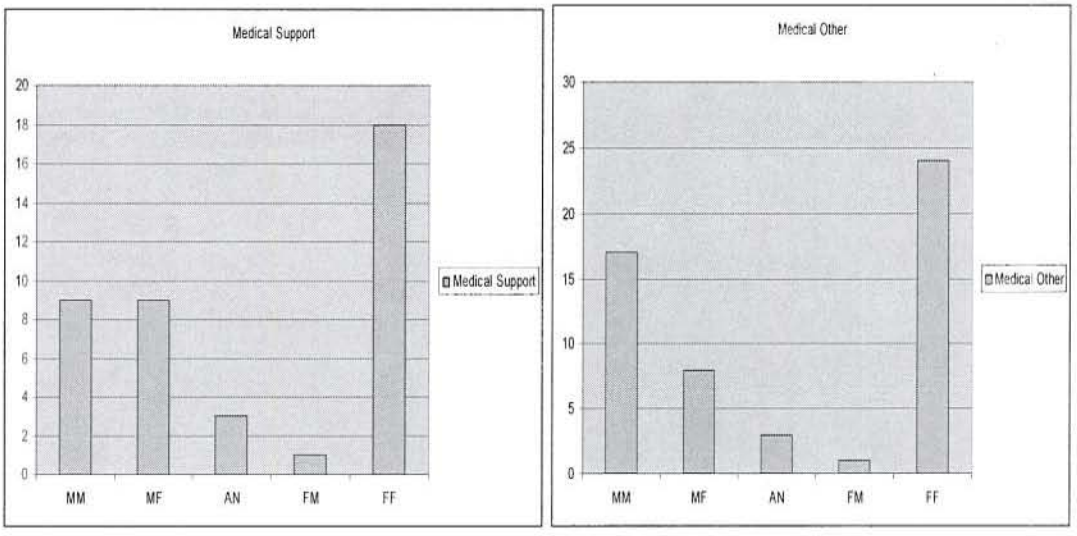

Again the masculine-males are disproportionately *"Very interested"* in the Business careers but the masculine-females are 12 times and the feminine-females are 5 times more interested in

Business careers than they were in the IT careers, even though IT is actually a Business related career.

**Very Interested in Trade and Very Interested in Medical Practice**




**Very Interested in Medical Support and Very Interested in Medical Other**

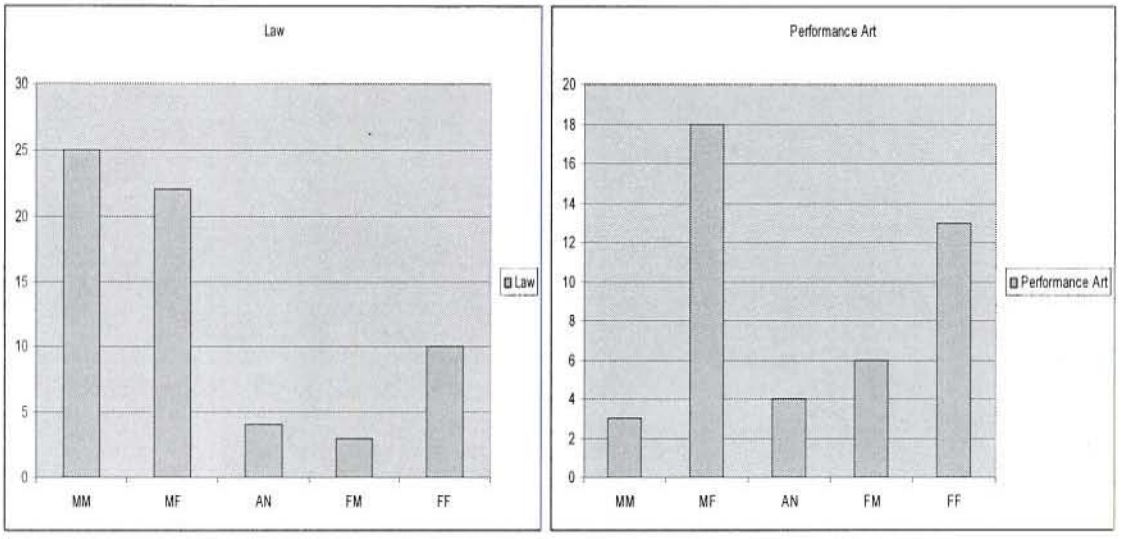



Above you can see that within trade there were no feminine-male students interested at all. Masculine males dominate this career, with just a scattering of females of both masculine and feminine self-image. On the survey used this year there were no female trades mentioned, so the results might seem a little odd, but evidently true.

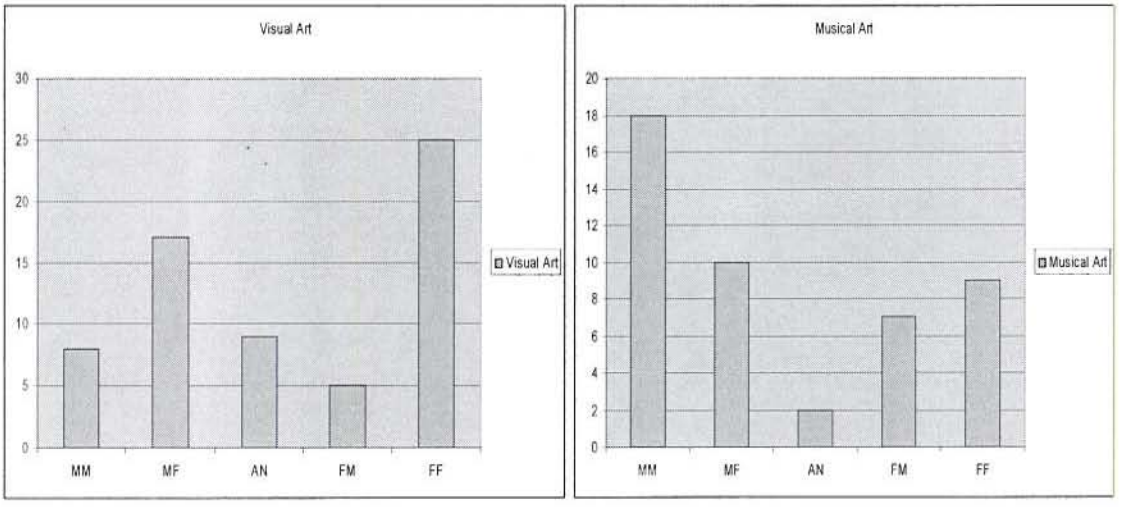
The Medical practice findings revealed that a third of the feminine-females aspire to Medical careers but a fifth of the masculine-males and masculine-females are also *"Very interested"*. The pattern is the same for Medical Support and Medical Other careers, as the feminine-females are most likely to aspire to these careers and the masculine students are notably less likely to be

*"Very interested"*. This demonstrates that these are no longer "masculine" professions, though they are on their way toward being female dominated. There were few androgynous and feminine-males interested in these careers but there were so many feminine-females that they about balance the combination of the masculine-male and masculine-female students with this aspiration.

**Very Interested in Law and Very Interested in Performance Art**

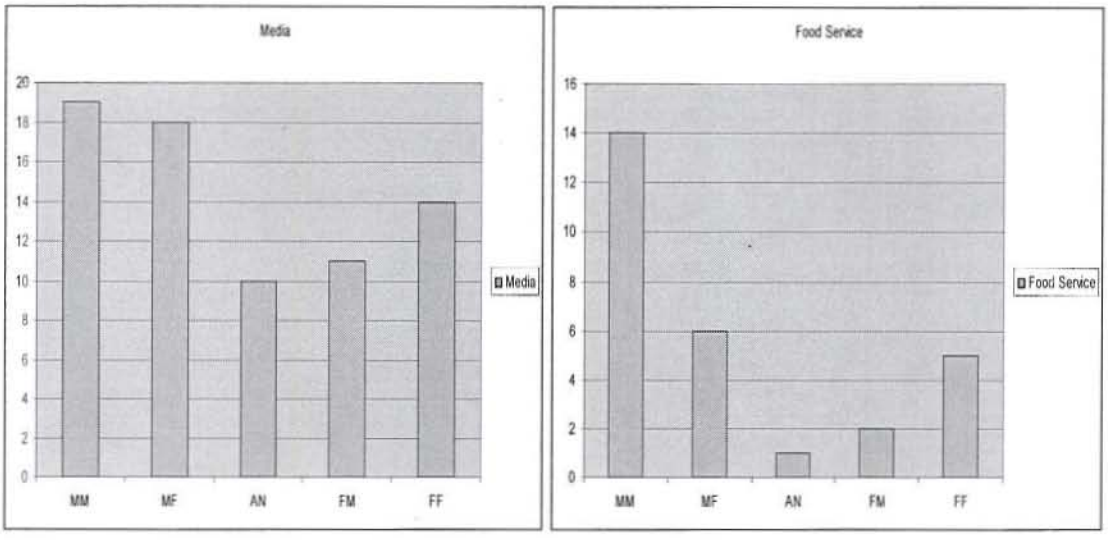



**Very Interested in Visual Art and Very Interested in Musical Art**

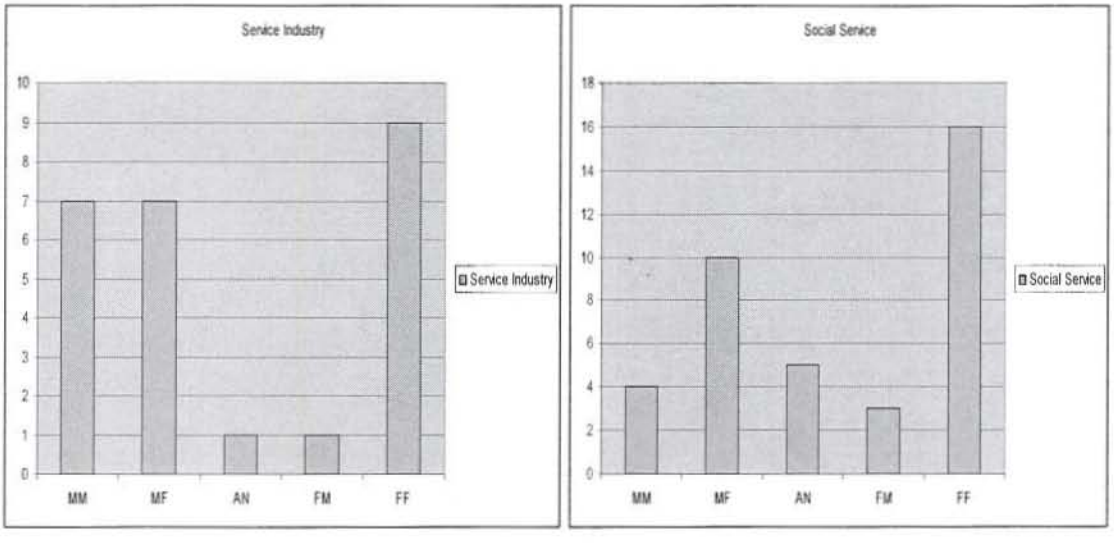



Law by comparison, is still a masculine field. The males and females are about equally numerous, but there women are mostly masculine-females. The pool of students aspiring to Performance Art careers is dominated by masculine-females and secondarily feminine-females. So are the Visual Art careers, but the emphasis shifts from masculine-females in Performance Arts to feminine-females in the Visual Arts. Musical Art careers are very masculine dominated, mostly male but the female pool is slightly more than half masculine-females and masculine-males are nearly 5 times as likely to be interested in Music as feminine-males.

**Very Interested in Media and Very Interested in Food Service**



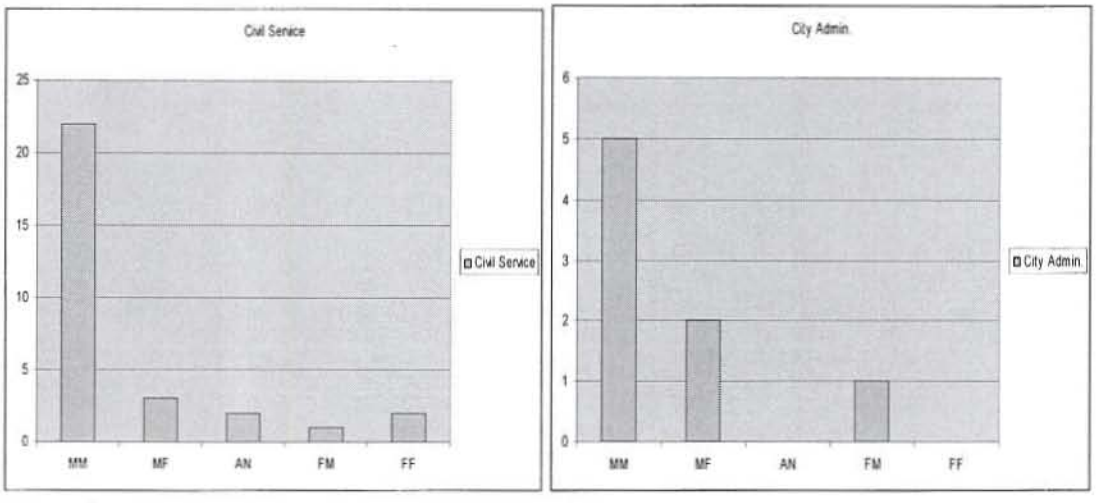

**Very Interested in Service Industry and Very Interested in Social Service**



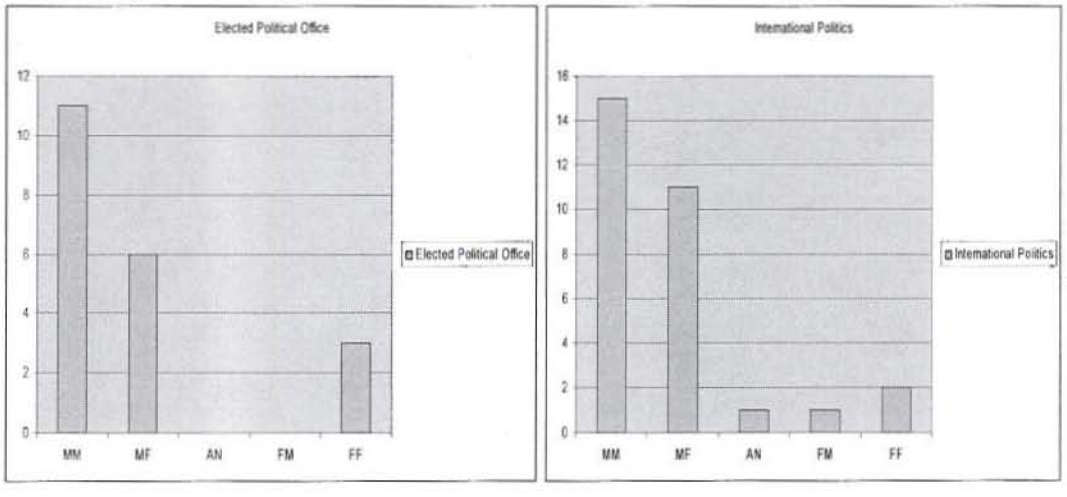

Masculine-males and masculine-females are about equally likely to be interested in the Service Industry, but feminine-females are even more likely than either masculine group to want to enter this field. Masculine-males and females are also interested in Media careers and in this case they are the most interested gender groupings, though there are many feminine-females who have this interest as well. Food service careers are dominated by masculine males and feminine females dominate social service careers in terms of being the most likely to aspire to these fields. It is also worth noting that the Social Service careers are of interest primarily to females, especially

feminine-females, but the second most interested group is the masculine-females. The other 3 fields were better balanced by sex, though they might have a masculine or feminine cast to the students that found them most appealing.

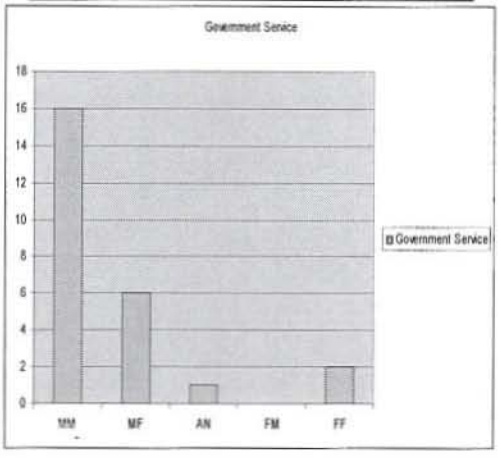
**Very Interested in Civil Service and Very Interested in City Administration**




**Very Interested in Elected Political Office and Very Interested in International Politics**



**Very Interested in Government Service**




Masculine males dominate the pool of students aspiring to Civil Service careers and City Administrative careers, but mostly masculine students of both genders are interested in pursuing Elected Political Office and International Political careers on high levels than other self-images. Government Service careers are 3 times more popular than City Administrative careers, but the pattern of interest primarily by masculine-male and secondarily masculine-female (though at a much lower level) students in similar in both cases.

The following table demonstrates the overall summary for the findings of this section. There was a pattern discovered and it seems to be gender – stereotypical.

**Domination of Pool**
**(Given that there are not equal numbers available)**

| | Career |
|---|---|
| **Masculine – Males** | Engineering, Physical Science, Computers, IT, Business, Trade, Musical Arts, Food Service, Civil Service, City Administration, Elected Political Office, Government Service |
| **Masculine – Females** | Performance Art |
| **Androgynous + Neutral** | Few – But tend to be interested in Business, Medical Practice, Visual Art, Media and Social Science |
| **Feminine – Males** | Few – Media, Music Art, Performance Art, Business, Engineering |
| **Feminine – Females** | Teaching, Medical Support, Visual Art, Social Service |

But there are also those fields where masculine-male and masculine-female students' interest are in a rough balance, which indicates that they are ripe for gender change – if they are male dominated now. These careers include: Teaching, Medical Practice, Medical Support, Law, Media, Service Industry and International Politics.

## *Self-Image vs. Career Interest in Private/Charter Schools*

Having looked at the pools using raw data, let's see what they would look like weighted. The following results were based on the weighted data which was discussed in a previous section. There was only one career in which there was no statistically significant difference in career choice and self-image.

The results for the Bem Sex Role Inventory versus career if there were equal numbers of each gender identity group are presented below:

**2005-2006 Survey Results**

| | Significance | Most Common Self-Image |
|---|---|---|
| **Teaching** | YES | FF |
| **Engineering** | YES | MM |
| **Phys. Science** | YES | MM |
| **Computers** | YES | MM=AN=FM |
| **IT** | YES | MM |
| **Business** | YES | MM |
| **Trade** | YES | MM |
| **Medical Practice** | YES | FF |
| **Medical Support** | YES | FF |
| **Medical Other** | YES | FF |
| **Law** | YES | MF |
| **Performance Art** | YES | MF |
| **Visual Art** | YES | FF |
| **Musical Art** | YES | FM |
| **Media** | YES | FM |
| **Food Service** | NO | |
| **Service Industry** | YES | FF |
| **Social Service** | YES | FF |
| **Civil Service** | YES | MM |
| **City Admin.** | YES | MM |
| **Elected Political Office** | YES | MM=MF |
| **Government Service** | YES | MM |
| **International Politics** | YES | MM |

From the above table it can be noted that food service careers alone did not show any statistical difference among the self-images though there were some "ties" in proportion expressing interest. It is also interesting to see that computer careers showed an equal proportion of masculine males, androgynous and neutral students, and feminine males interested in pursuing it in the future. Elected political career showed an equal proportion of masculine males and masculine females interested in political careers. This table produces a few "surprises", meaning fields that would be different than they are today in gender balance if there were equal number of men and women with male and female self-images. Medicine and Law would be female dominated (rather than balanced) and Politics would be balanced rather than male dominated. Computing would become – "Androgynous" but still male dominated, and feminine and masculine males balanced each other. Thus these are the areas poised for gender identity change and the key role of masculine females in Law and Politics is worth noting.

It was also interesting to see how much more gender determines career aspirations than the self image, if at all. The table on the next page demonstrates the comparison, and normally gender, the actual sex difference, is more predictive than self-image. There are 3 exceptions. In Business and City Administration the two variables are about equally important. In the care of interest – international politics gender identity is more important than biological sex. However, typically sex differences are 2-3 times as important as gender identity.

**2005-2006 Survey Results**

| | Variance% explained by self image | % Variance Explained gender | Gender of Majority |
|---|---|---|---|
| **Teaching** | 8.24% | 14% | Female |
| **Engineering** | 16.73% | 41% | Male |
| **Science** | 3.84% | 11% | Male |
| **IT** | 7.18% | 24% | Male |
| **Computers** | 5.2% | 19% | Male |
| **Business** | 5.48% | 6% | Male |
| **Trade** | 15.76% | 33% | Male |
| **Med Practice** | 3.0% | 12% | Female |
| **Med Support** | 2.8% | 4% | Female |
| **Med Other** | 5.43% | 11% | Female |
| **Legal** | | | |
| **Art Performance** | 8.12% | 26% | Female |
| **Art Visual** | 12.32% | 32% | Female |
| **Musical** | | | |
| **Media** | | | |
| **Food Ser** | | | |
| **Service Industry** | | | |
| **Social Service** | 11.02% | 25% | Female |
| **Civil Service** | 11.29% | 19% | Male |
| **City Admin** | 11.76% | 12% | Male |
| **Elected Political** | 10.69% | 6% | Male |
| **Govt Service** | 10.69% | 7% | Male |
| **International Political** | 6.60% | 2% | Male |

Looking at the two tables it can also be noted that the there was a statistically larger proportion of feminine students among all the females interested in educational careers. Medical practice also showed the same thing. Trade was masculine male dominated as well as it showed a larger proportion of males in general interested. Masculine females showed a statistically larger interest in legal and performance arts careers, musical arts and media careers. Legal careers did not show statistically significant difference among gender, but it did among self-images. The same was true for the musical, media, and service industry careers.

## *Self-Image vs. Future Plans in Private/Charter Schools*

It is also interesting to see if the weighted data on the self image distribution produced any significant relationships with future plans. The following table presents the results:

| | Pre - Dominant Self Image | Significance |
|---|---|---|
| **4-Year college** | FF | YES |
| **2-Year college** | | NO |
| **Vocational School** | FM | YES |
| **Work** | | NO |
| **Military** | MM | YES |
| **Marriage** | | NO |

The major findings were that there were statistically significant differences showing more feminine female students interested in attending a four year college, a larger proportion of feminine males interested in attending a vocational school, and a significantly larger proportion of masculine males interested in going into the military. Clearly the analysis using the weighted gender identity data are revealing some new and somewhat unexpected findings. They tend to confirm the idea that Bem's gender self – identity variable clarifies the meaning of the sex differences found in this study.

## *Self-Image vs. Doubts in Private/Charter Schools*

I also explored the difference amongst career reservations and self-image using the weighted data. The results are presented in the following table:

| Reservation | Significance | Pre - Dominant Self-image |
|---|---|---|
| **Accept 1** | NO | |
| **Accept 2** | YES | FF |
| **Accept 3** *** | YES | FF |
| **Attend 1** | NO | |
| **Attend 2** | NO | |
| **Attend 3** | YES | FM |
| **Unprepared 1** | YES | AN |
| **Unprepared 2** | NO | |
| **Unprepared 3** | YES | AN |

The "Questions" referred to in the chart above for this year's study are:

*Accept 1: *I doubt I will be accepted to college because my grades are too low.*

*Accept 2: *I doubt I will be accepted to college because my test score are too low.*

*Accept 3: *I doubt I will be accepted to college because [other reasons.].* ***

*Attend 1: *I doubt I'll attending college because its too expensive.*

*Attend 2: *I doubt I'll attending college because its too demanding/difficult.*

*Attend 3: *I doubt I'll attending college because I dislike school.*

*Unprepared 1: *I feel unprepared for my career interest because I don't know anyone in that profession.*

*Unprepared 2: *I feel unprepared for my career interest because I don't know what education is required.*

*Unprepared 3: *I feel unprepared for my career interest because I don't know if I will succeed in that profession.*

There was a statistically significant difference showing a larger proportion of feminine-females being concerned that they won't be accepted into college due to low test scores. There were also a statistically significant difference showing a larger proportion of Androgynous and Neutral students concerned about both being unprepared due to not knowing anyone in the profession of their interest as well as not knowing if they will succeed in the career. A larger proportion of feminine males reported that they were considering not going to college due to their not liking school.

*** "Accept 3" was an open ended question

It is not immediately clear why these gender self-identity groupings are associated with these various careers. There are not yet replicated findings, but it is interesting to speculate about why high school is an experience feminine-males are usually likely to find particularly distasteful, to the point of doubting whether they want to go on to higher education. Meanwhile, feminine-females are stressing about whether their test scores are holding them back. Clearly these matters would be worth pursuing in follow-up interviews. A follow-up study for this sample was planned though it was designed with a different question in mind, where it focuses on how students with different gender-identities view the same profession or career choice.

## DISCUSSION OF RESULTS

This year the majority of the results have replicated and others that have not were simply the result of a different survey being utilized for the replication study. This different survey instead revealed certain aspects of career aspirations of both the Private/Charter and Public High Schools that were not visible to us last year. This section will discuss the results and compare the results of this year's replication study to the results obtained in the two types of schools for the previous, and the initial, launch of the study. Some of the findings were not discussed in this section in detail as the comparable data sets from the Public high school teams was not prepared and therefore the comparisons would be too ambiguous to write about, specifically for the career fields that were no longer written as combinations on the survey utilized this year.

**Response Rate Results:** Private/Charter high school total response rate increased from 72% during 2004-2005 year study to approximately 89% in the 2005-2006 replication study. Specifically, Bancroft students substantially increased their response rates from 51% during the initial study up to approximately 90% during the replication study. This improvement in survey response is mainly due to the more efficient way of survey distribution that was utilized instructed by the guidance departments in the school for this year's replication study. Improvement in survey participation was also visible in the results of St. Peter Marian and students' response rate in Worcester Academy this year were close to 100%, with 98.4% respectively. Response rates among genders remained comparable to last year's results; even with an increase in total response rates overall in each school, demonstrating that the gender distribution within these high schools has not changed over the past year. For both years, it

seemed that there were more male respondents, corresponding to a larger male population within the schools overall.

Even though the response rates for the replication study have increased, I was still faced with data integration, comparison and comparability problem during the overall analysis of the results obtained for this replication study. I also needed to compare the results to the result of both the Private/Charter and Public high schools' from last year, and to Public high school results obtained for this year's replication study as well. Specifically, a complete comparability analysis of students' choices in career aspirations was necessary, due to the changes on the survey utilized for the 2005-2006 replication study.

**Career Aspirations Results for Combined Career Choices:** Engineering/Physical Science, Computers/Information Technology (IT), Medical Support/Medical Other and the Arts careers were listed this way on the initially utilized survey for the first round of this study during 2004-2005. This year, a new survey was used, where each one of these careers was written separately for the students' to rate their interests on each and the Arts career was broken down into three types of Art careers, Performance, Visual and Musical. The detailed of reasoning behind this were discussed in detail in Overview of the Analysis Process section of this report. The following table demonstrated the results for the careers that were listed differently this year as compared to last year, including raw data and comparable sets of data for the results obtained for the 2005-2006 year replication study:

***Comparison of aspirations data for the career fields listed in combinations for Private/Charter high school students***

| 2005-2006 Raw Data | | | |
|---|---|---|---|
| Career | M | F | T |
| Engineering | 19.0% | 5.0% | 12.0% |
| Physical Science | 8.0% | 4.0% | 6.0% |
| Computers | 9.0% | 2.0% | 6.0% |
| IT | 9.0% | 1.5% | 4.0% |
| Medical Support | 4.5% | 1.4% | 8.0% |
| Medical Other | 8.0% | 12.0% | 10.3% |
| Performance Arts | 4.5% | 13.0% | 9.0% |
| Visual Arts | 5.7% | 19.0% | 13.0% |
| Musical Arts | 10.0% | 8.0% | 9.0% |

| 2005-2006 Comparable Date | | | |
|---|---|---|---|
| Career | M | F | T |
| Engineering/Phys Science | 50.0% | 21.0% | 35.0% |
| Computers/IT | 23.0% | 8.4% | 15.0% |
| Medical Support/Med Other | 14.0% | 28.0% | 22.0% |
| Art | 15.0% | 17.0% | 16.0% |

| 2004-2005 Raw Data | | | |
|---|---|---|---|
| Career | M | F | T |
| Engineering/Phys Science | 34.0% | 15.0% | 23.0% |
| Computers/IT | 29.0% | 10.0% | 18.0% |
| Medical Support/Med Other | 9.0% | 28.0% | 20.0% |
| Art | 16.0% | 32.0% | 25.0% |

As it can be seen in the table demonstrated on page 141, most of the findings have replicated in the students' aspirations for the careers that were last year listed in combinations, and this year separately. The comparable version of student aspirations for these 4 career combination indicate that male students are still more interested in Engineering/Physical Science this year, as it was also true last year. Looking at the aspirations of students for this year by separate career fields, it can be noted that even though there are still more male students interested in Engineering (19% male) careers, there are less male students interested in Physical Science (8% male), where this distribution of interest was assumed to be the same due to the careers being listed as a combination last year.

Female interest last year in Engineering/Physical Science was lower (15% female, 34% male) then that of male students in the Private/Charter high schools, and even though the findings have replicated (21% female, 50% male), this higher proportion indicates that certain females were deterred from answering to the question of interest when the careers were listed as a combination as they were probably concerned on the actual meaning of the career field. Also, the higher proportion, as seen in the comparable 50% of males interested in Engineering/Physical

Science this year, indicated that males were also deterred from answering this question last year, as they ay have believed that Physical Science is not the target they believed to be interested in. Female interest in Physical Science and Engineering is roughly comparable and if anything a bit higher for Physical Science. Male interest in Engineering is about three times as great as Physical Science. This resulted in a 4:1 (m:f) gender ratio in engineering this year and only a 2:1 (m:f) gender ration in Physical Science, which once again was not visible in the results of the previous study in the Private/Charter high schools.

Computers/IT were also separated and listed as two career choices on the survey used this year. Looking at the table on page 141, also indicates that the results have replicated, with 23% males interested this year and 29% males interested last year, and with 8.4% females interested this year and 10% of females interested last year. Looking at the lest most data in that same table, it can also be determined this year that more male students than females students were interested in both Computer and IT careers, where as last year this result was not evident. Female interest in Computer was four times larger than the females interested in IT, and most of the students seemed to be interested in both of the careers instead of just IT. This indicated that for the combination of Computers/IT listed last year, the female representation of interest was not lost, as it seems that they believe that the two careers go hand in hand. Male interest in Computers and IT is roughly comparable and if anything a little higher for IT. The findings of this year indicate that there is a 1:3 (m:f) gender difference in Computers and a 1:3 (m:f) gender difference in It also.

Last year, two medical careers were listed for students to pick from, Medical Practice and Medical Support. This year the survey also contained a third career, called Medical Other. With the addition of Medical Other I believed that the results obtained for the two careers needed to be

made comparable to the results obtained only for the Medical Support career last year, since most students specified other careers within Medical Support. Again looking at the table on page 141 it is visible that the results have replicated, and that the careers are still a female domain, but it is interesting to note that this year, even though there were fewer male students interested in either of the two careers then female students, more male students overall were interested in Medical Other careers then Medical Support careers. This distinguishing result was also not visible in the results obtained last year due to the fact that the team analyzing the data was not able to tell whether the student was interested in Medical Support careers or Medical Other, due to the lack of Medical Other option. Medical Support is roughly comparable and if anything a bit higher for Medical Support. This results in a 2:1 (m: f) gender difference in Medical Support and a 3:1 (m:f) gender difference in Medical Other.

The last, and one of the most revealing combination that was broken up into three separate career choices on the survey utilized this year, was the Arts career, as it was called on the survey from last year. Art was broken up into Musical, Visual, and Performance Art with the addition of Media. It turned out that last year, the majority of the interested students were female, but the results obtained this year indicate that there were more male students interested in Musical Art careers then there were female students (19 males compared to only 3 females), no male students were interested in Performance Arts alone, and there were still more female students interested in the Visual Arts (5 males and 16 females). Also, it was interesting to see that females were also more interested in pursuing a combination of the three art careers than males by approximately 50%. Overall, last year 25% of the students were interested in the "Arts" careers, where as this year, the comparable proportion indicated that only 16% of the overall private/charter high school population was interested in Arts careers. This lower proportion

indicates that maybe the students had to rethink their choices as there are broader definitions that exist in each, and therefore were deterred to answering the question.

**Other Aspiration Data by Gender for Public vs. Private HS:** Last year in the Public schools it was revealed that approximately 6% of the students were interested in careers in politics, of which 40% were female. This finding replicated this year in the Public schools, with also 6% of all students interested in political careers of which there were also approximately 40% female students. As for the Private/Charter high schools, the results for political careers have also replicated but slightly fewer students this year were interested in political careers this year (6%) then last year (7%), but both years close to 40% of all interested students were female students. Interest in political careers within the public schools and the private schools have replicated seems to have been similar among the two school types.

For 2004-2005, Trade was the most male dominated career in the Public and the Private high schools, with a 5:1 (m:f) gender difference in the public schools and an even larger, 8:1 (m:f) gender difference, in the private high schools. For the 2005-2006 replication study, Trade was not the most male dominated career in the Private schools, but it remained to be in the Public schools, thus constituting yet another replication in terms of the public school data, with a 5.8 : 1 (m:f) gender difference, larger then from the previous year. This year, the most male dominated career in the private schools seemed to be IT careers, with a 6:1 (m:f) gender difference.

Last year, Social Service occupations were the most female dominated in the public high schools, constituting a 1:4 (m:f), where as this even though Social Service was still a female domain, Medical Practice occupations were the most female dominated with a 1:9.2 (m:f) gender

difference. In the private high schools last year Service Industry occupations were the most female dominated with a 1:4 (m:f) gender difference, but this year Visual Arts was the most female dominated with a 1:3.3 gender difference. What can be noted from this comparison of the results in the private and public high schools for both years of study is that for both school types and for the two years of study, female domains (the extremes) shifted over to other careers. In the public high schools, the most female dominated career for this year seemed to have become of a larger domain for females than the one dominated last year, thus constituting a larger extreme for the most female dominated career. In private high schools, the opposite has occurred, where the most female dominated career has actually become less of an extreme, where the gender difference decreased.

Business was a career which seemed to be equally attractive to both females and males in the public schools for the 2004-2005 year study, with a 1:1.03 (m:f) ratio. Food Service and Musical Art was the most evenly interesting careers to the students of both genders in the public schools this year. It is interesting that both of the careers had a 1:1 (m:f) ratio in the public high schools this year, where as in the private high schools Musical Art was of more interest to the male population, as it was noted in the previous sections of the report. For the private school students, 2004-2005 year study results indicated that Business and Law occupations were the two areas with the most even ratio (1.3:1 and 1:1.3 (m:f)) last year. This year, 2005-2006 study, Law, Media and International Political occupations seemed to be the areas where both genders expressed the same levels of interest therefore constituting 1:1 ratios, in all three career fields.

For the 2004-2005 study, the results indicated that females were interested in pursuing more careers in general than the male students in the public high schools. For example, 38% of the females were interested in Medical Practice and only 15% males, 35% of females were

interested in Legal career and only 24% of male students, and also 45% females were interested in business careers where as only 44% (slight, but evident difference) of the male students. For 2005-2006 study, Business careers seemed to be more of an interest to the male population, therefore indicating that the majority of the results have replicated, except some minor changes in proportions of interest such as the Business occupation. This year also, females in the public school demonstrated a high interest in professions overall as it was true last year, with 34% females being interest in Medical Practice careers (only 9% of males) and 14.4% of female students were interested in legal careers, (only 9% of males), indicating just another replication. With the addition of the Medical Other career field, females also dominated in the Medical Support and Medical Other careers, greatly.

In terms of the private high school results for 2004-2005, females did not demonstrate a greater interest then male students overall, which also replicated over to this year's results. 32% of females were interested in business and 52% of the males, 34% of females were interested in Medical Practice careers, compared to 20% of the males. For the 2005-2006 year replication study, females were more interested in Medical Practice careers, with 24% of females interested and only 11% of males interested. Also, in last year's study for the private high school students, 20% of females were interested in legal careers and also 20% of males were interested, indicating that the finding of this career being female dominated last year did not replicate, but instead gender equity has already been reached in this career field. For 2005-2006 year study though, the career was more attractive to females more than to the male population, indicating another female domain. As mentioned earlier the replication that females did not demonstrate a high interested overall in the careers in the private high schools, as it was true last year, but 20% of the females compared to 30% of the males were interested in business careers and also 20% of

the females were interested in legal careers compared to 20% of the male population, thus again indicating that females were not as interested in careers as they were in the public schools.

Teaching careers were a female domain in both the public and private high schools for both years of the study, even though there were more male students overall interested in the public school then in the private high schools. 20% of the public school student from the 2004-2005 year study were interested in careers in engineering, but in 2005-2006, 13.4% of all students were interested in engineering, and this decrease is due to the fact the engineering and physical science were listed separately this year. Results of last year's study of the private high schools students indicated that 23% of the private school students were interested in careers in engineering, where the majority was once again males, with a 2:1 m:f gender difference. For 2005-2006, approximately 12% of the private school students were interested in engineering, with a 4:1 gender difference, thus indicating yet another replication.

**Future plans of students in Private vs. Public school:** This year, there were five future plans that demonstrated a statistically significant difference in the kind of school the students are attending and their future plans. It was a statistically significant difference that there were more private school students who interested in attending a 4-year college after high school graduation, but there was evidence that there were statistically more students in the public schools interested in attending a 2-year college, a vocational school, go to work and get married. One of the findings that did not replicate over to this year was that there were more public high school students interested in going into the military, where as there were no statistically significant difference demonstrated this year, meaning that the choice of the students was not reluctant on the type of school he or she was attending. Also, this year there were two future plans that

demonstrated that there were statistically more male students interested in pursuing Vocational School and Military in the private schools, and then there were females.

This year in the private schools there were more students interested in pursuing two plans at a time, compared to the results obtained in last year's study. Some students were interested in going to a 4-year or to a 2-year college as well as working. Others were also pursuing marriage and work as well as military and work. 100% of the private high school students were interested in going to a 4-year college and working, where as only 83% of the males were interested in both at the same time, in the private high schools. For the public high school students, 75% of the female students were interested in working and attending a 4-year college and 64% of the male population.

There were much fewer students interested in attending a 2-year college and working, but that was only due to the fact that there were also fewer students in general in the private school this year interested in attending a 2-year college, and those who were mostly male students in both public and private high schools. Only 11.4% of the males who were planning on going into the military wanted to also work, where as there were no females at all interested in pursuing such a future plan combination in the private high schools this year. Marriage was another interest that was incurred in some of the choices of students this year and what is interesting is that 26% of the male population that planned to get married also planned to work, where as only 20% of the females were interested in pursuing both, thus indicating that the male students are already taking on the necessary responsibility.

**Other Conclusions:** The results from last year indicated that 7 out of 11 career reservations showed a statistically significant difference indicating the students in the Public schools were

more concerned about their future in college then the students in the private high schools. This year, 6 out of 9 concerns of students indicated a statistically significant difference showing more public school students interested, thus once again showing another replication. For this year, I also wanted see how significant gender was in determining the concerns of the students in the private high schools. Even though the statistical difference was quite small, Accept 1 and Unprepared 1 were the two concerns, indicating that more females were concerned about their test scores being too low, and more male students concerned about the career field into which they choose to go into because they are not familiar with anyone else in that occupation.

In terms of how significant is gender in determining students' aspirations in the private high schools, last year the team investigated and concluded that all career choices indicated a statistically difference choice by gender for each career except for Law. There was a statistically larger number of female students last year interested in education, medical practice, medical support, service industry, social service, and art careers. This year I concluded from the same type of analysis that gender was less of a significant determinant of career choice by gender as compared to last year, but that could also be due to the additional career choices as well for the careers that were previously listed in combination no longer were on the survey used this year. The replication was in that there were significantly more female students interested this year in education, Medical Practice, Medical Support and Medical Other, Art Performance and Art Visual (but not Musical Art) as well as Social Service careers.

Students in the private high school were more interested in pursuing a college education after high school, and most of them for the two years of the study, indicated to want to go to a 4-year college. Gender was not a good determinant of future plans for this year in private schools in general, but individual schools participating in the study did reveal that certain future plans

indicated that gender did constitute statistically significant difference in the future plans of the students in the private high schools (but only in individual schools).

**Self Image Conclusions:** Last year the survey did not include self-image section, not did the survey for this year that was utilized in the Public high schools. I was interested to see on whether gender-identity would be a good predictor of high school students' aspirations, and therefore explored the data in terms of this variable. I also needed to weight the obtained raw data to make it comparable as there were 175 masculine-males and only 97 masculine-females, and there were 133 feminine-females and only 44 feminine-males.

After obtaining the weighted career aspirations in terms of gender – identity for the private high school juniors for this year's replication study, I was able to then determine on whether gender-identity are good predictors. The results indicated that Business was a career in which gender equity was actually occurring, where most of the students, at a level of similar interest, were masculine males and feminine females. Civil Service and Engineering was mainly a masculine male domain, where as Education and Medical Practice was a feminine female domain. After looking at the actual distribution of career interests, I was able to determine that 22 careers out of 23 showed a statistically significant difference among gender identity of students and their interests in the particular career. This also go on to say that gender-identity may be a better indicator of their career aspirations, but that gender is still a necessary aspect to explore. In terms of future plans, only 4-year college, Vocational school and Military showed that there was a statistically significant difference among these three future choices and the gender identity of the students. 4-Year college seemed to be a future plan for the feminine females, where as vocational school was for feminine males, and lastly military for masculine

males. Also, androgynous students seemed to be concerned about Unprepared 3 and Unprepared 1, displaying a statistical significant difference. There were statistically significantly more feminine females concerned about Accept 2 and Accept3, where as more feminine males concerned about Attend 3. (Descriptions of concerns are found on page 137 as well as in the appendices.)

In general the results have indicated that it is up to the females themselves to begin pursuing careers where they are under-represented, where as the possibilities for this happening are as close as 2025, as the studies indicate. It is also important that the parents of the children support them through all their decisions, as most of them are influenced by their decisions as well as current occupations.

## Conclusions

The most important goal for this year's career aspiration study was to see whether or not the results have replicated over the two years. Over the past two years, the overall response rate has increased while response rates in individual private/charter schools have changed in both direction, but only the Massachusetts Academy data is noticeably less complete and representative from last year. A larger response rate is generally a good thing in statistical analysis, but it complicates a replication study as one cannot be sure if changes are due to improved data coverage, data instability, or some real trend in the data.

This year in private/charter schools, there was once again a larger proportion of females interested in educational, medical practice, medical support, medical other, performance and visual arts, service and social service industry careers. All the results seemed to have replicated this year except in cases of those careers which were not listed on the survey last year. Medical other was not an available option and the arts career was listed as one general choice, where as this year it was split into three categories of art. Media was also not listed on last year's survey, and this year the results showed slightly more females interested in media careers but overall the proportions were very close to a fifty-fifty distribution among the two genders.

Hence this year's study featured an improved set of survey items, which clarified patterns in the Arts and Technical professions not evident last year. A few things were misinterpreted last year due to the use of too crude a list of professions with things like Engineering and Physical Science lumped together. The major innovation this year was the inclusion of the BSRI. (This will be discussed in a separate summary section, where I will summarize the findings and present the gist of them.)

On the whole, the data set has improved and the findings have replicated. When the schools are compared to one another, and thus some samples are quite small, their relative positions change on the proportion aspiring to some given fields. However, there are rarely great changes in the proportion of students from a given school interested in a given profession. When there are, the movement in different schools tends to canal out leaving the larger total sample findings similar to that of the prior study. Thus, the claim for "overall" replication is demonstrated by this report.

It is important to consider distributing the surveys including the BSRI, to both the private and public high schools because it is interesting to view how fast the changes that are occurring, occurring. It is also important to note that parental current occupations need to be observed

## Recommendations for Further Research

For further studies and research on this topic I would recommend:

- When administering surveys next year, whether it is private or public schools, make sure to let the guidance department know that the surveys need to be taken on school grounds. This year, at one of the private schools, the advisor allowed the students to take the survey home which resulted in lower response rates, lees confident answers and possibly bias.
- As last year, the group wanted to see how the career reservations/doubts are connected to the students' current position within the extracurricular activities. This year there was not enough time to complete this analysis.
- I was unable to collect the follow-up survey, so I recommend that the guidance department receives the follow-up candidates within the first two weeks of collecting the primary surveys.
- Make sure that the follow up surveys are also filled out on school grounds.
- Honors classes and AP classes did not seem to used in both years of study for any analysis therefore they can even be considered to be removed for the following studies.
- The question that asks students how likely they are to enter into a career that is counter their gender stereotypical fields was not explored far enough in both year and I recommend to view how the distribution of answers differs by self-image as well as gender.

- The most important recommendation is that due to the many different sections of the project, I would recommend teams of no less than two people to work next year, as I sometimes found it too frustrating to be involved on my own.
- I also would advice using the Bem Sex Role Inventory again next year as well as incorporate it into the public schools.

## References


1. Bem S.L (1993) *The Lenses of Gender: Transforming the Debate on Sexual Inequality.* New Haven, CA: Yale University Press.
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3. Petrikin S.J. (1995) *Male/Female Roles: opposing viewpoints. CA:* Greenhaven Press Inc.
4. Renzetti C.M., Curran D.J. (1999) *Women, Men, and Society. 4th ed.* MA: Allyn and Bacon.

# Career Interest Survey

Guidance Counselor's name: School: Your Birth Date___/__/____

Gender: ☐ Male ☐ Female

Ethnicity: ☐ African American ☐ Asian ☐ Caucasian ☐ Hispanic
☐ Other (specify) _____

Parents'/Guardians' Occupations

Father: _____ Mother: _____ Other(s): _____

Indicate (by circling) your interest level in pursuing the following careers *(1– no interest ... 5 – very interested)*

Don't let concerns about money/education/parental approval/etc. limit your response.

Teaching ..... 1 2 3 4 5
Engineering/Physical Science..... 1 2 3 4 5
Computers/Information Tech..... 1 2 3 4 5
Business (Management, Ownership, etc.) ..... 1 2 3 4 5
Trade (Plumber, Electrician, etc)..... 1 2 3 4 5
Medical Practice (M.D, Dentist, Vet., Psych) ..... 1 2 3 4 5
Medical Support (Nurse, Med. Technician, etc.)..... 1 2 3 4 5
Law ..... 1 2 3 4 5
Art (Music, Drama, Fine Arts, etc.)..... 1 2 3 4 5
Service Industry (Retail, Beauty, Hotel, Restaurant)..... 1 2 3 4 5
Social Services (Social Worker, Therapist, etc.) ..... 1 2 3 4 5
Civil Service (Police, Postal Worker, etc.) ..... 1 2 3 4 5
City Administration (Mayor, City Manager, etc.) ..... 1 2 3 4 5

Please list specific careers that you are interested in (list ALL that apply & use back for space if necessary):

How interested are you in running for political office?..... 1 2 3 4 5

If interested, would you consider a position in: ☐ city, ☐ state or ☐ national politics? (Check all that apply)

What are your plans directly after high school?

☐ 4-year college ☐ 2-year college (community college) ☐ Vocational/trade school
☐ Work ☐ Military ☐ Marriage & Family
☐ Other (specify) _____

Is there anything that would prevent you from pursuing a career interest? (Check only those that apply)

- People of my gender don't usually…
  ☐ go into that field ☐ get family support ☐ succeed in that field
- I doubt I'll be accepted to college because…
  ☐ my grades are too low ☐ my test scores are too low ☐ other _____
- I doubt I'll be attending college because …
  ☐ it's too expensive ☐ it's too demanding/difficult ☐ I dislike school
- I feel unprepared for my career interest because I don't know…
  ☐ anyone in that profession ☐ what education is required ☐ if I will succeed in that profession
- List any additional concerns_____

**Turn Over**

# Career Interest Survey

Check all extracurricular activities that you are currently involved in and list any leadership positions within them. (Check all that apply)

| *Activity* | *Leadership Position* |
|---|---|
| ☐ Academic Team | |
| ☐ Amnesty International | |
| ☐ AP Classes | |
| ☐ Art Service Club | |
| ☐ Athletics | |
| ☐ Audio Technical Squad | |
| ☐ Band | |
| ☐ Black Student Union | |
| ☐ Chess Club | |
| ☐ Chorus | |
| ☐ Computer Club | |
| ☐ Cultural-Related Club | |
| ☐ Debate Team | |
| ☐ Drama | |
| ☐ Engineering Club | |
| ☐ Fine Arts Club | |
| ☐ Future Business Leaders of America | |
| ☐ Future Teachers Club | |
| ☐ Gay-Straight Alliance | |
| ☐ International Club | |
| ☐ Language Clubs | |
| ☐ Math Club | |
| ☐ Model Congress | |
| ☐ Mock Trial Team | |
| ☐ National Honor Society | |
| ☐ Peer Mediation | |
| ☐ Peer Mentors | |
| ☐ Peer Tutors | |
| ☐ ROTC | |
| ☐ School Newspaper | |
| ☐ School Website Team | |
| ☐ Science Club | |
| ☐ Students Against Drunk Driving | |
| ☐ Student Council | |
| ☐ Yearbook Committee | |
| Other(s) | |
| | |

# Appendices

***Appendix A – A copy of the survey administered to the students this year***

# Career Interest Survey

**Personal Information** **Date:** _____

Guidance Counselor: _____ School ID #: _____

School:

Gender: ☐ Male ☐ Female

Ethnicity: ☐ African American ☐ Asian ☐ Caucasian ☐ Hispanic

☐ Other (Please specify) _____

**Parents'/Guardians' Occupations** (Please list title(s) or occupation(s), **NOT** name of company)

Father: _____ Mother: _____ Other(s): _____

**Career Interests**

Indicate (by circling) your interest level in pursuing the following careers:

1 – No interest 2 – Moderate interest 3 – Some interest 4 – Considerable interest 5 – High interest

| | | | | | |
|---|---|---|---|---|---|
| Education (Teacher, Administrator, etc.) | 1 | 2 | 3 | 4 | 5 |
| Engineering (Mechanical, Civil, Electrical, Architect, Industrial, etc.) | 1 | 2 | 3 | 4 | 5 |
| Physical Science (Research Scientist, Geologist, Meteorologist, etc.) | 1 | 2 | 3 | 4 | 5 |
| Information Technology (Program, Systems Analyst, Software Design, etc.) | 1 | 2 | 3 | 4 | 5 |
| Computers (Database Admin/Specialist, Web Design, Network Admin, etc.) | 1 | 2 | 3 | 4 | 5 |
| Business (Owner, Executive Management, Marketing, Finance, etc.) | 1 | 2 | 3 | 4 | 5 |
| Trade (Plumber, Electrician, etc) | 1 | 2 | 3 | 4 | 5 |
| Medical Practice (MD, Dentist, Vet., Psych.) | 1 | 2 | 3 | 4 | 5 |
| Medical Support (RN, Med. Technician, etc.) | 1 | 2 | 3 | 4 | 5 |
| Other Medical Related (Pharmacist, Physical/Speech Therapist, etc.) | 1 | 2 | 3 | 4 | 5 |
| Legal (Lawyer, Judge, Magistrate, etc.) | 1 | 2 | 3 | 4 | 5 |
| Performance Art (Theatre, Acting, Dance, etc.) | 1 | 2 | 3 | 4 | 5 |
| Visual Arts (Fine Arts, Author, etc.) | 1 | 2 | 3 | 4 | 5 |
| Aural Arts (Musician, Music-Industry Related, etc.) | 1 | 2 | 3 | 4 | 5 |
| Media (Journalist, News Analyst or Correspondent, Producer, etc.) | 1 | 2 | 3 | 4 | 5 |
| Food Service Industry (Chef, Cook, Restaurant Management, etc.) | 1 | 2 | 3 | 4 | 5 |
| Service Industry (Sales, Retail, Beauty, Hotel, etc.) | 1 | 2 | 3 | 4 | 5 |
| Social Services (Social Worker, Therapist, etc.) | 1 | 2 | 3 | 4 | 5 |
| Civil Service (Police, Postal Worker, etc.) | 1 | 2 | 3 | 4 | 5 |
| City Administration (Mayor, City Manager, etc.) | 1 | 2 | 3 | 4 | 5 |
| Political Office, State Level (State Senator, Governor, etc.) | 1 | 2 | 3 | 4 | 5 |
| Political Office, National Level (President, Congress member, etc.) | 1 | 2 | 3 | 4 | 5 |

Please list specific careers that you are interested in (list ALL that apply & use back for space if necessary):

**Post High School Plans** (Please check your plans for the fall after graduating high school. Only check more than one If you plan on doing more than one of these items at that time)

☐ 4-year college ☐ 2-year college ☐ Vocational/trade school

☐ Work ☐ Military ☐ Marriage & Family

☐ Other (specify) _____

**Would** you be interested in participating in a program which will help prepare you for your career interests? ☐ Yes ☐ No

# Career Interest Survey

## Career Related Concerns

Is there anything that would prevent you from pursuing a career interest? (Check only those that apply)

- I doubt I'll be accepted to college because…
  - ☐ my grades are too low ☐ my test scores are too low ☐ other _____
- I doubt I'll be attending college because …
  - ☐ it's too expensive ☐ it's too demanding/difficult ☐ I dislike school
- I feel unprepared for my career interest because I don't know…
  - ☐ anyone in that profession ☐ what education is required ☐ if I will succeed in that profession
- List any additional concerns _____

Are there any careers that you are interested in, but wouldn't pursue because of your ethnicity (i.e. the career is dominated by people who are not your ethnicity)? (Please list)

☐ Yes ☐ No _____

Are you concerned that your family wouldn't support you pursuing a career that is dominated by people who are not your ethnicity? ☐ Yes ☐ No

For Females: Are there any careers that you are interested in, but wouldn't pursue because of your gender (i.e. they are male-dominated)? (Please list) ☐ Yes ☐ No

_____

Are you concerned that your family wouldn't support you pursuing a male-dominated career? ☐ Yes ☐ No

For Males: Are there any careers that you are interested in, but wouldn't pursue because of your gender (i.e. they are female-dominated)? (Please list) ☐ Yes ☐ No

_____

Are you concerned that your family wouldn't support you pursuing a female-dominated career? ☐ Yes ☐ No

## Extracurricular Activities (Check ALL extracurricular activities that you are currently involved in and list any leadership positions within them.)

| *Activity* | *Leadership Position* |
|---|---|
| ☐ Academic Team | _____ |
| ☐ Amnesty International | _____ |
| ☐ AP Classes | _____ |
| ☐ Art Service Club | _____ |
| ☐ Athletics | _____ |
| ☐ Audio Technical Squad | _____ |
| ☐ Band | _____ |
| ☐ Black Student Union | _____ |
| ☐ Chorus | _____ |
| ☐ Computer Club | _____ |
| ☐ Cultural-Related Club | _____ |
| ☐ Debate Team | _____ |
| ☐ Drama | _____ |
| ☐ Fine Arts Club | _____ |
| ☐ Future Business Leaders of America | _____ |
| ☐ Future Teachers Club | _____ |
| ☐ Gay-Straight Alliance | _____ |

| *Activity* | *Leadership Position* |
|---|---|
| ☐ International Club | _____ |
| ☐ Language Clubs | _____ |
| ☐ Math Club | _____ |
| ☐ Model Congress | _____ |
| ☐ Mock Trial Team | _____ |
| ☐ National Honor Society | _____ |
| ☐ Peer Mediation | _____ |
| ☐ Peer Tutors | _____ |
| ☐ ROTC | _____ |
| ☐ School Newspaper | _____ |
| ☐ School Website Team | _____ |
| ☐ Science/Engineering Club | _____ |
| ☐ Students Against Drunk Driving | _____ |
| ☐ Student Council | _____ |
| ☐ Yearbook Committee | _____ |
| ☐ Other (specify) | _____ |

*Appendix B – A copy of the survey administered to the students last year*

*Appendix C – A copy of the follow – up survey administered this year*

### *Appendix D – Survey response key*

*Student ID* – School initials followed by a number assigned to the schools.
Last year this was referred to as the *Identification Number.*

*School Name* – Abbreviated school name where,

SPM – Saint Peter Marian High School
BC – Bancroft High School
HN – Holy Name High School
WA – Worcester Academy High schools
MA – Massachusetts Academy High School

*Guidance* – Write in

*Graduation Year* – The graduation year for the participating students was the same since all the students were juniors

*Gender* – The gender of the students

1 – Male
2 – Female

*Ethnicity* was not part of the survey this year

*Father's/Mother's/Guidance Occupation* – The occupation of the student's parents

1 - Education
2 - Computers / Engineering
3 - Physical Science
4 - Engineering/Phys. Science
5 - Business
6 - Trade
7 - Medical Practice
8 - Medical Support
9 - Law
10 - Art
11 - Service Industry
12 - Social Services
13 - Civil Services
14 - City Administration
15 - Officer Training
16 - Homemaker
17 - Manual Labor
18 - Retired

The following careers were listed in the following order on the survey:

Teaching
Engineering
Phys. Science
Computers
IT
Business
Trade
Medical Practice
Medical Support
Medical Other
Law
Performance Art
Visual Art
Musical Art
Media
Food Service
Service Industry
Social Service
Civil Service
City Admin.
Elected Political Office
Government Service
International Politics

*Level of interest in each of the 23 careers was rated as:*

0 – No Answer
1 – Not Interested
2 – A Little Interested
3 – Pretty Interested
4 – Very Interested

*Special Careers:* There were nine fill in careers that the students were allowed to write in if they felt that the 23 careers listed on the survey were not adequate.

*Future Plan:* 4 –year college, 2-year college, vocational school, military, work and marriage were the options.

0 – blank
1 – interested

*Concerns:*

| | | |
|---|---|---|
| Accepted1 | Accepted2 | Accepted3 (fill-in) |
| Attending1 | Attending2 | Attending3 |
| Unprepared1 | Unprepared2 | Unprepared3 |

0 – no concern about the corresponding issue
1 – Indicates concern

*Additional Comments:* Fill in

*Gender 1:* How likely are the students to enter into a anti-stereotypical career…

0 - Blank
1 – Very Unlikely
2 - Unlikely
3 - Likely
4 - Very Likely

*Gender 2:* Level of parents support on Gender 1 decision…

0 - Blank
1 - Both would Oppose it
2 - Mixed Reactions
3 - Bother would be supportive

*Self-Image (60 adjectives):* The following adjectives were listed in alphabetical order:

1. self reliant
2. yielding
3. helpful
4. defends own beliefs
5. cheerful
6. moody
7. independent
8. shy
9. conscientious
10. athletic
11. affectionate
12. theatrical
13. assertive
14. flatterable
15. happy
16. strong personality
17. loyal
18. unpredictable
19. forceful
20. feminine
21. reliable
22. analytical
23. sympathetic
24. jealous
25. leadership ability
26. sensitive to other's needs
27. truthful
28. willing to take risks
29. understanding
30. secretive
31. makes decisions easily
32. compassionate
33. sincere
34. self-sufficient
35. eager to soothe hurt feelings
36. conceited
37. dominant
38. soft spoken
39. likable
40. masculine
41. warm
42. solemn
43. willing to take a stand
44. tender
45. friendly
46. aggressive
47. gullible
48. inefficient
49. acts as a leader
50. childlike
51. adaptable
52. individualistic
53. does not use harsh language
54. unsystematic
55. competitive
56. loves children
57. tactful
58. ambitious
59. gentle
60. conventional

0 - No Answer
1 - Not at all True
2 - Slightly True
3 - Somewhat True
4 - Moderately True
5 - Quite True
6 - Very True
7 - Always True

*BEM Score:* Score the students received based on their results of the self-image section

0 - Invalid Score
1 - Masculine-Male—MM
2- Masculine-Female—MF
3 - Feminine-Male—FM
4- Feminine-Female—FF
5 - Androgynous-Male—AM
6 - Androgynous-Female—AF
7 - Neutral-Male—NM
8 - Neutral-Female—NF

*Worcester Residents:*

1 – Yes
2 – No

*Program Interest:*

1 – Yes
2 – No

*Honors / AP of classes:*

# classes
0 - no answer

*Extra Curricular Activities: (Academic Team, Amnesty...)*

1 – No
2 – Yes
3 – President
4 – Vice
president
5 – Captain
6 – Manager
7 – Secretary
8 – Historian
9 - Editor
10 – Instructor
11 – Treasurer

## *Appendix E – How to read the tables presented in this report*

The tables that were used for demonstration purposed were generated by a program used in this study to conduct the statistical analysis.

The first table is shown here: Cross Tabulation

**Crosstab**

| SchoolType | | | | Unprep3 0 | Unprep3 1 | Total |
|---|---|---|---|---|---|---|
| Private/Charter Schools | Bem with middle collapsed | MM | Count | 145 | 30 | 175 |
| | | | % within Bem with middle collapsed | 82.9% | 17.1% | 100.0% |
| | | MF | Count | 79 | 18 | 97 |
| | | | % within Bem with middle collapsed | 81.4% | 18.6% | 100.0% |
| | | Androg or Neutral | Count | 32 | 17 | 49 |
| | | | % within Bem with middle collapsed | 65.3% | 34.7% | 100.0% |
| | | FM | Count | 31 | 13 | 44 |
| | | | % within Bem with middle collapsed | 70.5% | 29.5% | 100.0% |
| | | FF | Count | 100 | 33 | 133 |
| | | | % within Bem with middle collapsed | 75.2% | 24.8% | 100.0% |
| | Total | | Count | 387 | 111 | 498 |
| | | | % within Bem with middle collapsed | 77.7% | 22.3% | 100.0% |

The way you read this table is you look at the right side and see that private/charter schools are being compared by the self-image distribution within the Unprepared 3 career doubt. The percentage is the percent of, for example, Masculine Males (MM), within the student body who were concerned on this level of Unprepared 3.

The next two tables demonstrate the statistics that were used to see of the results were statistically significant.

**Chi-Square Tests**

| | Value | df | Asymp. Sig. (2-sided) |
|---|---|---|---|
| Pearson Chi-Square | 17.762[a] | 8 | .023 |
| Likelihood Ratio | 18.028 | 8 | .021 |
| N of Valid Cases | 517 | | |

a. 3 cells (16.7%) have expected count less than 5. The minimum expected count is 3.00.

**Symmetric Measures** [c]

| | | Value | Asymp. Std. Error [a] | Approx. T [b] | Approx. Sig. |
|---|---|---|---|---|---|
| Nominal by Nominal | Phi | .185 | | | .023 |
| | Cramer's V | .185 | | | .023 |
| Ordinal by Ordinal | Gamma | -.198 | .064 | -3.065 | .002 |
| N of Valid Cases | | 517 | | | |

a. Not assuming the null hypothesis.

b. Using the asymptotic standard error assuming the null hypothesis.

c. Correlation statistics are available for numeric data only.

To determine if the results were different statistically and if the difference were significant, we need to first look in the Chi-Square table and see the value of Asymp. Significance for Pearson Chi-Square. If he value is 0.05 or less than the difference is significant on the 0.05 significance level on which all the study was based. The next table allows us to calculate the percentage of variation explained by the variable that is different amongst the other variable. Gamma is squared to figure this percentage variance explained.

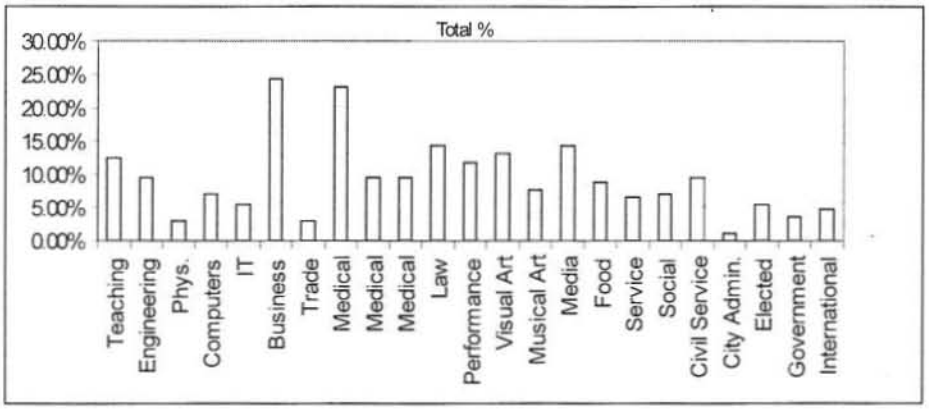
### *Appendix F – Holy Name School's Individual Report*

The following table demonstrates the response rate of student in Holy Name High for this year's study. The response rate was pretty high so the data represent the results of the 2007 junior class aspirations, plans and doubts well.

| | Expected | Actual | Response % | Male | % Male | Female | % Female |
|---|---|---|---|---|---|---|---|
| Holy Name | 190 | 168 | 88.40% | 65 | 38.70% | 103 | 61.30% |

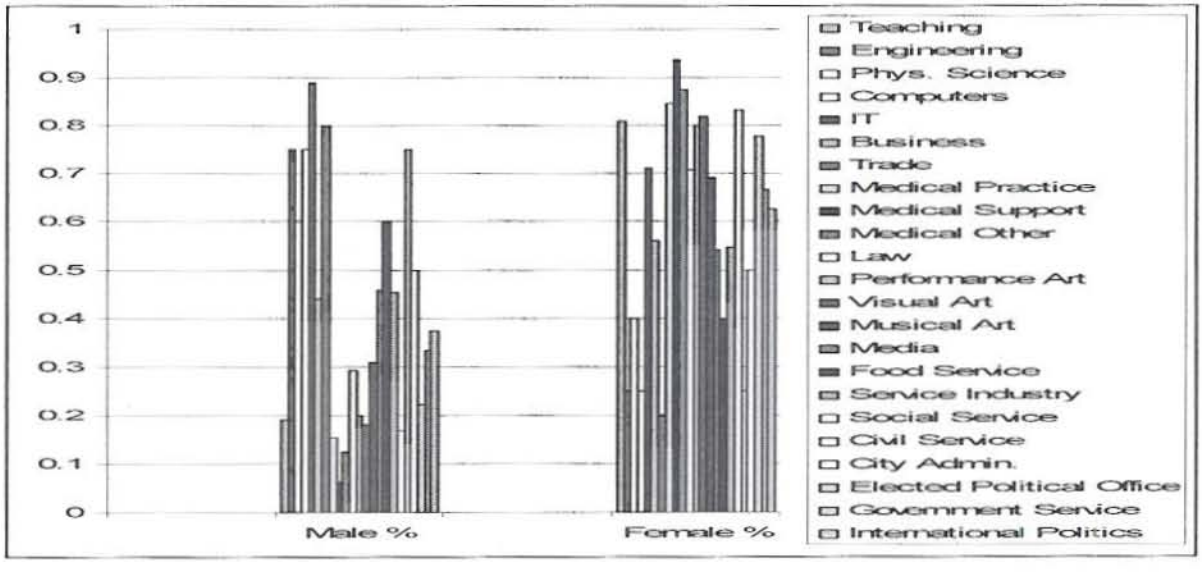
## Career Aspirations

The next graph shows the career aspiration of Holy Name juniors, those who chose a 4 for the careers in which they were interested in.




This graph tells us that a little less than 25% of the students are aspiring towards Business careers, 22% towards Medical Practice and a little under 30% in the Arts careers.

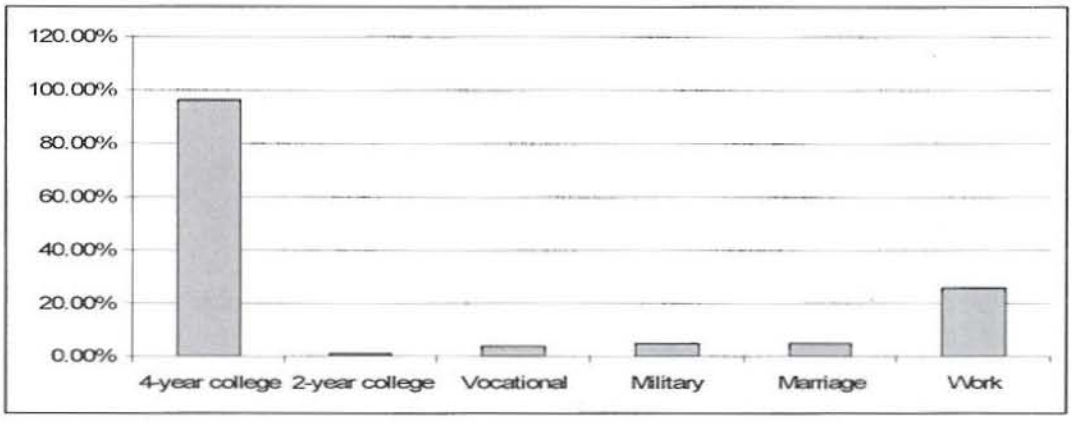
The following graph shows the career aspirations of Holy Name students by gender:



This year the graph demonstrates that as last year there were more females aspiring towards Medical Practice careers as well as Educational careers, where as there were more males students aspiring towards Engineering, Physical Science, Computer and IT careers. The political careers were more aspired towards by the females this year.

## Future Plans (Post-High School)

The table on the next page demonstrates the percentage of students who are planning to do one of the below after high school graduation:




## Doubts Regarding College Application/Acceptance Process

Students were also asked to indicate the reservations that they have in regards to being accepted into college.

The questions were:

*I doubt I'll be accepted to college because...*

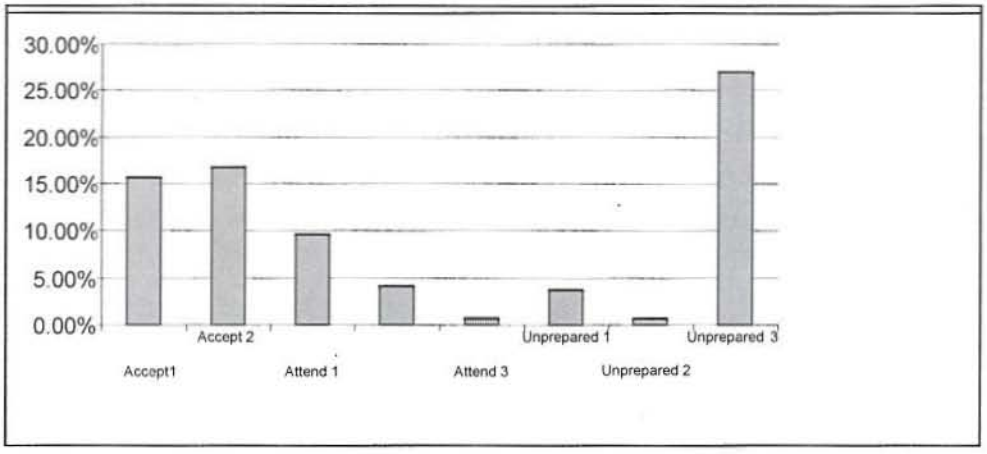
- *my grades are too low* (Accept1)
- *my test scores are too low* (Accept2)
- *other (fill-in)*

*I doubt I'll be attending college because...*

- *its too expensive* (Attend1)
- *its too demanding/difficult* (Attend2)
- *I dislike school* (Attend3)

*I feel unprepared for my career interest because I don't know...*

- *anyone in that profession* (Unpre1)
- *what education is required* (Unpre2)
- *if I will succeed in that profession* (Unpre3)




Gender 1, 2, and 3 were not part of the survey this year.

Concerns for Accept 1 increased a little for this year and concerns for Accept 2 decreased dramatically this year. Concerns for being unprepared due to not being sure if the students will succeed in their chosen careers increased this year.

## BSRI Results: Career aspirations, future plans and concerns

The acronyms used in these tables stand for:

MM- Masculine-Male
MF- Masculine-Female
AD-NT- Androgynous and Neutral Students both female and male
FM-Feminine-Male
FF-Feminine-Female

The results are raw data obtained from the surveys for each individual private/charter school.

| | MM | MF | AD-NT | FM | FF |
|---|---|---|---|---|---|
| Teaching | 2 | 3 | 3 | 1 | 12 |
| Engineering | 9 | 1 | 2 | 1 | 3 |
| Phys. Science | 3 | 2 | 0 | 0 | 0 |
| Computers | 6 | 1 | 2 | 1 | 2 |
| IT | 5 | 1 | 1 | 1 | 1 |
| Business | 15 | 10 | 3 | 4 | 9 |
| Trade | 4 | 1 | 0 | 0 | 0 |
| Medical Practice | 6 | 9 | 5 | 0 | 18 |
| Medical Support | 1 | 4 | 1 | 0 | 10 |
| Medical Other | 1 | 3 | 0 | 1 | 11 |
| Law | 5 | 12 | 0 | 2 | 5 |
| Performance Art | 1 | 5 | 2 | 3 | 9 |
| Visual Art | 2 | 4 | 4 | 1 | 11 |
| Musical Art | 4 | 3 | 0 | 1 | 5 |
| Media | 7 | 6 | 1 | 4 | 6 |
| Food Service | 8 | 5 | 0 | 1 | 1 |
| Service Industry | 4 | 3 | 0 | 1 | 3 |
| Social Service | 0 | 4 | 0 | 2 | 5 |
| Civil Service | 10 | 2 | 2 | 0 | 1 |
| City Admin. | 1 | 1 | 0 | 0 | 0 |
| Elected Political Office | 2 | 5 | 0 | 0 | 2 |
| Government Service | 2 | 3 | 0 | 0 | 1 |
| International Politics | 3 | 4 | 0 | 0 | 1 |

Future plans and self-image:

| | MM | MF | AD-NT | FM | FF |
|---|---|---|---|---|---|
| 4 year college | 42 | 35 | 15 | 11 | 55 |
| 2 year college | 1 | 0 | 0 | 1 | 0 |
| Vocational | 3 | 0 | 0 | 2 | 1 |
| Work | 9 | 8 | 3 | 4 | 19 |
| Military | 7 | 0 | 0 | 1 | 0 |
| Marriage | 3 | 1 | 0 | 1 | 3 |

Student concerns/reservation by self-image:

| | MM | MF | AD-NT | FM | FF |
|---|---|---|---|---|---|
| **Accept 1** | 9 | 4 | 2 | 1 | 10 |
| **Accept 2** | 3 | 7 | 3 | 2 | 13 |
| **Attend 1** | 4 | 2 | 0 | 1 | 9 |
| **Attend 2** | 1 | 0 | 2 | 1 | 3 |
| **Attend 3** | 2 | 1 | 0 | 3 | 1 |
| **Unprepared 1** | 2 | 2 | 0 | 1 | 1 |
| **Unprepared 2** | 10 | 4 | 0 | 3 | 12 |
| **Unprepared 3** | 11 | 7 | 5 | 5 | 16 |

### *Appendix G – Bancroft High School's Individual Report*

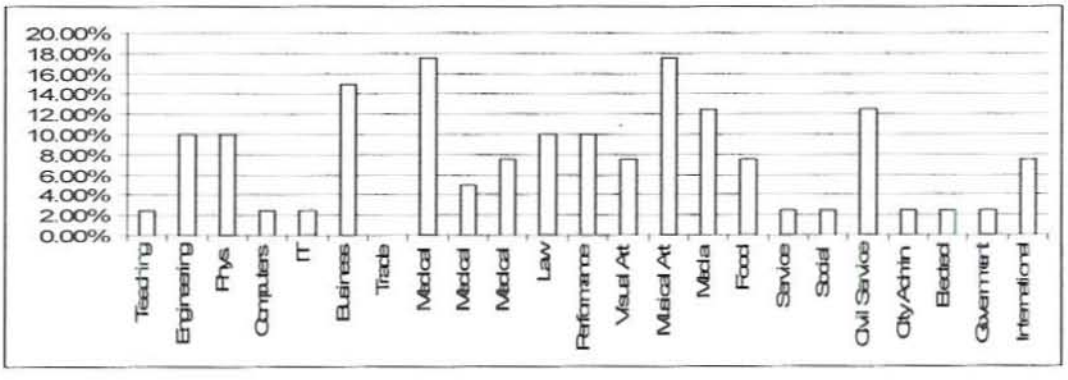
The following table demonstrates the response rate of student in Bancroft High School for this year's study.

| | Expected | Actual | Response % | Male | % Male | Female | % Female |
|---|---|---|---|---|---|---|---|
| **Bancroft** | 45 | 40 | 88.88% | 20 | 50.00% | 20 | 50.00% |

The response rate was very close to 90% which means that the findings represent the school well overall.

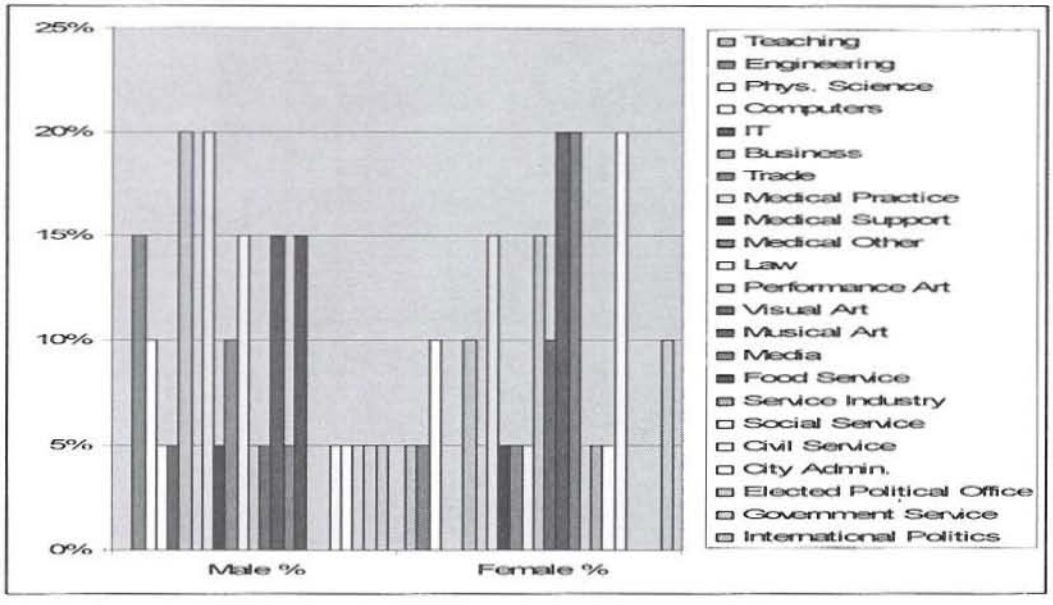
## Career Aspirations

The following graph shows the high interests of students within this school, those who chose a 4 on the survey for each of the 23 careers:



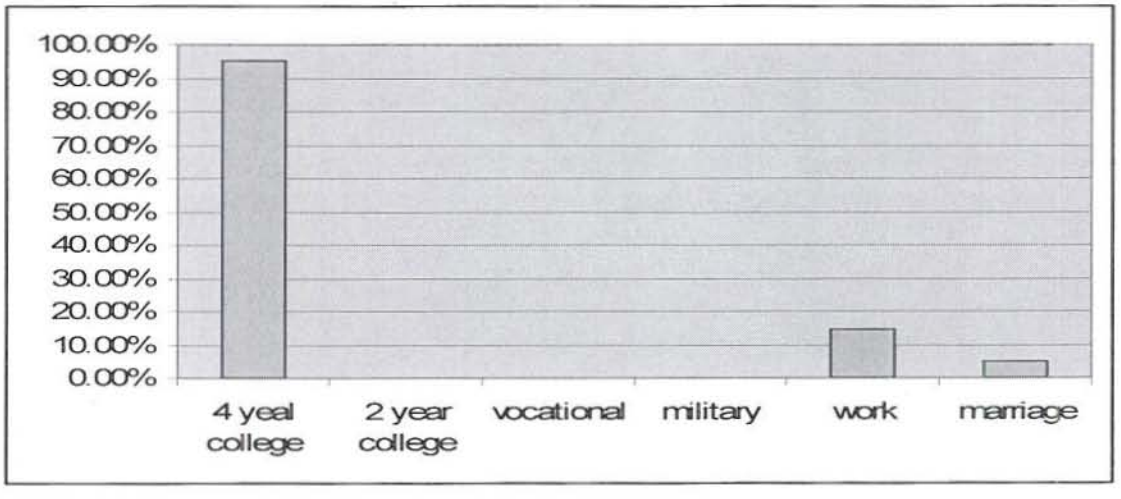

From this table it can be noted that there are many students interested in Medical Practice careers, Business and Musical arts careers. Civil service demonstrated a high interest within this school.

The next table demonstrates the breakdown by gender for each career aspiration:




From the table above it can be noted that there are no females students interested in government service and elected political office careers. There are more females interested in musical arts. There are more males interested in engineering and business careers.

## Future Plans (Post-High School)




In this school there were no students interested in vocational, 2 year college, or military as future plans where as most of the students planned on attending a 4 year college.

## Doubts Regarding College Application/Acceptance Process

Students were also asked to indicate the reservations that they have in regards to being accepted into college.

The questions were:

*I doubt I'll be accepted to college because...*

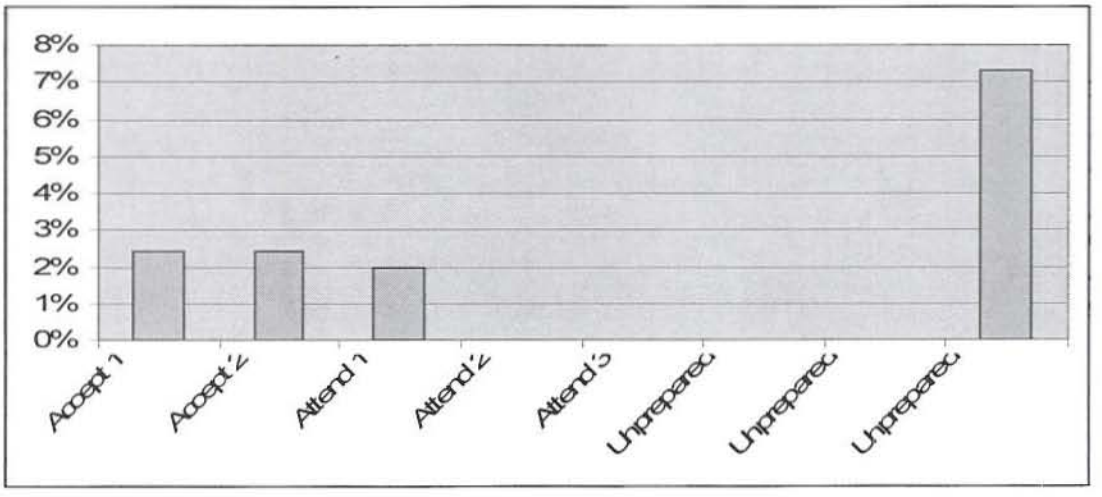
- *my grades are too low* (Accept1)
- *my test scores are too low* (Accept2)
- *other (fill-in)*

*I doubt I'll be attending college because...*

- *its too expensive* (Attend1)
- *its too demanding/difficult* (Attend2)
- *I dislike school* (Attend3)

*I feel unprepared for my career interest because I don't know...*

- *anyone in that profession* (Unpre1)
- *what education is required* (Unpre2)
- *if I will succeed in that profession* (Unpre3)




Students at Bancroft High School were more concerned about not being able to succeed in the profession they were aspiring towards than any other career doubts.

## BSRI Results: Career aspirations, future plans and concerns

The acronyms used in these tables stand for:

MM- Masculine-Male
MF- Masculine-Female
AD-NT- Androgynous and Neutral Students both female and male
FM-Feminine-Male
FF-Feminine-Female

| | MM | MF | AD-NT | FM | FF |
|---|---|---|---|---|---|
| **Teaching** | 0 | 1 | 0 | 0 | 0 |
| **Engineering** | 0 | 0 | 0 | 3 | 0 |
| **Phys. Science** | 1 | 1 | 0 | 1 | 0 |
| **Computers** | 0 | 0 | 0 | 1 | 0 |
| **IT** | 0 | 0 | 0 | 1 | 0 |
| **Business** | 3 | 1 | 0 | 1 | 1 |
| **Trade** | 0 | 0 | 0 | 0 | 0 |
| **Medical Practice** | 2 | 2 | 0 | 1 | 0 |
| **Medical Support** | 1 | 1 | 0 | 0 | 0 |
| **Medical Other** | 2 | 1 | 0 | 0 | 0 |
| **Law** | 3 | 1 | 0 | 0 | 0 |
| **Performance Art** | 0 | 3 | 0 | 1 | 0 |
| **Visual Art** | 0 | 2 | 0 | 1 | 0 |
| **Musical Art** | 2 | 2 | 1 | 1 | 1 |
| **Media** | 0 | 3 | 0 | 1 | 1 |
| **Food Service** | 2 | 0 | 0 | 1 | 0 |
| **Service Industry** | 0 | 1 | 0 | 0 | 0 |
| **Social Service** | 0 | 1 | 0 | 0 | 3 |
| **Civil Service** | 0 | 0 | 0 | 1 | 0 |
| **City Admin.** | 0 | 0 | 0 | 1 | 0 |
| **Elected Political Office** | 1 | 0 | 0 | 0 | 0 |
| **Government Service** | 1 | 0 | 0 | 0 | 0 |
| **International Politics** | 1 | 1 | 0 | 0 | 0 |

Future plans and self-image:

| | MM | MF | AD-NT | FM | FF |
|---|---|---|---|---|---|
| 4 year college | 11 | 10 | 2 | 6 | 7 |
| 2 year college | 0 | 0 | 0 | 0 | 0 |
| Vocational | 0 | 0 | 0 | 0 | 0 |
| Work | 1 | 2 | 0 | 1 | 2 |
| Military | 0 | 0 | 0 | 0 | 0 |
| Marriage | 0 | 0 | 0 | 0 | 2 |

Student reservations/concerns:

| | MM | MF | AD-NT | FM | FF |
|---|---|---|---|---|---|
| **Accept 1** | 0 | 0 | 0 | 1 | 0 |
| **Accept 2** | 0 | 1 | 0 | 0 | 0 |
| **Attend 1** | 0 | 1 | 0 | 0 | 0 |
| **Attend 2** | 0 | 0 | 0 | 0 | 0 |
| **Attend 3** | 0 | 0 | 0 | 1 | 0 |
| **Unprepared 1** | 0 | 0 | 0 | 0 | 0 |
| **Unprepared 2** | 0 | 0 | 0 | 1 | 0 |
| **Unprepared 3** | 0 | 3 | 0 | 0 | 0 |

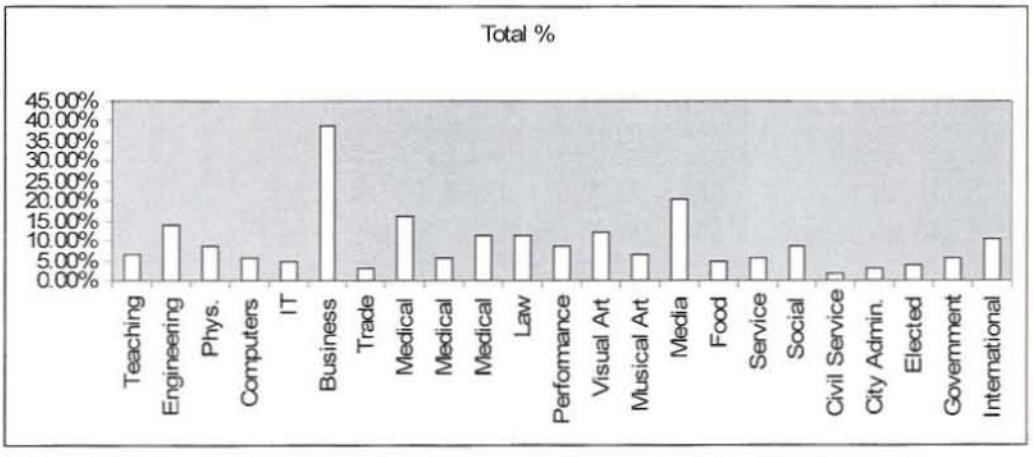
## Appendix H – Worcester Academy High School's Individual Report

The following table demonstrates the response rate for Worcester Academy. It was close to 100% for this year's study:

| | Expected | Actual | Response % | Male | % Male | Female | % Female |
|---|---|---|---|---|---|---|---|
| **Worcester Acad.** | 125 | 123 | 98.40% | 69 | 56.10% | 54 | 43.90% |

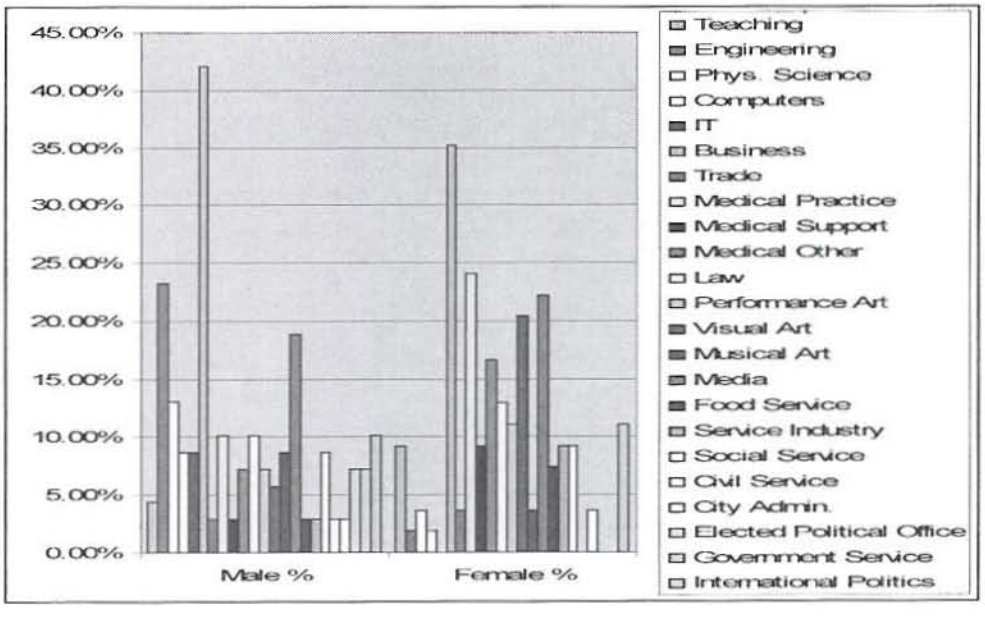
## Career Aspirations

The next table demonstrates the high interests of students in this school:



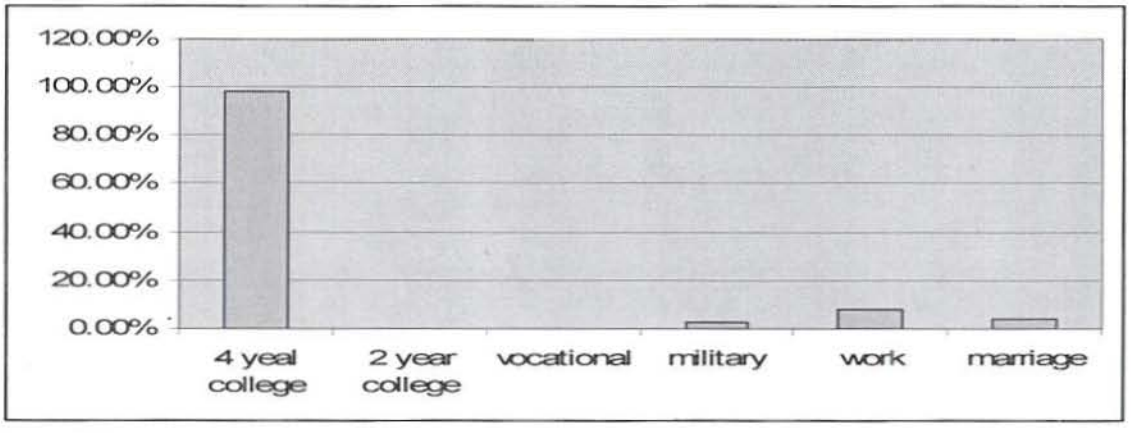

There were many students interested in business careers and media careers.

The next graph shows the high interests by gender for this school:



There were more students who were male interested in business careers. There were more female students interested in media careers.

## Future Plans (Post-High School)




There are more students interested in a 4-year college. There are some people interested in work and marriage, but the percentages are very low

## Doubts Regarding College Application/Acceptance Process

Students were also asked to indicate the reservations that they have in regards to being accepted into college.

The questions were:

*I doubt I'll be accepted to college because...*

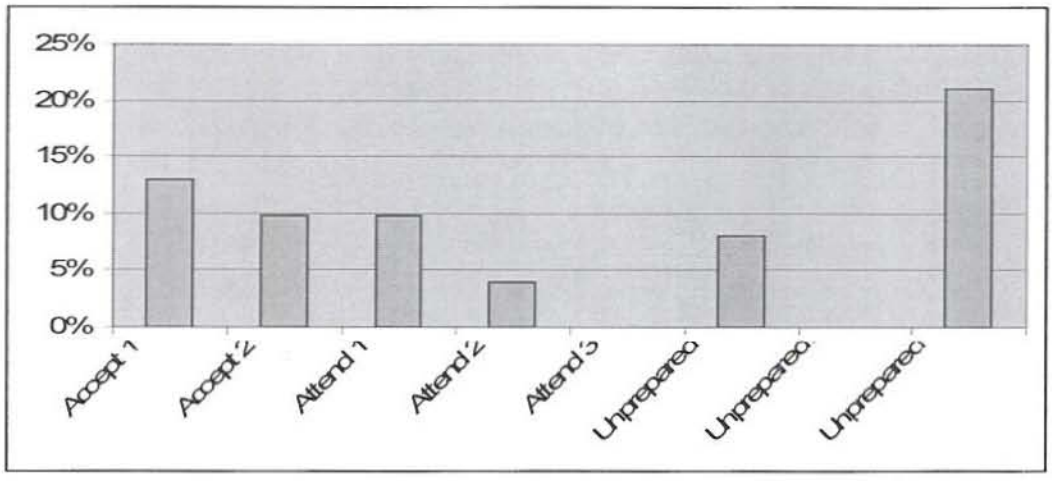
- *my grades are too low* (Accept1)
- *my test scores are too low* (Accept2)
- *other (fill-in)*

*I doubt I'll be attending college because...*

- *its too expensive* (Attend1)
- *its too demanding/difficult* (Attend2)
- *I dislike school* (Attend3)

*I feel unprepared for my career interest because I don't know...*

- *anyone in that profession* (Unpre1)
- *what education is required* (Unpre2)
- *if I will succeed in that profession* (Unpre3)




More students are concerned with being unprepared to succeed in the career they are aspiring towards.

## BSRI Results: Career aspirations, future plans and concerns

The acronyms used in these tables stand for:

MM- Masculine-Male
MF- Masculine-Female
AD-NT- Androgynous and Neutral Students both female and male
FM-Feminine-Male
FF-Feminine-Female

The table is demonstrated on the next page.

| | MM | MF | AD-NT | FM | FF |
|---|---|---|---|---|---|
| Teaching | 2 | 1 | 1 | 1 | 3 |
| Engineering | 11 | 1 | 1 | 3 | 0 |
| Phys. Science | 6 | 0 | 2 | 2 | 1 |
| Computers | 3 | 0 | 2 | 0 | 0 |
| IT | 2 | 0 | 2 | 1 | 1 |
| Business | 19 | 12 | 3 | 6 | 6 |
| Trade | 2 | 1 | 0 | 0 | 1 |
| Medical Practice | 5 | 6 | 4 | 0 | 5 |
| Medical Support | 1 | 2 | 1 | 0 | 3 |
| Medical Other | 4 | 3 | 1 | 0 | 6 |
| Law | 5 | 5 | 1 | 1 | 2 |
| Performance Art | 1 | 4 | 1 | 2 | 1 |
| Visual Art | 2 | 4 | 2 | 1 | 5 |
| Musical Art | 3 | 1 | 1 | 2 | 1 |
| Media | 6 | 7 | 4 | 4 | 3 |
| Food Service | 2 | 1 | 0 | 0 | 3 |
| Service Industry | 2 | 3 | 0 | 0 | 2 |
| Social Service | 4 | 2 | 1 | 1 | 2 |
| Civil Service | 2 | 0 | 0 | 0 | 0 |
| City Admin. | 2 | 1 | 0 | 0 | 0 |
| Elected Political Office | 4 | 0 | 0 | 0 | 0 |
| Government Service | 5 | 1 | 0 | 0 | 0 |
| International Politics | 6 | 5 | 0 | 1 | 0 |

Future plans and self-image:

| | MM | MF | AD-NT | FM | FF |
|---|---|---|---|---|---|
| **4 year college** | 49 | 20 | 14 | 11 | 20 |
| **2 year college** | 0 | 0 | 0 | 0 | 0 |
| **Vocational** | 0 | 0 | 0 | 0 | 0 |
| **Work** | 2 | 1 | 3 | 1 | 1 |
| **Military** | 2 | 0 | 0 | 0 | 0 |
| **Marriage** | 3 | 0 | 0 | 0 | 0 |

Students' concerns and reservations:

| | MM | MF | AD-NT | FM | FF |
|---|---|---|---|---|---|
| **Accept 1** | 4 | 3 | 0 | 3 | 4 |
| **Accept 2** | 5 | 2 | 1 | 0 | 2 |
| **Attend 1** | 6 | 1 | 1 | 2 | 0 |
| **Attend 2** | 1 | 1 | 0 | 1 | 1 |
| **Attend 3** | 1 | 2 | 0 | 0 | 0 |
| **Unprepared 1** | 3 | 1 | 2 | 1 | 1 |
| **Unprepared 2** | 5 | 1 | 0 | 0 | 4 |
| **Unprepared 3** | 10 | 2 | 1 | 0 | 4 |

### *Appendix I – Massachusetts Academy High School's Individual Report*

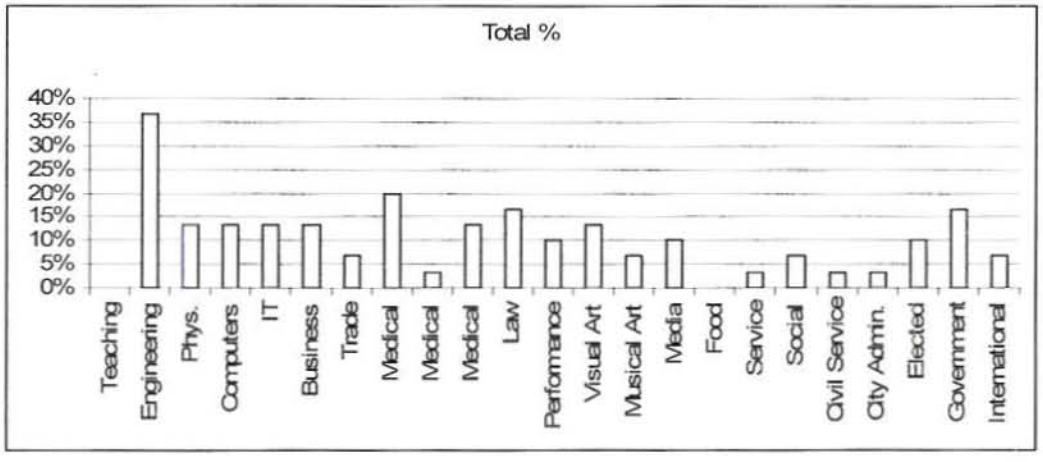
The response rates for Massachusetts Academy are demonstrated below:

| | Expected | Actual | Response % | Male | % Male | Female | % Female |
|---|---|---|---|---|---|---|---|
| Mass Acad. | 40 | 30 | 75.00% | 15 | 50.00% | 15 | 50.00% |

The response rate was lower than in other schools, but still a good representation of the students since there is a small junior class this year.

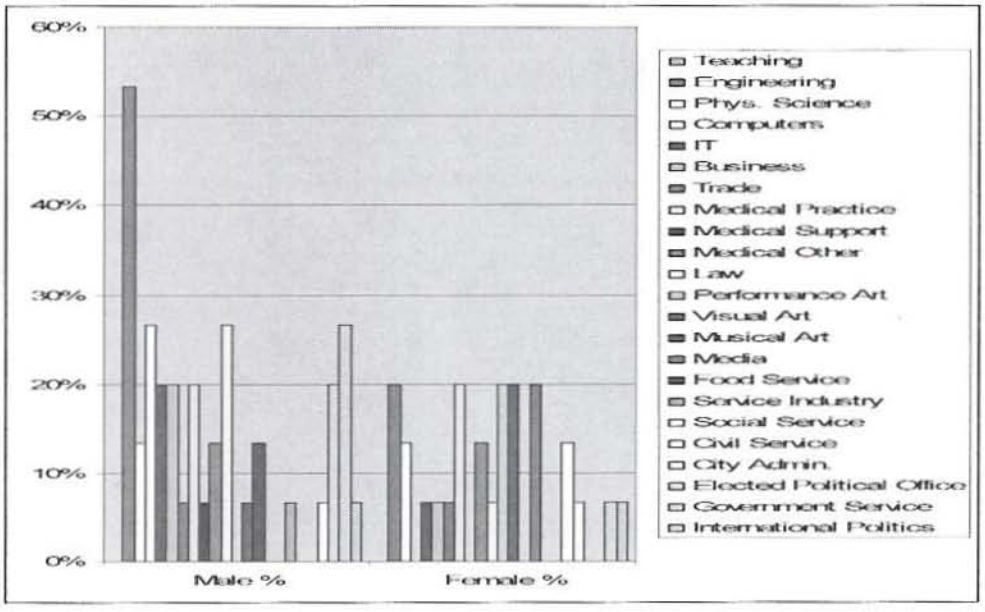
## Career Aspirations

The next table demonstrates the high interests of students in this school:



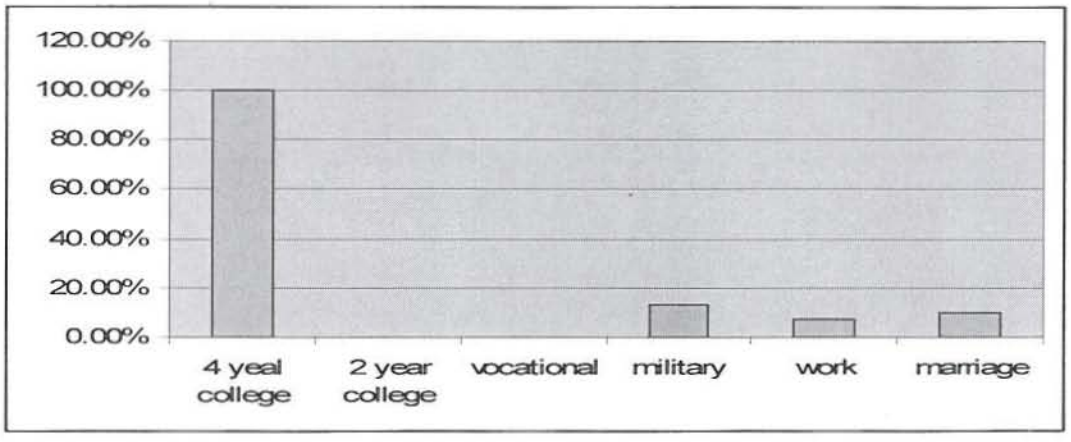

There were many students interested in engineering and medical careers.

The next graph demonstrates the breakdown by gender within each career:



There are a lot more males interested in engineering than females.

## Future Plans (Post-High School)




100% of Mass Academy students wanted to go to a 4 year college. This means that the people who wanted to go into a 4 year college also wanted to pursue other plans as seen on the graph above.

## Doubts Regarding College Application/Acceptance Process

Students were also asked to indicate the reservations that they have in regards to being accepted into college.

The questions were:

*I doubt I'll be accepted to college because...*

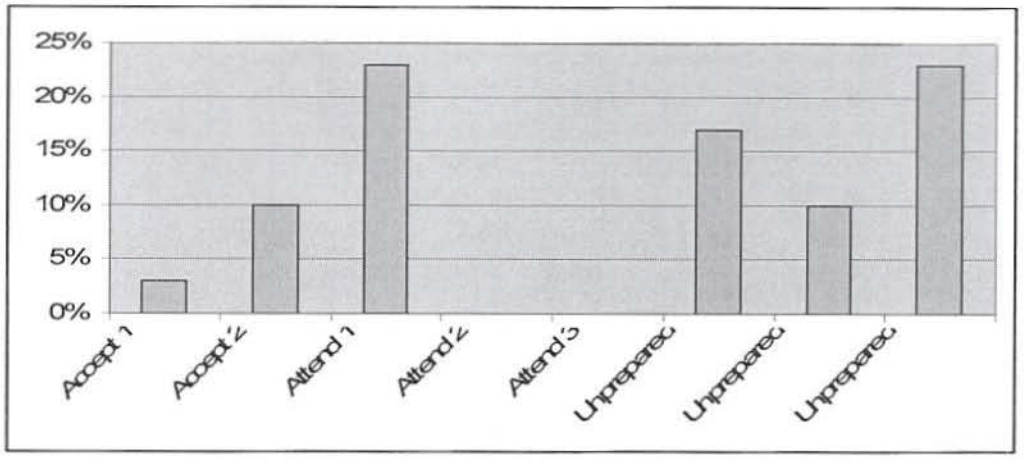
- *my grades are too low* (Accept1)
- *my test scores are too low* (Accept2)
- *other (fill-in)*

*I doubt I'll be attending college because...*

- *its too expensive* (Attend1)
- *its too demanding/difficult* (Attend2)
- *I dislike school* (Attend3)

*I feel unprepared for my career interest because I don't know...*

- *anyone in that profession* (Unpre1)
- *what education is required* (Unpre2)
- *if I will succeed in that profession* (Unpre3)




Attend 1 and Unprepared 3 had the highest rate of concern in this school.

## BSRI Results: Career aspirations, future plans and concerns

The acronyms used in these tables stand for:

MM- Masculine-Male
MF- Masculine-Female
AD-NT- Androgynous and Neutral Students both female and male
FM-Feminine-Male
FF-Feminine-Female

| | MM | MF | AD-NT | FM | FF |
|---|---|---|---|---|---|
| **Teaching** | 0 | 0 | 0 | 0 | 0 |
| **Engineering** | 7 | 3 | 0 | 1 | 0 |
| **Phys. Science** | 2 | 1 | 0 | 0 | 1 |
| **Computers** | 3 | 1 | 0 | 0 | 0 |
| **IT** | 3 | 1 | 0 | 0 | 0 |
| **Business** | 3 | 0 | 0 | 1 | 0 |
| **Trade** | 1 | 0 | 0 | 0 | 1 |
| **Medical Practice** | 3 | 2 | 0 | 0 | 1 |
| **Medical Support** | 1 | 0 | 0 | 0 | 0 |
| **Medical Other** | 2 | 1 | 0 | 0 | 1 |
| **Law** | 4 | 0 | 0 | 0 | 0 |
| **Performance Art** | 0 | 0 | 0 | 0 | 2 |
| **Visual Art** | 1 | 0 | 1 | 0 | 1 |
| **Musical Art** | 1 | 0 | 0 | 1 | 0 |
| **Media** | 0 | 0 | 1 | 0 | 2 |
| **Food Service** | 0 | 0 | 0 | 0 | 0 |
| **Service Industry** | 1 | 0 | 0 | 0 | 0 |
| **Social Service** | 0 | 0 | 1 | 0 | 1 |
| **Civil Service** | 0 | 0 | 0 | 0 | 1 |
| **City Admin.** | 1 | 0 | 0 | 0 | 0 |

| | | | | | |
|---|---|---|---|---|---|
| Elected Political Office | 3 | 0 | 0 | 0 | 0 |
| Government Service | 4 | 0 | 1 | 0 | 0 |
| International Politics | 1 | 0 | 1 | 0 | 0 |

| | MM | MF | AD-NT | FM | FF |
|---|---|---|---|---|---|
| 4 year college | 13 | 6 | 1 | 2 | 7 |
| 2 year college | 0 | 0 | 0 | 0 | 0 |
| Vocational | 0 | 0 | 0 | 0 | 0 |
| Work | 1 | 1 | 1 | 1 | 0 |
| Military | 1 | 0 | 0 | 0 | 1 |
| Marriage | 2 | 0 | 0 | 1 | 0 |

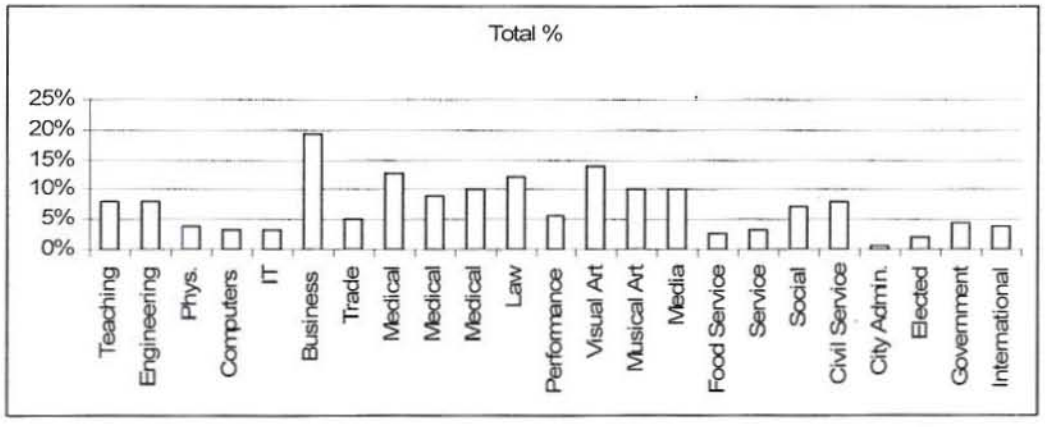
| | MM | MF | AD-NT | FM | FF |
|---|---|---|---|---|---|
| Accept 1 | 0 | 0 | 0 | 0 | 1 |
| Accept 2 | 1 | 1 | 0 | 0 | 1 |
| Attend 1 | 4 | 1 | 0 | 0 | 2 |
| Attend 2 | 0 | 0 | 0 | 0 | 0 |
| Attend 3 | 0 | 0 | 0 | 0 | 0 |
| Unprepared 1 | 1 | 0 | 1 | 0 | 3 |
| Unprepared 2 | 0 | 1 | 1 | 0 | 1 |
| Unprepared 3 | 0 | 2 | 1 | 0 | 4 |

The response rates were as follows for this school:

| | Expected | Actual | Response % | Male | % Male | Female | % Female |
|---|---|---|---|---|---|---|---|
| St. Peter-Marian | 185 | 156 | 84.32% | 75 | 47.77% | 81 | 51.92% |

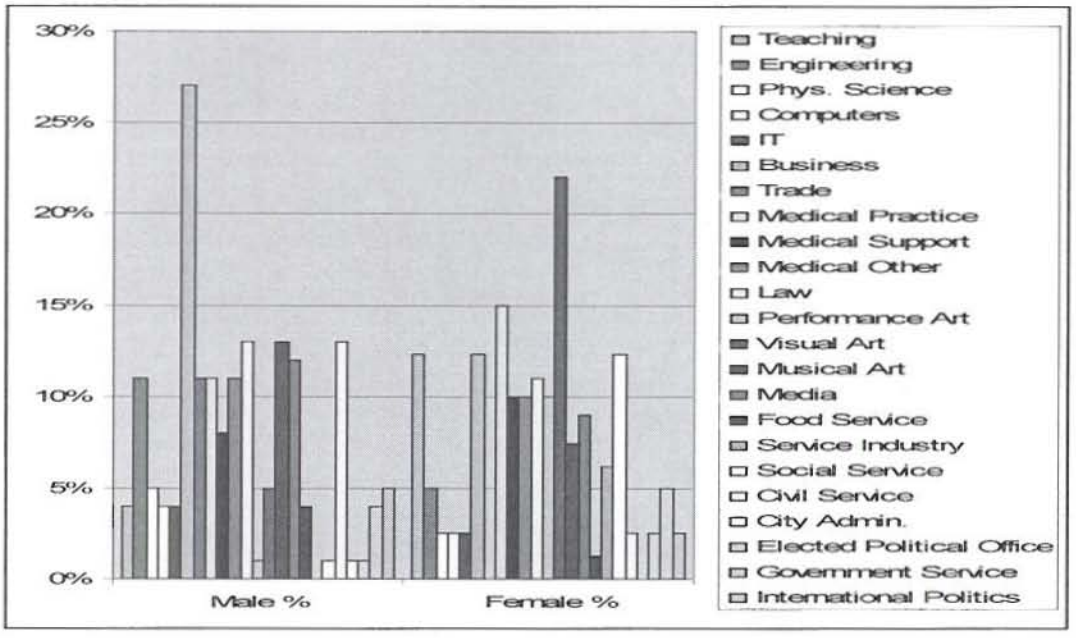
## Career Aspirations

The following graph shows the career aspirations of all the students in this school:



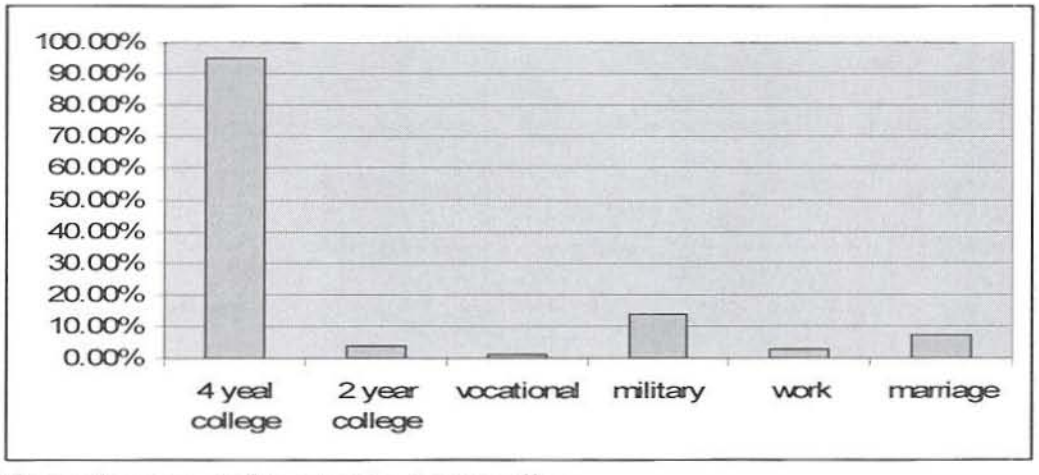

Many students were interested in Business careers as well as all the arts careers, especially Visual arts careers.

The following graph shows by gender career aspirations:




There are more males aspiring towards business careers. There were more female students aspiring towards visual arts careers.

## Future Plans (Post-High School)




Most of the students wanted to attend a 4 year college

## Doubts Regarding College Application/Acceptance Process

Students were also asked to indicate the reservations that they have in regards to being accepted into college.

The questions were:

*I doubt I'll be accepted to college because...*

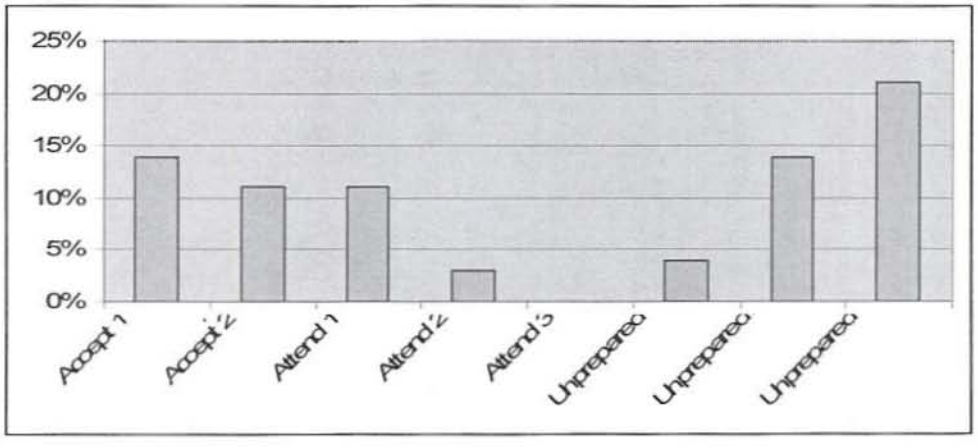
- *my grades are too low* (Accept1)
- *my test scores are too low* (Accept2)
- *other (fill-in)*

*I doubt I'll be attending college because...*

- *its too expensive* (Attend1)
- *its too demanding/difficult* (Attend2)
- *I dislike school* (Attend3)

*I feel unprepared for my career interest because I don't know...*

- *anyone in that profession* (Unpre1)
- *what education is required* (Unpre2)
- *if I will succeed in that profession* (Unpre3)




The students in this school had the most percentage of concerns compared to the other schools. They had no concerns regarding Attend 3.

## BSRI Results: Career aspirations, future plans and concerns

The acronyms used in these tables stand for:

MM- Masculine-Male
MF- Masculine-Female
AD-NT- Androgynous and Neutral Students both female and male
FM-Feminine-Male
FF-Feminine-Female

The table is demonstrated on the next page:

| | MM | MF | AD-NT | FM | FF |
|---|---|---|---|---|---|
| Teaching | 3 | 2 | 1 | 0 | 7 |
| Engineering | 7 | 2 | 0 | 0 | 2 |
| Phys. Science | 4 | 0 | 0 | 0 | 2 |
| Computers | 3 | 1 | 0 | 0 | 1 |
| IT | 3 | 1 | 0 | 0 | 1 |
| Business | 18 | 4 | 4 | 0 | 4 |
| Trade | 7 | 0 | 1 | 0 | 0 |
| Medical Practice | 5 | 2 | 3 | 2 | 8 |
| Medical Support | 5 | 2 | 1 | 1 | 5 |
| Medical Other | 8 | 0 | 2 | 0 | 6 |
| Law | 8 | 4 | 3 | 0 | 3 |
| Performance Art | 1 | 6 | 1 | 0 | 1 |
| Visual Art | 3 | 7 | 2 | 2 | 8 |
| Musical Art | 8 | 4 | 0 | 2 | 2 |
| Media | 6 | 2 | 4 | 2 | 2 |
| Food Service | 2 | 0 | 1 | 0 | 1 |
| Service Industry | 0 | 0 | 1 | 0 | 4 |
| Social Service | 0 | 3 | 3 | 0 | 5 |
| Civil Service | 10 | 1 | 0 | 0 | 0 |
| City Admin. | 1 | 0 | 0 | 0 | 0 |
| Elected Political Office | 1 | 1 | 0 | 0 | 1 |
| Government Service | 4 | 2 | 0 | 0 | 1 |
| International Politics | 4 | 1 | 0 | 0 | 1 |

| | MM | MF | AD-NT | FM | FF |
|---|---|---|---|---|---|
| 4 year college | 51 | 25 | 16 | 10 | 43 |
| 2 year college | 3 | 0 | 1 | 0 | 1 |
| Vocational | 1 | 0 | 1 | 0 | 0 |
| Work | 10 | 4 | 4 | 1 | 3 |
| Military | 4 | 1 | 0 | 0 | 0 |
| Marriage | 3 | 4 | 2 | 0 | 2 |

| | MM | MF | AD-NT | FM | FF |
|---|---|---|---|---|---|
| Accept 1 | 9 | 2 | 2 | 1 | 6 |
| Accept 2 | 4 | 2 | 1 | 0 | 9 |
| Attend 1 | 8 | 2 | 3 | 0 | 4 |
| Attend 2 | 2 | 1 | 0 | 0 | 0 |
| Attend 3 | 2 | 0 | 0 | 0 | 0 |
| Unprepared 1 | 3 | 0 | 2 | 0 | 1 |
| Unprepared 2 | 8 | 3 | 5 | 1 | 5 |