

Institutional Rankings and their Effects on Decision-Making

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Abstract

Institutions of higher learning seek to enhance their standing amongst competing institutions by achieving and maintaining top 25 status in ranking matrices that have been developed to provide (1) informative content and (2) persuasive utilities in order to draw in and retain the highest quality students and faculty. The benefits gleaned from these sources changes according to factors which contribute to the mindset of a user's decision-making habits; identified in this writing as “novice”, “sophisticated”, and “well-informed”. These decision-making temperaments are combined to develop specific decision maps which are unique to each users set of evolving utilities. Examining the formation and evolution of these contributing utilities as it relates to decision-making reveal how the publications are used and ultimately their overall usefulness.

Keywords: university rankings, decision-making, problem-solving, higher education

Institutional Rankings and their Effects on College Decision-Making

Choosing an institution of higher learning may be one of the most significant far-reaching decisions a person makes. It is of utter importance to examine the structuring of decision-making resources necessary to make a “successful” choice. Previous research reveals the existence of a hierarchy of decision-makers (Chen, Ortiz, & Sandoval n.d.; Dearden, Grewal, & Lilien 2014; Galotti 1995; Galotti, Ciner, Altenbaumer, Geerts, Rupp, & Woulfe, 2006). Within that hierarchy, there are research and analysis techniques which are deployed in an effort to categorize the available choices as well as the utilities required to arrive at a desirable decision (Chen et al. n.d.; Galotti 1995; Galotti et al. 2006; Moogan, Baron, & Harris 2014).

For example Galotti (1995) sought to address five major questions: (1) how do students structure a decision? (2) How does a student's' decision map change over time? (3) Does the provision of a specific set of criteria to consider affect subsequent decision maps? (4) How do students integrate information and judgements about factors and alternatives? (5) Does the complexity of a decision map, or correlation of decision maps with formal linear models, predict either greater satisfaction with the decision-making process, or greater success at the end of the process? More importantly is the correlation of individual differences which include academic ability, demographics, and socio-economic measures to the goal of choosing an institution of higher learning?

Students completed seven information forms over the course of a year, with each of the 322 students participating in a maximum of three sessions which assessed their background, self-generated and standard factors and rankings, school impressions, feelings regarding the

decision-making process, application results and a retrospective about the decision-making process.

From this research three distinct groups of academic abilities were identified; “higher”, “average” and “lower” and 23 distinct categories to be utilized to form a decision map. Ultimately the amount of categories being considered does not change over time although the content under consideration becomes more specific or focused over time. Identifying the specific categories necessary to formulate a decision map and presenting the aforementioned categories in a manner which provides a tool to group and narrow the choices is the focus of this research. For a product to be useful it must meet the needs of the user. In this context, providing a tool that is built on the concept of decision-making with the focus on customization and ranking methodologies.

Historically rankings have been apart of the American (Stuart 1995) and World decision-making process (Hazelkorn 2013). Initially they were tools to keep educational scholars and government officials informed about the system (Stuart 1995). The current rank structure has been in place since the 1980’s and has been expanded to include not only US colleges and universities but the top 400 world schools as well (Tolis and Morse 2014). International rankings have also re-enforced significant concepts which must be considered; meaningfulness as it relates to among other indicators, academic quality (Tolis and Morse 2014). Because education can also be considered a driver of economic development (Tolis and Morse 2014) it is critical that rankings provide a meaningful statistical analysis, aid student choice and improve overall performance.

Examining college ranking publications reveal the existence of distinct actors (Dearden, Grewal & Lilien, 2014). Each seek to utilize the rankings with specific goals in mind. Students approaching graduation look to find information on which schools to apply, which schools are best, which will boost their careers the most, which are most aesthetically pleasing, which offer the best party and a myriad of other criteria (Galotti 1995). Universities work to maintain or boost their position in the ranking structure, attract and enroll high quality students, attract and retain high quality faculty, and generate alumni donations. Finally ranking publications have a desire to provide information which aid in the decision-making process as well as increase revenue for the publication (Dearden et al. 2014).

The behaviors of these actors are is worth examining as it drives the ultimate utilization of the data derived from the rankings themselves. Ideally reducing the (negative) impact of strategic profit moves by publications in addition to leveling the information playing field regarding the behaviors of universities and their admissions practices is an element of exploration. Finally increasing the value to those involved in the college search process is the desired end state.

In order to measure these rankings the methodologies must be examined. The measure used by US News and World Report categorizes schools using the following quantitative matrix: reputation (22.5%), retention rate (22.5%), faculty resources (20%), student selectivity (12.5%), financial resources (10%), graduation rate performance (7.5%) and alumni giving rate (5%). These figures are attributed to the number one ranked school and the values are normalized to 100 (99.5%) and ranked in descending order. This single-attribute model is the standard matrix utilized and has been in place since the 1980's although a multi-attribute model is desired which

would help diminish data manipulation (Avery and Levin 2010). Regardless, the matrix rankings take on two roles; informative and persuasive as it relates to the searchers utilities or the criteria the student desires.

Finally the mindset of the decision-maker must be examined. There are volumes written on the categories and classes of decision makers. As the topic relates to this writing those categories are identified as novice, sophisticated, and well-informed (Dearden et al. 2014). These categories take into account “how much” the searcher has invested into the overarching process of “planning to attend college.” Within these categories the following decision-making styles are considered; rational, intuitive, dependent, avoidant and spontaneous (Galotti et al. 2006) and (Chen, Ortiz and Sandoval, n.d.). These styles take into account the intellectual abilities or the manner in which searchers deploy resources when approaching cognitive tasks. Its important to consider the elements of analytics, intuition, indecision, fixed thinking and bias (Chen et al. n.d.). Based on stylistic preferences, decision-makers generate unique maps which are integrated into an analytic plan.

Once a plan has been executed or the problem stated the information search commences. Because the “purchase” of an education is an abstract concept which weighs options under the guise of a purchase vice a service (Chen et al. n.d.). This concept increases anxiety because the risk of arriving at the “wrong choices” is high. Assessing the tangibility of a higher education influences need for increased quality and quantity of information (Moogan, Baron & Harris 2014). Aside from an abundance of quality information a number of contributing factors must be applied (Gorman 1976). Prospective students consider controllable/uncontrollable factors, their own internal characteristics, external factors, academic and social influences. These factors must

be accounted for to effectively provide the foundation for an informed college choice decision (Gorman 1976).

In order to generate an effective decision map (Chen et al. n.d.) a series of interleaved decisions are considered prior to engaging in effective decision-making. This process must be further deconstructed into a series of subproblems which must first be considered: the financial and academic feasibility, when to commence school, what resources to consult, resolving conflicts, categorizing or listing “choices” and ultimately what does “considering” a choice mean (Chen et al. n.d.). Once these questions are resolved a prospective student can realistically consider a school to attend and refine their decision map. *This research proposes to take the influences derived from ranking publications and positively contribute to the decision-making of those involved in the college search process by incorporating the methods outlined into a useful and useable application.*

Successful implementation will provide a resource capable of simplifying data sets across a number of categories ultimately aiding in decision-making from a macro view. It is evident that ranking tools are a part of the decision-making process. Galotti et al. (1995, 2006) has extensively detailed the criteria built into surveys to glean decision-making matrices. The characteristics of (1) breaking down a decision into independent factors (2) determining the relative weights of each factor (3) listing alternatives (4) rating the alternatives on each factor (5) multiplying the ratings by the weights and (6) choosing the alternative with the highest value are the criteria adopted by the multi-attribute utility theory (MAUT) and utilized by Galotti et al. (1995, 2006) provide the fundamental decision-making criteria to be used for the application in design. These methodologies have endured and are an effective basis to build upon. The criteria

derived from MAUT (Galotti et al. 1995) will be expanded upon to provide the criteria necessary to display the most effective information necessary to positively aid a student in their decision-making. Building on the tendency for search applications to have a singular focus or a specific set of criteria is the framework from which development will evolve. Providing an unbiased comparative analysis tool is important as it will aid in developing the decision map necessary to proceed with a desirable choice as it relates to the users aspirations.

The proposed research is is innovative because it combines the elements of rankings and the utilities derived from decision maps into a comparative analytical tool which provides “side-by-side” analysis of the major criteria which ultimately aids the decision-maker in effectively analysing the choices that are presented as they relate to their unique decision-maps.

The goal is increase the choices a user has to consider. Research is abundant along the lines of the impact of rankings, decision-making and choosing an institution of higher learning. The point of importance stems from the applications ability to provide side-by-side analysis without bias. The researcher has no affiliation with any publication or agenda only a desire to provide analysis in-line with the utilities students themselves generate. Continued research will aid in expansion of assets within the application based on information gleaned from insights obtained through research surveys, testing and analysis will provide greater benefit to end user.

Fundamentally, producing an application that focuses on the criteria decision-makers themselves generate ultimately increases ease of use thus influencing usefulness.

Method

Participants

College bound younger adults (5 women, 5 men ranging in grades 10-12) as well as parents/guardians (5 women, 5 men) who are financially responsible for the funding required to attend college will be recruited in the Philadelphia metropolitan area. Ideal student participants will fall into one of the academic categories defined as “higher” average” and “lower”. Ideal parent participants will have children that are actively engaged in the college search or have children already attending college.

Materials and Procedure

The two surveys to be utilized will be electronically administered. Decision-making confidence will be measured with a five point semantic differential ranking scale (1 = *very high confidence* and 5 = *very confidence*). The college match survey will be measured with a four point semantic differential ranking scale (1 *very true* = and 4 = *not true*). The pre and post survey questions will be measured These cross-sectional surveys will provide snapshots of the population providing insights about the decision-making process and the ideal school type match. Pre-survey questions will collect academic related information (5 for student, 3 for parent groups). The post-survey questions for the decision-making survey (3 for both student

and parent groups) will aid the researcher in determining the participants inclination to utilize ranking resources as well as a hierarchy of ranking categories. Each participant will complete the 25 question decision-making survey which will measure confidence in the decision-making process. The resulting categories from the decision-making survey are; *very high confidence, high confidence, average confidence, below average confidence* and *low confidence*. The 80 question college match survey will only be administered to the students only. The resulting categories from this survey are; *very true, sometimes true, not sure* and *not true*. The results from this survey will provide the researcher insights on the participants inclination towards the following categories; *school enthusiasm, participant learner, affection for knowledge, basic academic skills, independence, career orientation, academic/school balance, eagerness for college, social consciousness* and *self-understanding*. These categories will aid the researcher in aligning the participant with a school that best represents the students intrinsic desires.

Procedure

Each survey will be sent to the participants via email as an interactive pdf. Instructions on how to complete the survey will be provided which will allow for the study to be completed in an unmoderated fashion. Participants will complete the pre-survey questions, survey questions and post-survey questions. Both the 25 and 80 question surveys will be completed by selecting one checkbox corresponding to the applicable ranking choice for each question. There will be no time limit associated any of the surveys and participants will be required to complete all the questions. Upon completion, participants will return the survey to the researcher by email for interpretation and analysis.

Results

The desired sample group ultimately was composed of 2 smaller groups; a parent and student group. Each group was composed of 10 participants. The parent sample was composed of 5 males and 5 females ranging in ages 27 to 65 (table C1). Within this group 6 participants were black (5 males and 1 female) 2 white (both female) and 2 latinos (both female). The student group was composed of 4 females and 6 males ranging in ages 14 to 18 in grades 9 through 12 (table C2). Within this group 5 were black (3 male and 2 female) 3 latino (2 male and 1 female) and 2 white (1 male 1 female).

The critical factor that is being explored is one's view of themselves with regards to higher education decision making. 70% of the parent sample responded in a manner consistent with not achieving their highest level of education, although the group displayed a willingness to return to school to realize their academic goals. 40% of the parent sample also hold a Masters level degree while 60% hold Associate level degrees. Comparatively, the national average for adults over 25 holding Bachelors degrees is 30.9%, and 10.9% for Graduate level degrees (Perez-Pena).

Data on grade point averages was collected in addition to degree level aspirations in the student sample. The students overall cumulative GPA was recorded at 2.70 with the female participants holding the higher average with a 2.75 vice the male participants at 2.60. Comparatively, the national average for graduating students is 3.05 with female students edging out their male counterparts 3.10 to 2.90 (US News & World Report). All students desire at least a Bachelors degree with 2 desiring a Masters level degree and 1 a Doctoral level degree.

The first survey was composed of 25 questions measuring the participants confidence with their decision-making. Responses were measured on the following 5-level Likert scale; very likely, somewhat likely, undecided, probably not, and definitely not. Each question was answered once and no questions were omitted. Answers were totaled and compiled in the following manner: 125-110 very high confidence, 109-90 high confidence, 89-75 average confidence, 74-50 below average confidence and 49-25 low confidence. In the parent sample only 1 participant scored in the very high confidence range, while 30% scored in the high confidence range averaging 101.3. 40% of the participants scored in the average confidence range with an average score in this range of 79.5. The final 20% scored in below average range scoring 71. Looking closer at the scores reveal a very interesting trend; the mean score for all the participants in the parent sample was 87.9. The male participants mean score was 92.2 (+4.3*m*) compared to the womens score of 83.6 (-4.3*m*). The median score of the all participants was 83 which was higher than the males median score of 78 (-5*m*) and lower than the women who scored 89 (+6*m*).

The same data was collected on the students and produced the following results: no students scored in the very high confidence, below average confidence or low confidence ranges. 30% scored in the high confidence range with an average score of 98.3 while 70% of the student sample scored in the average confidence range scoring 81.2. Applying the same analysis to the student sample reveal similar results; the mean score for this sample is 86.4. In this group the males scored below the mean 84.8 (-1.6*m*) while the female participants scored 88.75 (+2.35*m*). The median score for this group was also 83 which was lower than both the males median score of 86 (+3*m*) and the females 90 (+7*m*).

The second survey was designed to identify the ideal institution type based on the responses given. Responses were measured on the following 4-level Likert scale; very true, sometimes true, not sure, and not true. Each question was answered once and no questions were to be omitted. Answers were totaled and compiled in the following matrix: AFK (affinity for knowledge), BAS (basic academic skills), CO (career orientation), ASB (academic/social balance), EFC (eagerness for college), SE (school enthusiasm), I (independence), PL (participant learner), SC (social consciousness), and SU (self understanding). Each participant received a battery of scores as displayed in tables D1-D2. There was no significant correlation between high confidence and type of ideal institution of higher learning. Significance was identified as it relates to important factors when choosing an institution of higher learning. Parents ordered importance factors as follows: affordability, academics, crime, facilities, off-campus life, social, school size, and finally athletics. Parents placed significantly more importance (table D1) on aspects that make returning to or commence an education a possibility. Conversely students appeared to categorize elements more susceptible to rankings higher. Academics and athletics ranked highest followed by affordability, facilities, school size, crime, social, and off-campus life (table D2).

Discussion

As originally stated, this researcher set out to determine if there was any significant correlation between decision-making confidence and a willingness to consult ranking publications as an essential part of their individual decision map. The two groups show similar trends regarding decision making although the parent sample had a wider dispersion of participants falling into the lower decision-making confidence categories. This may be attributed to reluctance from past experiences, but this claim must be tested. The student sample scored in

the middle categories with a slightly higher confidence marker. This too could be attributed to the absence of a significant decision-making history, a claim that too must be explored. Age and gender did not appear to skew any results although female participants held a higher number of advanced degrees in addition to having higher aspirations. In order to call this significant the sample pool must be expanded in order to validate that claim.

The college match survey provided insights into what the participants viewed as important in choosing a school intrinsically. Interestingly, the parent sample responded in a manner consistent with long range thinking measuring importance on things like self understanding, independence and academic/social balance. The students saw academic/social balance as most important followed by self understanding and eagerness for college. Because both groups recorded similar trends with regards to importance speaks to the need raised by this researcher for a side by side analysis tool aimed at providing a snapshot of many criteria at once. Galotti et al. (1995, 2006) has clearly outlined that although decision-making develops overtime, adolescents formulate ideas and work through advanced decisions in much the same manner as their adult counterparts. Unfortunately, this research has been unable to prove that a ranking alone is the deciding factor in choosing a school. What this research has been able to prove is that regardless of decision-making confidence both parents and students rely on a number of factors that if presented logically will aid them in arriving at the most desirable end.

References

- Avery, Christopher, and Jonathan Levin. 'Early Admissions At Selective Colleges'. *American Economic Review* 100.5 (2010): 2125-2156. Web.
- Chen, Chi-Kuang, Michelle Ortiz, and Ana Lucia Sandoval. 'Decision-Making Styles In A Real-Life Decision: Choosing A College Major'. Print.
- Dearden, James A, Rajdeep Grewal, and Gary L Lilien. 'Framing The University Ranking Game: Actors, Motivations, And Actions'. (2014): n. pag. Print.
- friedman, samuel. 'Putting A Curious Eye On A High School Ranking System - New York Times'. *Nytimes.com*. N.p., 2014. Web. 7 Oct. 2014.
- Galotti, Kathleen M et al. 'Decision-Making Styles In A Real-Life Decision: Choosing A College Major'. *Personality and Individual Differences* 41.4 (2006): 629--639. Print.
- Galotti, Kathleen M. 'A Longitudinal Study Of Real-Life Decision Making: Choosing A College'. *Applied Cognitive Psychology* 9.6 (1995): 459--484. Print.
- gandhi, lakshmi. 'One University's Push To End Student Loans'. *metro* 2014: 11. Print.
- gandhi, lakshmi. 'This Country Just Made College Free For All'. *metro* 2014: 11. Print.
- Hazelkorn, Ellen. 'Reflections On A Decade Of Global Rankings: What We've Learned And Outstanding Issues'. *European Journal of Education* 49.1 (2013): 12-28. Web.
- McDonough, Patricia M et al. 'College Rankings: Democratized College Knowledge For Whom?'. *Research in Higher Education* 39.5 (1998): 513--537. Print.
- Moogan, Yvonne, Steve Baron, and Kim Harris. 'Decision-Making Behavior Of Potential Higher Education Students'. N.p., 2014. Web. 20 Oct. 2014.

Perez-Pena, Richard. 'Census Finds Bachelor'S Degrees At Record Level'. *Nytimes.com*. N.p., 2015. Web. 21 Mar. 2015.

Stuart, Debra L. 'Reputational Rankings: Background And Development'. *New directions for institutional research* 1995.88 (1995): 13--20. Print.

Tolis, Diane, and Robert Morse. 'How U.S. News Calculated The 2015 Best Colleges Rankings - US News'. *US News & World Report*. N.p., 2014. Web. 7 Oct. 2014.

US News & World Report,. 'Average High School Gpas Increased Since 1990 - US News'. N.p., 2011. Web. 21 Mar. 2015.

Wikipedia,. 'College And University Rankings'. N.p., 2014. Web. 7 Oct. 2014.

Appendix A

Decision-Making Confidence Survey

The Decision-Making Confidence Survey will be administered to both parents and students. The pre-survey questions differ for both sets of participants as the qualitative data being examined is different for both sample groups. The post survey questions provide a tool to draw correlations between decision-making and willingness to utilize ranking publications as information resources.

Table A1 Decision-Making Confidence Demographics/pre-survey parents

Decision-Making Confidence Survey

What is your gender? Male Female
 How old are you? _____
 What is your highest level of education completed? Associates Bachelors Masters Doctoral
 Have you achieved your highest desired level of education? Yes No

- Choose the box that best represents your race?
- White
 - Hispanic or Latino
 - Black or African American
 - Native American or American Indian Asian
 - Pacific Islander
 - Other

Pre Survey Questions	Very likely	Somewhat likely	Undecided	Probably not	Definitely not
1. Indicate how likely are you to return to school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. How likely are you to recommend attending college to others?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. What is the highest level of education you desire?	<input type="checkbox"/> Associates <input type="checkbox"/> Bachelors <input type="checkbox"/> Masters <input type="checkbox"/> Doctoral				

Table A2 Decision-Making Confidence Demographics/pre-survey students

Decision-Making Confidence Survey

What is your gender? Male Female
 What grade are you in? 9 10 11 12
 How old are you? _____
 What is your GPA? Below 1.0 1.0 - 1.9 2.0 - 2.9 3.0 - 3.9 4.0

- Choose the box that best represents your race?
- White
 - Hispanic or Latino
 - Black or African American
 - Native American or American Indian Asian
 - Pacific Islander
 - Other

Pre Survey Questions	Very likely	Somewhat likely	Undecided	Probably not	Definitely not
1. Have you considered going o college after high school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. How likely are you to continue your education after high school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. What is the highest level of education you want to achieve?	<input type="checkbox"/> Associates <input type="checkbox"/> Bachelors <input type="checkbox"/> Masters <input type="checkbox"/> Doctoral				

Table A3 Decision-Making Confidence Instructions

Based on your past experiences, rate how confident you are in completing the following aspects of decision-making when deciding on what college to attend. For each item, check the appropriate answer category:

"very confident," "somewhat confident," "average confidence" "low confidence" or "very low confidence".

Even if you are unsure of an answer, or your response falls somewhere between two categories, check only one answer per question.

Table A4 Decision-Making Confidence Survey

	Very confident	Somewhat confident	Average confidence	Low confidence	Very low confidence
1. Identifying factors which are important to you you when deciding to stay in school.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Getting support from people for your decision so that you stick with it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Being content with your decision even though you have to make compromises	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Getting advice about your decision without giving up control over it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Staying motivated as you gather information and weigh alternatives.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Shutting out distractions and focusing on one goal.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Recognizing and dealing with anxiety.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Table A4 Decision-Making Confidence Survey (continued)

8. Anticipating factors that will prepare you for your decision.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. Identifying resources that can give you helpful guidance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10. Estimating satisfaction from alternative decisions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. Estimating the amount of time each option will require.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. Convincing others to agree with your decision when they initially do not.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. Remaining flexible about your decision when new information becomes available.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. Knowing what you want from a school before choosing it.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. Being content with a decision once its been made.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. Identifying facts about a school before deciding to attend.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. Negotiating with other about your decisions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Being aware of dealines that corespond with your decion.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Creating alternatives so you make the best decision.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. Sticking with your decision once its made.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. Accepting the risks that come with your decision.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. Determining if you have the willingness/ability to accomplish what your decision requires.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. Diagnosing problems that may arise.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24. Remaining satisfied with your decision even if others do not fully agree with you.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. Following a plan to reach your goal.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Table A5 Decision-Making Confidence Post Survey Questions

Post Survey Questions	Very likely	Somewhat likely	Undecided	Probably not	Definitely not
1. How likely are you to consult college rankings as an information source for your college decision?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. What is the likelihood of a schools ranking influencing your decision to apply/attend?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Place the following rankings in order by importance.			
Academics	<input type="checkbox"/>	Dorms/facilities	<input type="checkbox"/>
Affordability	<input type="checkbox"/>	Social life/parties	<input type="checkbox"/>
Athletics	<input type="checkbox"/>	School size	<input type="checkbox"/>
Crime/desireability	<input type="checkbox"/>	Off campus life	<input type="checkbox"/>

Appendix B

College Match Survey

The College match Survey will be administered to both parents and students. The survey seeks to identify the participants affinity to a particular type of institution of higher learning. This survey does not utilize any pre or post survey questions; only demographic information which will be used to draw correlations across both surveys.

Table B1 College Match Survey Demographics Parents

College Match Survey

What is your gender? Male Female

How old are you? _____

What is your highest level of education completed? Associates Bachelors Masters Doctoral

Have you achieved your highest desired level of education? Yes No

Choose the box that best represents your race?

- White
- Hispanic or Latino
- Black or African American
- Native American or American Indian Asian / Pacific
- Islander
- Other

Table B2 College Match Survey Demographics Students

College Match Survey

What grade are you in? 9 10 11 12

What is your gender? Male Female

How old are you? _____

What is your GPA? Below 1.0 1.0 - 1.9 2.0 - 2.9 3.0 - 3.9 4.0

Choose the box that best represents your race?

- White
- Hispanic or Latino
- Black or African American
- Native American or American Indian
- Asian / Pacific Islander
- Other

Table B3 (Instructions)

Respond carefully to these questions about your educational attitudes, goals and perspectives. Keep in mind that there are no correct responses. For each item, check the appropriate answer category

"very true", "sometimes true", "not sure" or "not true".

Even if you are unsure of an answer, or your response falls somewhere between two categories, check only one answer per question.

Table B4 College Match Survey

Item	Very True	Sometimes True	Not Sure	Not True
1. There are several social issues or "causes" in society about which I care deeply.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. I often participate in class discussions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. I enjoy reading.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. I feel I know myself pretty well.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. I'm excited for my college years to begin.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. There are at least three things I can do better than others around me and at least three things others can do better.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. If I don't understand something in class, I typically feel comfortable asking my teacher a question.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. School is fun.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9. I normally am enthused about the classes I am taking.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Table B4 College Match Survey (continued)

Item	Very True	Sometimes True	Not Sure	Not True
10. I can identify at least one school subject or topic about which I am truly passionate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. I believe one of the most important reasons to go to college is to get a job.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. I want to organize myself so I have time for both homework and for out-of-class activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. I love learning for the sake of learning.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14. If I want to do something on a Saturday afternoon, I usually don't need my friends to do it with me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15. I am satisfied with my listening skills in my classes.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16. I can truly say I enjoy school.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17. I will enjoy college a lot more if I can see how my classes apply to real life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. I am interested in and feel comfortable talking about current events.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. Going to college means growing, learning, changing: In other words, it is not just "the thing to do."	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
20. I enjoy learning things on my own (and not just for a class).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
21. I enjoy hearing and discussing other students' ideas in class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22. I see college more as a time for preparing for a career than for discovering my academic interests.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23. A college with a blend of studying and socializing is important to me (even if I'd need to sacrifice my grades a little bit to enjoy college).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Table B4 College Match Survey (continued)

Item	Very True	Sometimes True	Not Sure	Not True
24. Even if my friends weren't there, I would still like school.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25. My friends and I enjoy discussing concepts and new ideas.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26. My parents don't have to remind me to study or do my homework.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27. My English teachers commend me on the quality of my papers and written assignments.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28. Making others happy is one of my primary goals.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29. Most of the time, I feel others understand me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30. On most homework assignments, I do everything that needs to be done.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31. I am comfortable making some decisions without my parents' input.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32. I want to commit at least part of my life to bettering society.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33. Unless I have decided on a career, it will be hard to choose a college.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34. On most days, I look forward to going to school.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35. Assuming there was a campus speaker on an interesting topic I know little about, I'd likely attend.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36. I'm the sort of person who is comfortable going outside of my comfort zone.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
37. There is more to college than going to class and doing homework.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
38. I'm usually good at prioritizing my time to get my studying done.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Table B4 College Match Survey (continued)

Item	Very True	Sometimes True	Not Sure	Not True
39. I usually find class discussions stimulating and interesting.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40. Learning about many different academic subjects – history, English, math and so on – is interesting to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41. I usually initiate my own social activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42. I tend to lose interest if class material is not relevant to the real world.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43. By late summer, I'm eager to go back to school.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44. The college philosophy “work hard/play hard” appeals to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45. I see many benefits in going to college.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46. I seek out ways to demonstrate my concern for political/national/international issues.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
47. I seldom get “tongue-tied” when trying to express myself.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
48. Taking lots of different subjects in college (English, math, history, etc.) is not as appealing to me as focusing on those subjects I like.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49. I usually go beyond class requirements, not because I have to, but because I am interested in the class.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50. I like colleges that emphasize pre-professional programs (pre-med, pre-law, pre-business, etc.).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51. I want to go to college as much as my parents want me to go.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
52. It is easy for me to identify my favorite class in school.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Table B4 College Match Survey (continued)

Item	Very True	Sometimes True	Not Sure	Not True
53. When I know the answer to a question in class, I typically raise my hand.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
54. I do not feel pushed into going to college.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
55. I am not afraid to take a position with which others will disagree.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
56. One of my top goals is to develop a philosophy of life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
57. One of the prime reasons to go to college is to meet people who will be influential in helping me get a job later in life.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
58. I like a challenge, but I don't want to be academically overwhelmed in college.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
59. I can explain why I want to go to college.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
60. I like teachers who encourage me to think about how academic subjects interrelate.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
61. I am ready to begin thinking about my future and planning for college.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
62. In college, it will be important that I have time to spend with my friends.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
63. Learning by discussion is more fun than learning by listening to a teacher lecture.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
64. I read about news, politics and international affairs in the newspaper or on the Internet.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
65. It is not that important for me to look and act like my friends.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
66. When I walk into class, I feel prepared and ready to share what I know.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
67. Thinking about one of my weaknesses is not uncomfortable for me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Table B4 College Match Survey (continued)

Item	Very True	Sometimes True	Not Sure	Not True
68. The thought of going to college doesn't scare me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
69. I'm pretty good at making decisions.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
70. Writing essays and papers is relatively easy for me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
71. Building good rapport with teachers is important to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
72. I am willing to study hard in college, but I also want time to be involved in activities.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
73. As far as intelligence, I want the other kids at my college to be similar to me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
74. I can easily identify the special qualities my friends like about me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
75. If asked, I could easily list two or three words that describe me.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
76. My note-taking skills are good.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
77. I believe I know how to motivate myself to be successful in school.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
78. I am comfortable with my reading speed and comprehension.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
79. I seldom get homesick when I'm away from home for a few days.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
80. I enjoy volunteering my time to help people in need.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Table C1 Parents demographic chart

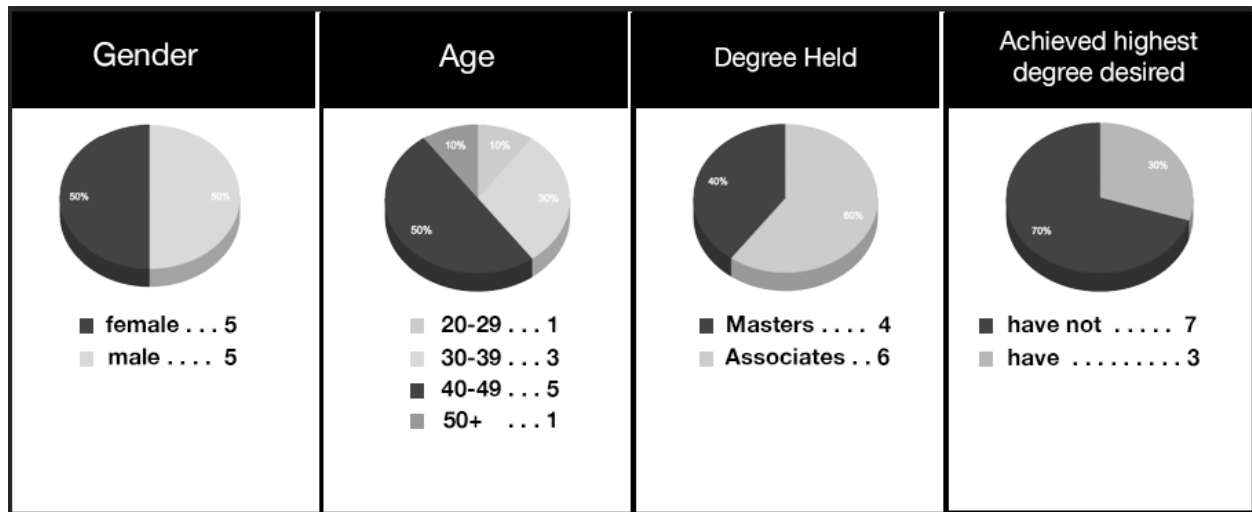


Table C2 Students demographic chart

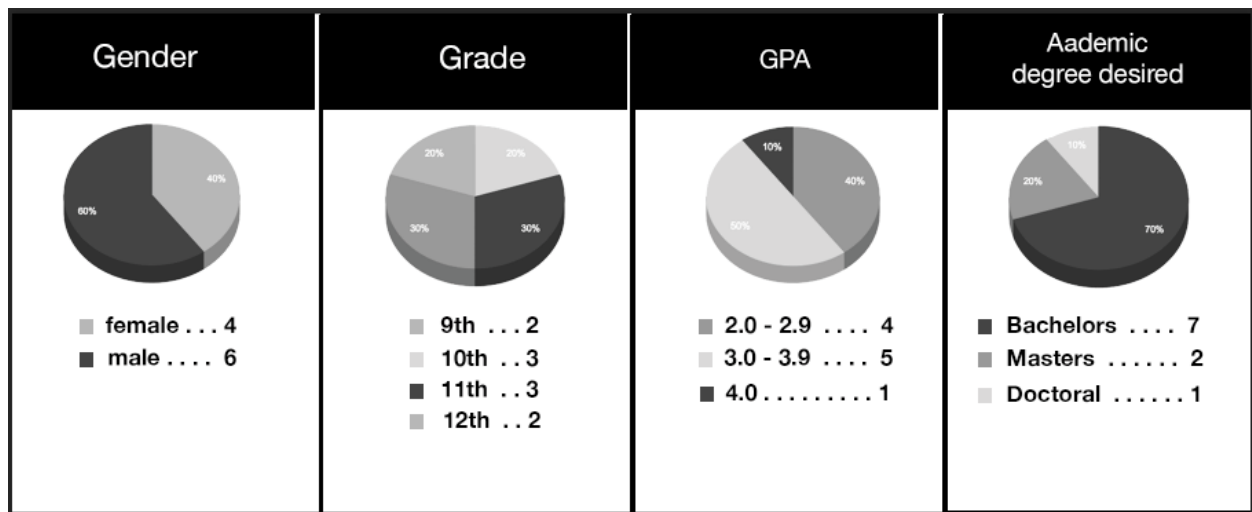


Table D1 Parents college match results

AFK		BAS		CO		ASB		EFC	
0 9 9 6 6 9 9 9	57	6 9 9 6 9 9 9 6	63	0 0 0 0 6 6 9 0	21	6 0 9 0 6 0 6 9	36	9 9 9 0 9 9 9 9	63
0 3 6 6 0 0 0 0	15	0 6 6 3 6 3 3 6	33	6 6 9 9 9 9 0 6	54	3 6 6 6 9 6 6 3	45	3 3 3 0 3 3 6 0	21
0 0 3 6 0 0 0 0	9	0 6 6 0 3 0 3 3	21	9 9 9 9 6 9 0 9	60	6 9 3 9 3 9 3 9	51	3 0 6 0 3 9 6 0	27
6 6 6 9 3 3 0 6	39	3 3 0 6 6 6 6 9	39	6 9 3 6 9 9 0 6	48	9 9 6 6 9 9 9 6	63	6 6 6 6 6 3 6 6	45
9 0 6 9 6 6 6 9	51	6 9 6 9 6 9 6 6	57	6 6 3 0 6 3 6 6	36	0 0 6 3 6 6 9 9	39	6 6 9 9 0 9 9 6	54
9 9 9 9 6 6 6 9	63	9 9 9 9 9 9 9 9	72	0 0 6 6 0 3 9 6	30	9 0 9 0 0 0 9 9	36	9 9 9 9 9 9 9 6	69
9 0 0 6 0 0 0 6	21	6 3 0 6 3 3 3 3	27	9 6 6 6 6 9 0 6	48	6 6 9 9 9 6 6 0	51	0 3 3 0 6 3 6 0	21
9 3 3 9 0 0 6 0	30	3 9 6 6 3 3 3 9	42	6 6 6 6 6 9 0 6	45	6 3 9 9 9 6 9 6	57	6 6 9 6 6 6 6 6	51
9 0 9 9 6 6 9 9	57	6 9 6 9 6 6 9 9	60	0 6 0 0 0 9 9 6	30	9 0 9 0 9 0 6 9	42	9 9 9 9 9 9 9 9	72
9 0 6 6 0 6 0 0	27	0 6 3 6 3 6 3 3	30	6 6 9 6 6 9 0 6	48	9 6 0 9 9 6 9 6	54	6 6 6 0 6 3 6 3	36
SE		I		PL		SC		SU	
9 9 9 9 9 6 9 6	66	9 9 9 3 9 9 9 9	66	9 9 6 9 9 6 9 9	66	9 6 0 9 3 9 6 6	48	9 6 3 9 6 3 9 9	54
6 6 0 3 6 0 0 6	27	3 0 9 0 9 6 6 6	39	6 3 0 6 0 9 3 3	30	3 3 3 3 0 0 0 0	12	6 6 6 0 6 6 3 6	39
0 6 0 0 6 3 3 6	24	0 0 6 6 9 6 6 3	36	6 0 6 0 0 9 6 6	33	0 3 6 0 0 0 0 0	9	6 6 6 3 6 9 9 6	51
3 3 6 6 3 6 0 9	36	6 3 9 6 9 6 0 0	39	6 6 6 3 0 9 6 6	42	6 6 6 3 0 3 0 6	30	6 9 6 0 3 9 6 6	45
6 9 3 6 6 6 9 9	54	6 9 9 3 6 6 0 9	48	9 6 9 6 6 9 9 6	60	9 9 0 3 6 6 6 6	45	6 9 6 6 6 9 9 9	60
6 6 6 9 9 9 6 9	60	9 9 9 3 9 9 9 6	63	9 9 9 9 9 6 9 6	66	9 6 0 9 6 9 9 9	57	6 9 6 9 9 6 9 9	63
0 0 0 3 0 3 0 6	12	9 6 9 0 9 6 0 9	48	0 3 6 0 0 6 3 6	24	6 6 6 0 6 0 3 6	33	3 6 6 0 6 6 9 6	42
6 6 6 3 6 3 0 9	39	9 9 9 6 9 3 9 9	63	6 6 6 6 6 9 6 6	51	6 3 0 0 6 0 3 0	18	6 9 6 0 6 6 9 6	48

Table D2 Students college match results

AFK		BAS		CO		ASB		EFC	
6 0 6 6 0 0 0 6	24	0 6 6 6 6 6 6 6	42	9 9 6 6 9 9 6 6	60	9 6 6 9 9 9 9 9	66	3 3 6 3 9 6 9 0	39
9 9 6 9 3 6 3 9	54	9 6 6 9 6 6 3 6	51	0 6 3 3 6 6 9 6	39	9 6 9 3 9 6 9 9	60	9 9 9 9 9 9 9 6	69
6 0 6 6 0 0 0 6	24	3 6 6 9 3 6 6 6	45	6 6 6 6 9 9 0 9	51	9 9 3 9 9 9 9 6	63	3 3 9 0 6 6 9 6	42
9 6 9 6 6 6 0 6	48	6 9 6 0 6 0 6 9	42	9 9 0 6 3 0 0 6	33	6 6 9 0 6 0 0 0	27	6 9 6 0 6 6 0 9	42
9 0 6 6 3 6 6 9	45	0 6 6 9 6 6 9 9	51	9 6 3 3 0 6 3 3	33	6 6 3 3 6 6 9 9	48	6 3 6 6 6 6 6 6	45
9 9 6 6 6 9 6 0	51	9 9 6 9 0 0 3 9	45	9 6 6 0 9 0 6 9	45	6 6 6 9 9 6 9 9	60	9 9 6 9 6 9 3 9	60
9 6 9 9 6 9 9 9	66	9 9 9 9 6 9 9 9	69	0 9 0 0 0 0 6 6	21	9 0 9 3 0 0 9 9	39	9 9 9 9 9 9 9 9	72
6 9 6 6 0 0 0 0	27	9 6 6 6 6 6 6 6	51	9 6 6 3 9 9 6 9	57	9 6 6 9 6 6 9 9	60	9 3 6 3 9 6 3 0	39
6 6 6 6 6 9 6 0	45	6 9 6 9 0 0 3 9	42	9 6 6 6 9 0 6 6	48	6 6 6 9 9 6 9 9	60	3 9 6 9 6 9 3 9	54
9 9 6 6 6 9 6 0	51	9 9 6 9 0 0 3 9	45	0 9 6 0 9 0 6 9	39	6 6 6 9 9 6 9 9	60	9 9 6 9 6 9 3 9	60
SE		I		PL		SC		SU	
6 6 3 0 6 6 0 9	36	0 0 3 0 9 0 0 3	15	6 0 9 0 6 9 6 3	39	3 6 6 3 0 3 6 3	30	6 6 6 3 6 6 6 3	42
9 9 9 6 9 9 9 9	69	9 9 6 6 9 9 9 3	60	9 9 6 9 9 9 9 9	69	9 6 0 6 6 6 6 6	45	6 9 6 6 6 9 9 6	57
6 6 0 0 6 6 0 6	30	6 0 6 0 6 6 6 0	30	6 3 9 6 0 6 6 6	42	6 6 3 3 0 3 6 6	33	3 6 3 0 3 9 9 3	36
0 9 6 9 6 6 0 9	45	9 9 9 0 9 9 0 9	54	9 9 9 6 9 6 6 9	63	9 9 9 6 6 0 9 6	54	9 9 9 6 6 6 6 6	57
9 6 9 9 6 6 9 9	63	6 6 9 6 9 6 3 6	51	6 0 0 6 9 0 9 6	36	6 6 6 6 6 3 6 6	45	9 6 6 6 9 9 9 9	63
6 9 9 6 6 6 3 9	54	3 0 6 6 0 0 3 3	21	9 9 6 9 6 0 6 9	54	9 6 6 6 0 6 9 6	48	6 9 6 9 9 9 9 6	63
9 9 6 6 9 9 6 9	63	3 9 9 6 6 6 3 9	51	9 9 9 9 9 6 9 6	66	9 6 0 6 6 9 6 3	45	9 9 6 3 9 9 9 9	63
6 9 9 0 6 6 0 6	42	0 0 3 0 9 0 0 3	15	6 9 6 0 6 9 9 3	48	0 6 6 6 0 3 9 6	36	0 6 6 3 6 6 6 3	36
6 6 6 6 6 6 3 9	48	3 9 6 6 0 3 3 6	36	9 9 6 9 6 0 6 9	54	3 6 6 6 0 6 9 9	45	6 9 6 9 9 9 9 6	63
6 6 9 6 6 6 3 9	51	9 0 6 6 0 0 3 9	33	6 9 6 9 6 0 6 9	51	9 6 6 6 0 6 9 6	48	6 6 6 9 9 9 9 6	60