The Tutor Network

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THE RESEARCH QUESTION

"How can we effectively utilize peer-tutoring to ease academic pressure on students in Palo Alto?"

BACKGROUND AND SIGNIFICANCE

Academic pressure is a stubbornly persistent issue in Palo Alto. Students often complain of overwhelming homework and test loads, which affects their personal lives outside of school (Spencer, 2017). Serving on Palo Alto High School's Wellness Professional Learning Committee in 2016 provided new ideas to mitigate the aura of academic pressure in Palo Alto, an experience that has led to this project.

The project's ultimate goal? Combine the technological excellence of Silicon Valley with its bright young minds to establish a powerful "Tutor Network."

Proposed: a website that allows students to contact student tutors in any subject at any given moment at any available location in the area. Peer tutoring has been "demonstrated to be effective in producing cognitive gains" (Fantuzzo, Riggio, Connelly, Dimef, 1989), verifying the positive effect a program like this would have.

The student would be able to pull up the site on any device and request a tutor for the subject at a specific location for a specific amount of time. A network of student tutors will immediately receive this request, and any tutor can respond to take up the job. After the session, the tutee can rate the quality of their tutor and the tutor will be paid by commission. Creating a system that connects tutors with tutees quickly and conveniently will allow for students to receive better academic attention and do better in class, thus accomplishing the task of creating the most supportive learning environment possible in a high stress area.

RESEARCH METHODOLOGIES

"The Tutor Network" involves research that is carried out in an effort to solve an immediate problem (applied), but it is also seeking to add to the existing body of tutoring research (pure).

Academic stress and pressure is a very pervasive problem that needs immediate addressing, which indicates this work is leaning more towards the applied side.

The data utilized during research was more qualitative than quantitative. Fairly open-ended surveys have been used to gather data, which is indicative of qualitative research.

The Survey:
- How are your homework habits on a nightly basis (are you efficient, why or why not)?
- What subjects do you primarily need help on when doing homework?
- If you do need help, who do you primarily go to for help?
- Do you use a tutor?
- If you use a tutor, how did you find the tutor? Is it a tutor at Paly? Was the process of finding a tutor easy?
- How much has having a tutor helped you academically? Have you noticed significant improvements in test scores and academic success after hiring a tutor?
- Would you be willing to pay for one-on-one tutoring from a fellow student (who has taken the class before and has been successful in the class)?
- How much would you be willing to pay per one-hour session?
- Our idea: a website which allows students to match up with other students when they need tutoring, on the go (think: Uber, but with tutoring). Students can request tutors in any subject, whenever they need it, and they will be matched with a student tutor who is proficient in that field. Our primary goal is to make access to high quality tutors efficient and easy. Do you have any initial thoughts or ideas on the concept?
- Would you be willing to use the proposed system?
- If not, what would you change?
- Would you be willing to tutor others in return for getting tutored? In other words, would you be willing to tutor for free given the fact that you would be tutored by others in return (exchange system)?
- What about for community service or extra credit?

The gathering and collecting of data and behavioral patterns from individuals without manipulating variables, and surveys as a primary means of data collection indicate an observational study.

So what exactly was the population of interest? Mainly, students in high-pressure academic environments across the country. A randomly selected sample of students at Palo Alto High School worked well, as Paly is a prime example of a pressured academic location, and functions as an appropriate representation of other students in similar scenarios.

Google Forms and other survey methods were utilized to interact with students from around school, and individual case studies were conducted with students from different grades to get more in depth responses to questions.

ACKNOWLEDGEMENTS / REFERENCES

Works Cited:

Fantuzzo, John W.; Riggio, Ronald E.; Connelly, Sharon; Dimeff, Linda A. (1989). Effects of reciprocal peer tutoring on academic achievement and psychological adjustment: A component analysis. Journal of Educational Psychology, Vol 81(2), 173-177.

Spencer, K. (2017, April 05). It Takes a Suburb: A Town Struggles to Ease Student Stress. Retrieved from https://www.nytimes.com/2017/04/05/education/edlife/overachievers-student-stress-in-high-school-.html?_r=0

DATA ANALYSIS AND RESULTS

Subjects Students Primarily Need Help on for Homework

Math, Science, History, Languages, English, Other

Who Students Go to for Help
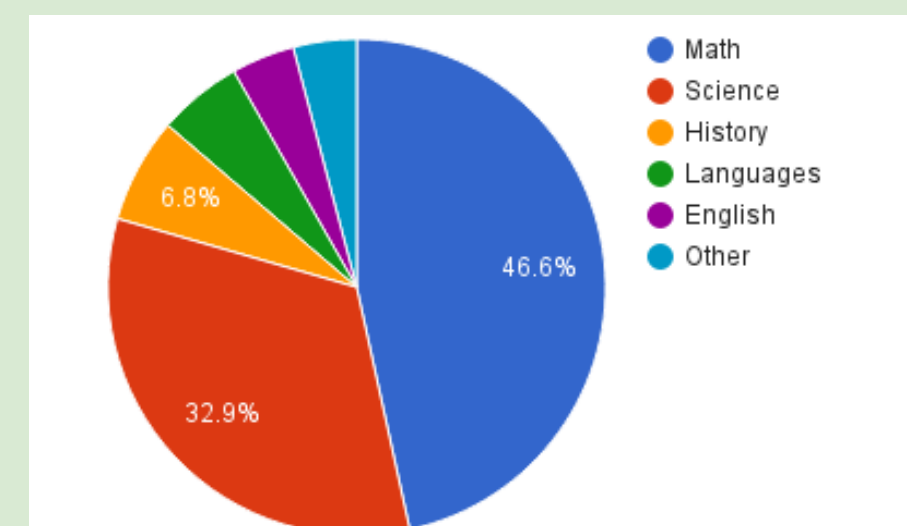
46.6%
of students needed the most help on Math homework, of all subjects
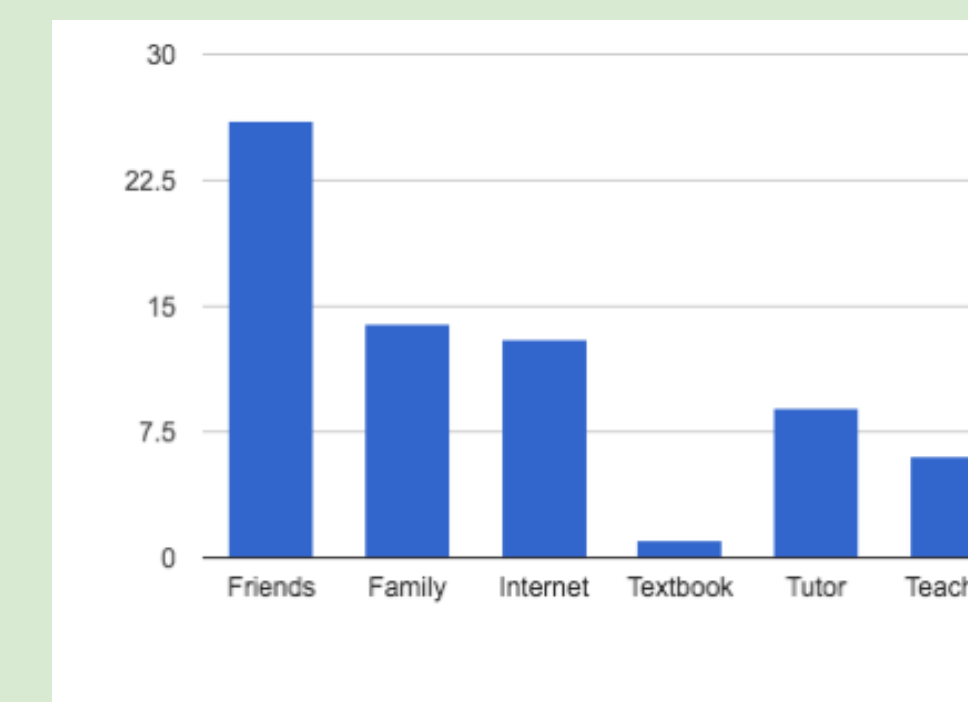
37.7%
of students go to their friends and peers first when looking for homework help; this depicts a need for peer tutors as they are widely counted on by students

THE RESEARCH PROCESS - Lessons Learned

The biggest takeaway from this project was *not* the final result, but rather, the lessons learned about teamwork, product design, and how to navigate through obstacles in the research process itself. I had a very unique experience, and I'd like to personally share my story as a learning experience for other going through similar situations.

In October, it was brought to my attention that a peer at my school was developing a very similar project to mine. I was initially confused and upset, as I considered this peer my friend, but I made it my duty to withhold judgment until I had uncovered all the details about his project. It never helps to rush into conclusions.

I arranged a meeting with this peer, and I learned that he was working on a project through TIE, an independent organization, and that he had simply happened to come up with a similar model. After discussing further, he proposed that we combine forces and form a partnership.

I returned to my mentor, Ms. Xiao, and ask for her opinion on the matter. She gave me some critical thinking points to consider before rushing into a partnership, and I truly believe they helped me informatively assess this first real obstacle I'd encountered in the research process.

Some of her thoughts:
- "Consider the ultimate outcome you want from this project. If you want to be done right after AAR, then perhaps it's better to work solo. If you want to become an entrepreneur with this product, partners can provide a lot to you!"
- "What do *you* want to take away from this experience? You need to remember, that even if your product fails, *learning how to work with others is far more important.*"

In the end, I chose to continue working on my own, but I gained valuable insight into business-world relations through this experience. Every individual provides a skillset, an essential idea to collaborative success.