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CSE 300 - Literature Review

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An Analysis of Research Surrounding the Effects of Social Media on Student Performance

Social media refers to the plethora of technologies dedicated to the sharing of information, ideas, career interests, and other forms of expression via virtual communities and networks. It ranges from feed-driven sites like Twitter and Reddit, where users consume content from different sources all in one convenient web page, to friend networking sites like Facebook and MySpace, where users connect with each other via friends lists. Since its inception in the early 2000s, social media has been undeniably popular among adolescents and young adults; school age people. Its rapid dominance of the youth has startled some communities and has driven a lot of research in the area, specifically the effects it has on student performance. There is a popular divide among the findings: social media is a tool for enhancing student performance, or social media is a distraction and a hindrance on student performance. Most research done in this area is not dated, as social media platforms have only been around for fifteen years, and have seen their boom of popularity in around the last ten. That being said, this analysis will focus on research coming from the last five years in order to stay current.

In a study involving a survey of 108 Saudi Arabian students (Alwagait), researchers attempted to identify a relationship between the number of hours per week spent on social media and GPA scores. The experiment consisted of creating a survey, meant to determine a link

between increasing social media use and a drop in academic performance, and distributing it through a service called “SurveyMonkey,” where it stayed open for three months. The survey was designed to discover 1. Which social networking site was the most popular among Saudi students, 2. What has been the percent change in the students’ social network usage over the past two academic years, 3. How have students’ GPAs changed over time as a result of previous semesters, and 4. Can we determine a link between an increase in social media usage and a decrease in academic performance? The results of the study are described in a scatter plot diagram, where several data points are plotted on one graph, and then a “line of best fit” is determined in order to discover the strength of a relationship between the two variables. Specifically, in this study, the researchers found that the strength of the relationship between hours spent on social media and academic performance was very weak. But, since many of the data points were clustered together, researchers believed that students’ attitudes towards social media was a driving factor.

The Saudi Arabian survey has a few research flaws that should be discussed, such as a relatively small sample size and a bias method of delivery. Since the survey was electronically hosted, it is fair to assume that students who spend more of their time on social media are more likely to come across it, whether it be shared by a friend or sent to them directly. This causes a bias in the sampling of students and could lead to skewed results in the average number of hours students spend on social media each week. Additionally, the article concludes that students say that time management and football (soccer) are more of a negative influence on their academic performance than social media usage. While this may be true (and would require additional

research to disprove), this self reporting mechanism may be counterproductive in the goal of discovering bad habits among students.

Comparing the Saudi Arabian study to an analysis done by Taiwanese researchers (Huang) brings up some interesting points from both articles. The Taiwanese analysis consisted of thirty independent studies all centering around a correlation between social media use and academic achievement, adding up to 21,376 participants. Similarly to the Saudi Arabian study, this analysis measures total time spent on social media sites. In contrast, some studies trying to identify a social media / academic performance relationship measure social media site visiting frequencies. The researcher backs up the validity of the selected measure by citing that many studies who correlated visiting frequency and academic performance found no relationship, while those who used visiting time as a measure found more statistically significant results. While Huang's meta-analysis did find a positive correlation between social media use and academic achievement, it is relatively weak. While this analysis probably has more validity than the Saudi Arabian survey, it is worth noting some concerns about their approach. Since the analysis was of a myriad of studies from several different publication sources, such as journals, dissertations, and thesis, it has an opportunity to run into a publication bias. A publication bias is a statistical phenomena that favors positive results, since successful discoveries of relationships are more likely to be published in journals.

Another study on the effects of social media use on academic performance was done using students from Koforidua Polytechnic, a tertiary school in Ghana (Acheaw). The data the study collected was from 1,578 students obtained through the means of a set of questionnaires. In contrast to Alwagait's study, the questionnaires were first vetted against a different disjoint

group of students from another nearby school. The data produced from the vetting process was then used to improve the questionnaire, leading each survey to produce more conclusive and descriptive results. The data was analyzed using a popular data analysis package called the “Statistical Package for Social Science” (SPSS). This comes in contrast with Alwagait’s and Huang’s studies, each of whom analyzed the data using methods devised by them. While there are pros and cons to both methods, the use of the statistical analysis package probably speaks more to the robustness of their results. Interesting findings from the study include that 93.4% of students sampled had a mobile phone, with 85% of those students having internet access on said phones. A further inquiry into which of these students used social media found that every student with a internet connected mobile device has some form of social media account. Acheaw uses these observations to further validate claims made by other researchers describing the internet’s hold on our daily lives, like how 73% of Americans use social media, and 75% use the internet to make plans and communicate with friends. Comparing this study to Alwagait’s, both researchers gathered their data using a self reporting survey, where students filled out their own answers. While this technique is convenient and robust enough for most circumstances, it relies on the self reflective skills of undergraduate students, which may not be the most reliable of data gathering techniques.

A study done by UK researchers on the effects of online communication and social media on adolescent well being has the potential to be marked as a landmark study (Best). The study has been cited over seventy times, which is pretty significant considering most notable research papers in this area have around thirty citations at most. The study set out to create a comprehensive narrative of research done on the effects of social media on young people

published from 2003 to 2013. The researcher proposes a new framework for synthesizing narratives using concepts from mental health and communications literature. This specific research is interesting because it does not just use college aged students like other studies have. The use of undergraduate students is useful and convenient because researchers often have direct contact with this population through courses they teach or universities they are affiliated with. However, there is a notable difference between the modern high school student and the undergraduate. Undergraduates are most likely less prone to fall victim to social media abuse because they have to learn to be self reliant. Also, students who may have dropped out of their undergraduate program may be more representative of the effects social media abuse can have of the level of success a student achieves.

Like Best's analysis, a study done by Turkish researchers (Kaya) centers around data gathered from 362 high school age students, using Facebook as a case study. Facebook was reported to be the most used social media service by a vast majority of the other studies analyzed, and continues to be the most used social media site today. Because of this, focusing the study on Facebook lets the researchers get a more specific result. This study again used a questionnaire, but instead of asking students their opinions of the effect of social media on everyday life, the questions were designed to judge student's confidence levels and engagement in educational studies. The study concludes with the notion that Facebook has become a tool for students to communicate and organize, effectively increasing the overall productivity of the student population. They also noted that the data showed how students who communicate through social media more are more likely to be engaged in extracurricular activities.

In conclusion, the research surrounding the effects of social media on student performance is relatively inconclusive one way or another. Each study finds something different, from students being distracted by social media and academically suffering, to students using social media to organize and excel. It leads one to believe that the mindset of the student is the deciding factor in how social media affects their performance, because students are self deterministic. Some students adapt better to having a powerful tool at their fingertips, while others fall victim to the predatory and addictive nature of social media. Students who were going to excel from the beginning reap the benefits of such a tool, while others are more likely to get overwhelmed.

Works Cited

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