

After an initial analysis of student's responses, it was evident that class rank and GPA did have a significant impact on course decisions. Figure 1 illustrates the distribution of responses to question 6, which asked, "Did you take any classes this year specifically to improve or maintain your GPA?". Out of the 20 participants, 17 of the students (85%) replied "Yes," while only 3 students (15%) replied "No." Similarly, when the students were asked, "Are there any classes that you wanted to take but couldn't because they would negatively impact your rank?", 16 of the students (80%) replied "Yes," while 4 students (20%) replied "No." (Figure 2). Question 4, which is modeled in Figures 4 and 5, asked respondents, "Did you take any classes this year because you were interested in them and wanted to learn the material?", to which 16 of the students (80%) replied "Yes," while 4 students (20%) replied "No." However, out of the students who responded "Yes," 8 students (50%) could only name one class that they took because they were genuinely interested in it, 6 students (37.5%) could name two classes, and 2 students (12.5%) said they chose most of their classes out of interest.

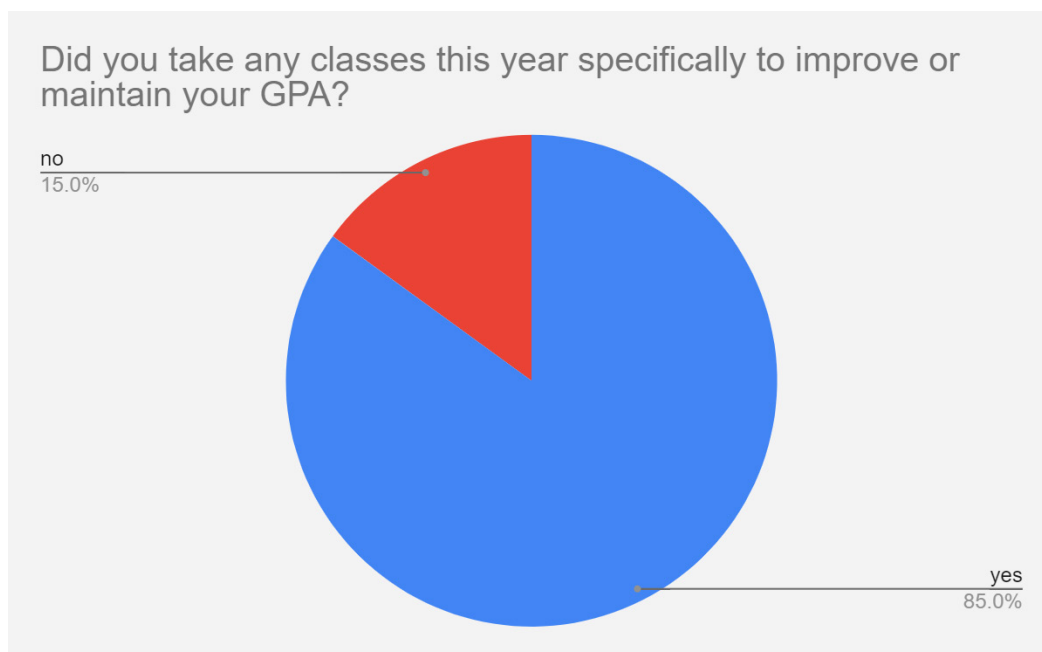


Figure 1. Did you take any classes this year specifically to improve or maintain your GPA?

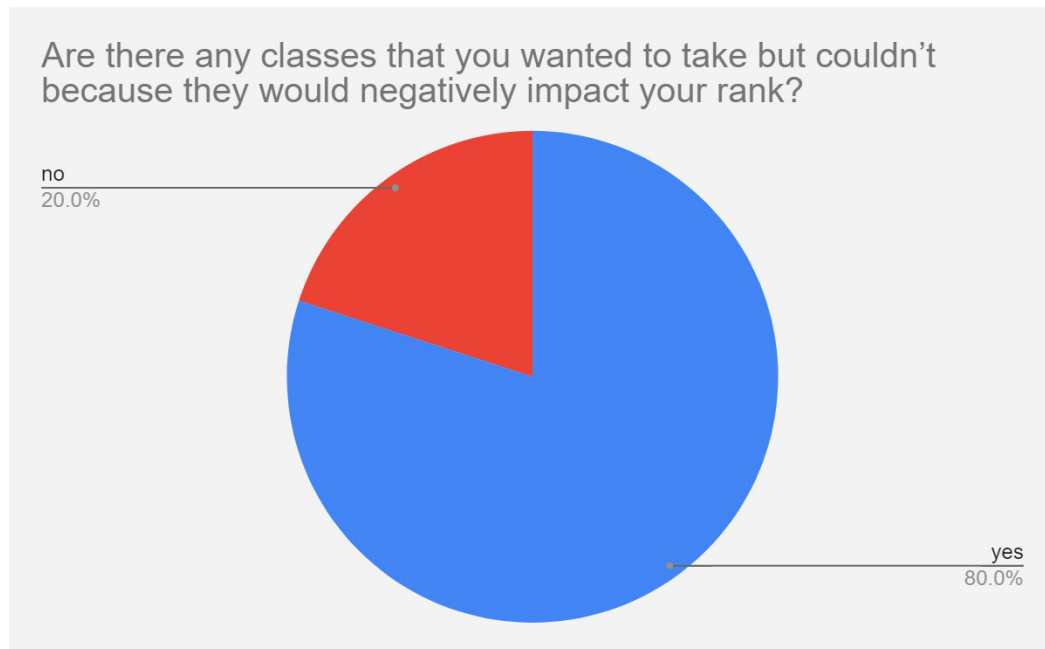
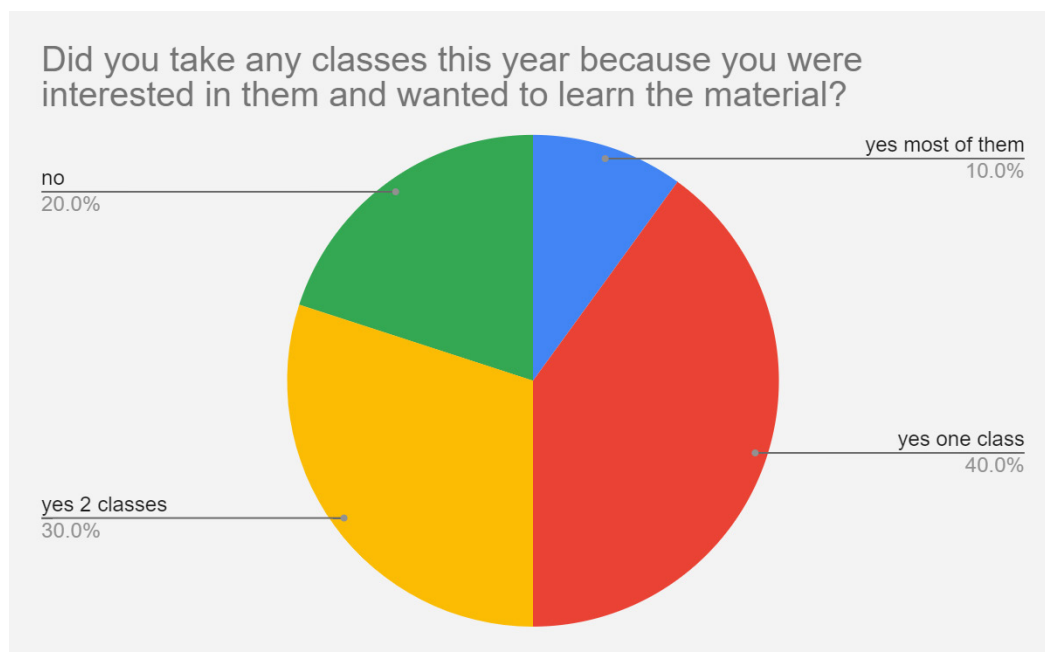
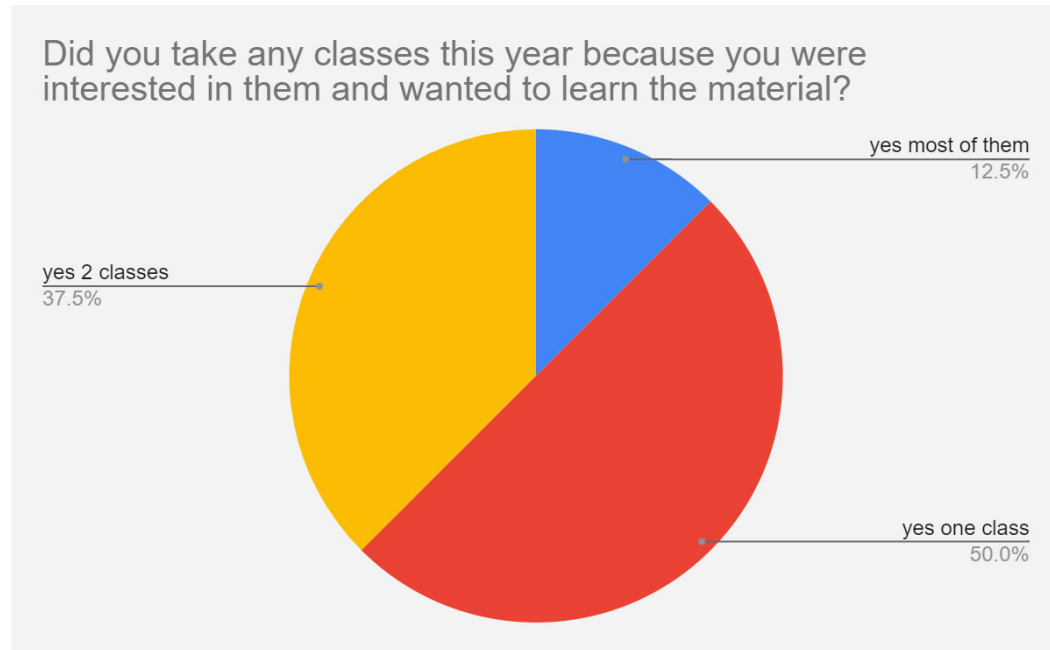


Figure 2. Are there any classes that you wanted to take but couldn't because they would negatively impact your rank?





Shown in Figure 5, responses to questions 4-6 were converted to a numerical scale to determine if there was a correlation between student behavior and their class rankings. “Yes” responses were represented with the number 1, while “No” responses were shown as a zero.

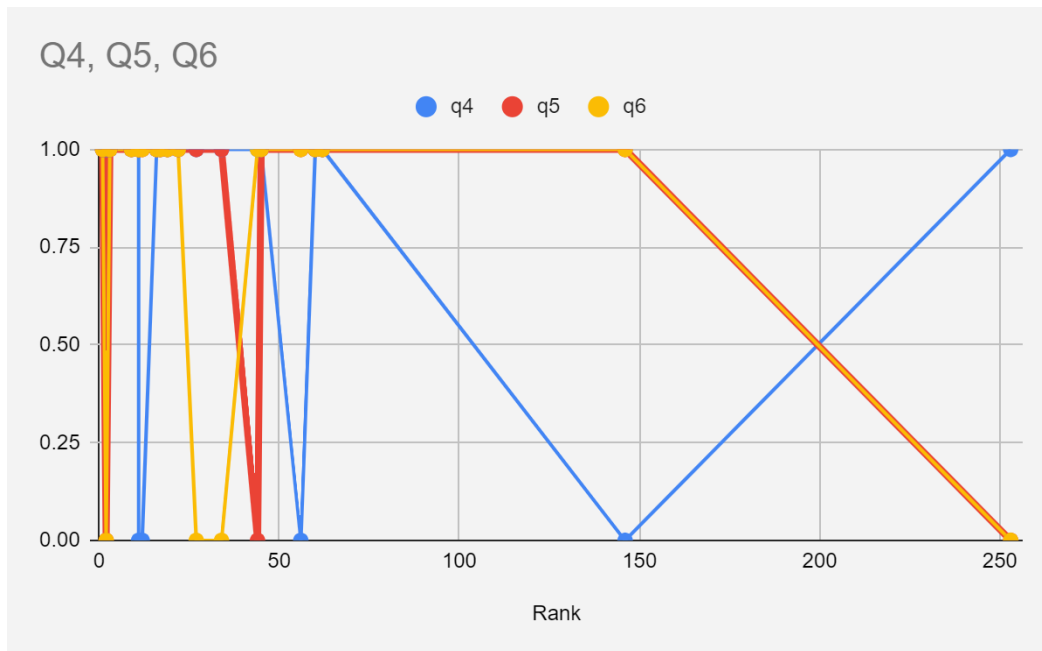


Figure 5 shows no apparent correlation between the participants' positions in the class and their decisions regarding their course choices. "Yes" and "No" responses were relatively scattered throughout the data set, regardless of the students' rankings.

Qualitative Results

Interviews were transcribed and coded using Braun and Clarke's (2006) reflexive thematic analysis approach. Three themes emerged as most prevalent within student responses: class rank as an academic motivator, effects of rank on mental health, and student suggested improvements to the ranking system. Participants are represented in the transcripts according to their rank (ex. a student ranked third will be represented as 3). Two participants were tied for rank number 11, so they are represented in the findings as 11A and 11B.

Class Rank as an Academic Motivator

All 20 students signified rank as a factor to push them to achieve better grades, although opinions on whether it occurred under positive or negative circumstances varied. When participants were asked if they felt their grades would be better or worse if their school didn't release class rank, 14 students responded that their grades would be worse. Many attributed this to the idea that because their rank is an indicator of where they stand in comparison to their peers, not knowing it would take away their drive to succeed academically.

Interviewer (Int): Do you feel like your grades would be better or worse if your school didn't release class rank?

(Student) 9: I think the motivation of seeing my class rank, and then being able to work on it, know how I can improve, or just saying, I like where I'm at, actually helps me, and so I think it might be worse if I didn't know.

11A: Honestly probably worse, because when they release it, it makes me aware of the fact that there is competition and the fact that my grades are somewhat important, so I'm glad that they release it.

Other participants acknowledged that their rank did influence their grades, however their experiences reflected more negatively.

11B: To be honest they might actually be worse because I wouldn't be aware of what other people were making so there wouldn't be a standard to hold myself to. Because right now I get the impression of, if I have a class that's below a 95, well then that's horrible because everyone else in that class has above a 95...So if we didn't have class rank then I actually think that they might be a little bit worse because there wasn't that competitive aspect.

9: I think that because I'm so competitive it's definitely driven me to work harder and get better grades but, although it's helped my grades I think it's had negative impacts elsewhere in my life. Like mental health wise, if I didn't care so much about my class rank I might take some easier classes... and, I mean in turn it honestly might end up hurting my grades.

Accounts of negative experiences or feelings of little motivation tended to increase with students who were lower in the class:

42: It could go either way. Because I feel like rank, for some people, obviously if you're number one you're like freaking out right, because you don't want to lose your spot, but then if you're 199, you're probably like ok well... I'm not gonna get there anyways.

Int: If you could make the ranking system at your school, what would you change?

62: I just feel like it's very degrading especially if you're on the lower half of it, I just think that's really discouraging, and it kind of makes it seem like if you're already low, then there's no point in working my way up, versus if you're up you have this motivation to work your way up, but I just think motivation should come from within the individual not just because of a number.

Int: So you feel like it's motivating for people higher up but degrading for people lower down?

62: 100 percent. Because if you're already at the top, you'll work harder to stay at that top or, you know, push past it. But if you're already at the bottom it's kind of like, I'm stuck here, so there's no really point in moving forward.

Interview excerpts clearly displayed significant discrepancies between high and low ranking students regarding academic motivation, some seeing it as inspiring while others view it as demoralizing.

Influence of Class Rank on Mental Health

Perceptions of stress and anxiety caused by class rank varied among the participants. Some students acknowledged that it caused pressure to a minimal extent but was manageable, while others appeared to be either affected significantly mentally or not affected at all.

Int: Do you feel a pressure to keep up with AP classes?

1: It depends...Sometimes I do, and sometimes it's kind of more- I think I used to, and I think this year, as it's gone on and as it's been stressful, I have kind of relaxed and I've been like, it's not important to have that much anxiety about that.

When asked about ranking competition's effects on their learning, student 3 stated,

3: Ok, first of all I'd say the competition's not, with people, I don't compete with actual people, I really don't care. I'd say the competition is more just trying to be number one for school, so I don't think it's overly pressuring, and it definitely doesn't have an effect, for me at least.

Int: Does the competition weigh on you or does it not really affect you?

27: I mean it affects me a little bit, you know of course I have self-doubts about if I'm smart enough or not but, I don't have mental health issues because of my grades or anything like that.

Other participants reported the academic competition as having a more substantial impact on their mental well-being.

Int: Do you have a high or low breaking point with regards to stress?

9: I'd like to think I'm resilient but, I honestly don't think I am. Or maybe I'm just under so much pressure that I'm already at that edge, but the pressure from school definitely gets to me, all the time...I have unrealistic stress for things like tests and quizzes and I am always thinking about how one grade can affect my entire GPA, like if I bomb a test, that's gonna lower my grade in the class, and a lower grade in the class is gonna lower my GPA, and the lower GPA is going to lower my rank, it's like a snowball effect that's constantly in the back of my mind.

Int: Does class rank put a significant pressure on you?

62: Definitely, but I think it's within the students and it's pretty self-induced. I don't think the teachers are necessarily putting the pressure on us in terms of rank, but I think that the students bring it upon themselves to be very overwhelmed with rank and the students cause a frenzy over it and over what your position is, and that's like a direct correlation to your intelligence, which I just don't think is fair.

Int: Overall do you see rank positively or negatively?

12: Negatively definitely because the amount of time I spend thinking about rank... or whenever our ranks get released every semester, that's all I think about until I get it, and then when I get it sometimes I'm disappointed, sometimes I'm happy, it's scary how much it impacts my mood for the day, and it just causes so much unnecessary stress.

Int: Has competition positively affected your grades or has it had more debilitating impacts?

253: I think it's had more debilitating impacts. I think it's just because, always being stressed out about where, if I'm not doing well, my rank's gonna drop and my GPA is gonna drop, and just being in such a competitive area, it's always stressful, keeping a good grade.

Student Suggested Improvements

Each participant was asked what they would change about their school's ranking system if they had the opportunity. 7 out of the 20 participants mentioned decreasing the weight of 18 extra points on AP and Dual Credit classes, and 4 students suggested releasing rankings to only the top 10% of the class. 4 students expressed that they wanted to participate in more sports and electives without harming their rank, and 2 others said they wished the atmosphere was less competitive. 4 participants said they would make no change to the system, while 3 others said they would get rid of it entirely.

3: I would drop the number of electives that factor into it. I'd keep the 18 points and everything, but that way, you can still take double blocked footballs, or orchestra or whatever you want to take, and not worry about it.

9: I'd say as much as I like the 18 extra points system, and the extra points for honors classes that, if I could change something I would put less weight on those AP classes. I think it is fair to give them the extra points because AP kids do work really hard in those classes, but 18 extra points is an insane amount...and there are incredible classes here

that are on level classes that you don't get extra points for, and so if we weighted those little bit differently to put less emphasis on kids taking those classes for the extra points, I think it would definitely help. The other thing is providing class rank, I think that...if we didn't tell kids their class rank until their junior year...that it would definitely help kids a lot and again deemphasize taking those hard classes just for the points.

45: I would probably do only top 10 or 15%... I definitely like knowing that I could probably get into college today, but I know a lot of kids feel stressed about it.

2: I like the ranking system for our grade specifically. I know that they have a different ranking system for grades below us, but from what I've learned about the younger grade's ranking system, it's difficult for them to, since they don't get their ranks, know what's going on, and so I don't think I would change our ranking system.

253: I think I would just get rid of it.

Interview transcripts revealed differences in student opinions that the quantitative data was unable to provide. Although high and low ranking students behave similarly for the sake of their GPA, their overall opinions about class rank varied greatly.

Discussion

Findings

The goal of the study was to examine the extent to which class rank competition influences student class selection, and to determine if its effect varies among students of different rankings. After analyzing participant responses, it was found that ranking and GPA played a significant role in many student's decisions regarding their courses, specifically in encouraging them to take AP, Dual Credit, and Honors classes. This is confirmed by over 80% of the participants affirming that their rank is a contributing factor in their course selections (Figures 1& 2). Additionally, 11 out of the 20 students cited their rank and GPA as one of their number one considerations when choosing their classes for the school year. These findings support assertions in previous research that class rank promotes performance goal structures and consequently increases competition among students (Ames & Archer, 1988, Bergin, 1995). Although class rank was indicated as an influential factor in course selections, there was no apparent correlation of a higher tendency to choose classes for rank purposes among higher ranked students, disproving the hypothesis (Figure 4). In short, the study reached a new conclusion that a majority of the students consider their rank when choosing their courses, regardless of whether they are high or low ranking.

The qualitative results provided a detailed insight into the personal feelings of the participants regarding the ranking system. Many students referred to their rank as a means to propel academic success and keep themselves accountable for their grades. However, lower ranking students perceived it as having quite the opposite effect; providing that the comparison was somewhat belittling, participants felt that if they were already low ranking, there would be no purpose in attempting to improve. This finding asserts that class rank is constructive to a definitive group of people, but may inhibit work ethic for others. The conclusion is cohesive with the pre-existing research, which found that when competition was stressed, many students quit if they were not winning (Bergin & Cooks, 2000). The same conclusion was also drawn by Monica Kowalski and Andrea Christensen of The University of Notre Dame, who determined that student engagement in competition relied on their perceived level of competence, and competitive environments proved to be detrimental for students with low perceptions of ability (2019). In regards to mental health, the burden of class rank appeared to depend more on the nature of the student's personality rather than their academic status: students who prioritized their grades were more prone mental health issues due to their rank than those who

were less concerned with their standing, and there was no correlation found between students of higher or lower rankings being more prone to issues with mental health. Opinions about an ideal ranking system varied greatly, but a majority of the students expressed a desire to be able to take more sports and elective courses without undermining their rank, but still have some weight added to higher level courses to keep them incentivized.

Limitations

Because of the decision to conduct qualitative interviews, the sample size was limited, and the findings of this research would have greater statistical significance if more of the junior population were able to be interviewed. Although this is a significant limitation, it was also understood that detailed student explanations would be more valuable to understanding student perceptions and meeting the goal of the research. Other limitations included the use of self-reported class rankings, as the validity of these values lies entirely in the honesty of the participants, and the tendency for students to not want to reveal their ranking at all, as it is a sensitive topic for many students who fear judgment according to their academic status. A list of updated rankings of junior students was not available, so the use of their personally reported ranking was necessary in order to quantify the results of the interviews. Students who agreed to participate in the research also tended to be higher up in the class, with 16 out of 20 subjects being above rank 60. There was also a disproportionate number of male versus female participants (5 male, 15 female). If the subject pool contained more variety either through rankings or gender, more comparisons could be drawn between their responses.

Implications

The significance of these findings may be influential in prompting schools to rethink the nature of their class ranking systems and GPA calculation methods. Understanding the effect rank has on student behavior provides the mechanisms needed to adjust weights of various classes to best fit student needs. Class rank continues to serve as a primary predictor of college success, and will likely have a greater influence on college admissions with many universities becoming test optional (Niu & Tienda, 2011). The findings of this research can aid in determining ranking systems that are both accurate representations of ability as well as provide equal benefit to students. Additionally, teachers can emphasize or deemphasize academic competition in order to increase motivation. Knowing that higher performing students are typically going to benefit from academic competition, teachers in higher level AP courses can encourage competition among their students to garner more motivation in their learning. Contrastingly, a teacher in a lower-level course may emphasize the mastery goal set over competition in order to motivate their students to want to learn.

Future Studies

Specificities of this study could be expanded into future research to address a different pool of subjects. A high school with an unweighted ranking system or no ranking system at all could be examined to determine student behavior based on a different set of incentives. Students of different grade levels or from different schools could also be studied to draw comparisons among more variables. Researchers could also go into depth about the different behaviors of males versus females due to academic competition to identify if there is a correlation of responses based on gender. Addressing larger populations of high schoolers will allow for a greater understanding of the influence of class rank and enable educators to implement systems that benefit all student populations.

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References

- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology*, 84(3), 261–271. Retrieved October 4, 2020 from <https://doi.org/10.1037/0022-0663.84.3.261>
- Ames, C., & Archer, J. (1988). Achievement goals in the classroom: Students' learning strategies and motivation processes. *Journal of Educational Psychology*, 80, 260-267.
- Bergin, D. A., & Cooks, H. C. (2000). Academic Competition among Students of Color: An Interview Study. *Urban Education*, 35(4), 442–472. <https://doi.org/10.1177/0042085900354004>
- Bergin, D. (1995). Effects of a Mastery versus Competitive Motivation Situation on Learning. *The Journal of Experimental Education*, 63(4), 303-314. Retrieved October 4, 2020, from <http://www.jstor.org/stable/20152461>
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. <https://doi.org/10.1191/1478088706qp063oa>
- Class rank & college admission. (2020, October 26). Retrieved April 06, 2021, from <https://professionals.collegeboard.org/guidance/applications/rank>
- Gilman, D. A., & Swan, E. (1989). Solving G.P.A. and Class Rank Problems. *NASSP Bulletin*, 73(515), 91–97. <https://doi.org/10.1177/019263658907351515>
- Judith Siegel, C. (1991). Considerations in Calculating High School GPA and Rank-in-Class - Judith Siegel, Carolyn S. Anderson, 1991. Retrieved September 20, 2020, from <https://journals.sagepub.com/doi/pdf/10.1177/019263659107553716>
- Kowalski, Monica; Christensen, Andrea L. (2019). "No One Wants to be a Loser:" High School Students' Perceptions of Academic Competition. *Mid-Western Educational Researcher*, Vol. 31 Issue 4, p389-406. 18p. Retrieved October 4, 2020, from <https://www.mwera.org/MWER/volumes/v31/issue4/V31n4-Kowalski-FEATURE-ARTICLE.pdf>
- Lang, D. (2007). Class Rank, GPA, and Valedictorians: How High Schools Rank Students. *American Secondary Education*, 35(2), 36-48. Retrieved September 16, 2020, from <http://www.jstor.org/stable/41406287>
- Niu, S. X., & Tienda, M. (2011, August 2). Test Scores, Class Rank and College Performance: Lessons for Broadening Access and Promoting Success. Retrieved September 20, 2020, from https://www.researchgate.net/profile/Sunny_Niu2/publication/240310148_Test_Scores_Class_Rank_and_College_Performance_Lessons_for_Broadening_Access_and_Promoting_Success/links/56ab48ca08ae8f386568cabf.pdf