

The Covid Generation: How a Pandemic Changed the Way College Students Relate to Themselves and Others

Arlene R. Lundquist¹, Hannah Johnson², Annalisa Fusco³

¹Psychology Department, Utica University, Utica, NY, USA, alundqu@utica.edu

²Psychology Department, Utica University, Utica, NY, USA, hajohnso@utica.edu

³Psychology Department, Utica University, Utica, NY, USA, annfusco@utica.edu

ABSTRACT: The Covid-19 pandemic's abrupt interruption in high school and college life in 2020 revealed unintended long-term social and motivational consequences for students. Whereas students' protection was imperative, the unintended consequences of such action have led to continued mental health and social development problems. Previous research concluded that the pandemic notably impacted students in five motivation areas: personal, academic, self-care, relationships, and finances (Lundquist and Hayden 2022). This research investigated the continuing impact of the Covid-19 lockdown on the mental health and social development of high school and college students. One hundred forty-four college students, 76.4% of whom were in high school when the lockdown occurred, completed various surveys and psychological instruments designed to measure motivational changes in social and cognitive development, and the extent to which such changes may have influenced participants' abilities to navigate the continuing impact of the pandemic lockdown. Level of perceived stress was the number one indicator of the lockdown's impact on the motivation to initiate and complete tasks, create new and sustain existing relationships, and engage in self-care activities to maintain one's mental health. Individuals who stated that social restrictions during the lockdown were their greatest stressor (the largest group) reported overall higher perceived stress scores and lower cognitive, behavioral, and emotional engagement scores. Understanding the role of social stressors in meeting challenges presented by the pandemic can lead to better decision-making by those who teach and provide support for students during this (pandemic) and other times of transition.

KEYWORDS: Covid-19, Academic Motivation, Adolescent Mental Health, Adolescent Social Development

Introduction

Higher education institutions of the early to mid-20th century indoctrinated students to view instructors as being experts in their fields; thus, students were mostly passive in the classroom (Karp and Yoels 1976). Surveys indicated that students believed their role was to listen and take notes, thus only a small number of students actively participated in the class discussion. Educators teaching class material through their singular perspective, relied upon most of the learning to take place through the absorption of the speaker's knowledge (Ekeler 1994). Later 20th century studies additionally showed that the lecturing method does not match the learning style of many students (Cummins and Griffin 2012).

Research of the late 20th century suggested that active learning methods were more effective in transferring information and facilitating critical thinking than the traditional lecturing method (Goldsmid and Wilson 1980). In response, educators began using more active learning methods in their classrooms. Active learning involves a partnership between student and teacher to create learning opportunities by way of active participation as opposed to passive participation (Benjamin 1991). Additionally, students must take personal responsibility for their education. Agentic engagement requires students to constructively contribute to the flow of the instruction (Reeve and Tseng 2011, 158). Students' observable classroom behaviors, or active participation, affect what teachers do and vice versa. The results of Reeve's (2013) study showed that agentic engagement helps create a motivationally supportive learning environment

depending on the assistance students receive from their teachers. Thus, academic motivation to achieve may be a result of the reciprocal interaction between teacher and student.

Student-centered learning emphasizes the needs of the student, and student agency is a prioritized factor in this method (Granger et al. 2012). In this method, students choose how to learn, and the educator facilitates an optimal learning environment for the varied student learning styles (Lee and Hannafin 2016). Student-centered learning is very much a partnership between student and teacher, and thus, students can acknowledge responsibility for their learning. However, some students have been shown not to exhibit responsible behaviors accordingly (Deveci and Ayish 2017). Teachers and institutions must facilitate student engagement and students' responsibility for their learning (Nejabati 2015). Recent research suggests student-faculty partnership and guided group work increase student responsibility and student-centered learning. Despite the large number of studies that indicated active learning methods were more beneficial to students, traditional lecturing is still prevalent in college classrooms today.

Recognizing the growing lack of participation by students in classes, in early 2017, I re-evaluated the teaching method employed in my classes with a goal of improving overall engagement with the course material. Whereas evaluating course participation had typically been accomplished through class and/or group discussion, such evaluation seemed to favor the more extraverted and/or confident student while neglecting other students in the class. I could not be sure that the participation grade students were earning was really measuring student course engagement rather than just verbal participation. Thus, I implemented a three-pronged method for involving students in class participation. I added several other means for engaging students with the course material and compared the participation and overall course grades from previous semesters with six new semesters. Students completed summary assignments on their own, followed up with small group discussion on the material presented, and finally participated in an all-class discussion, presumably with greater knowledge of the material and perhaps greater confidence in their contributions. The goal was to create greater engagement with the course material over and above verbal class participation.

At the completion of each semester, beginning in spring 2017 and ending in spring 2020, the participants in the first part of the study completed an anonymous Class Engagement and Satisfaction Survey. Participants provided feedback through responses to a variety of questions on the following topics:

- The use of the three-pronged method to evaluate participation and engagement in the class
- The balance of required small group and class discussion in the class
- The reading summary assignments
- The research application assignment
- The design and execution of the subjective, applied examinations
- The required personal reflection papers
- The non-textbook course materials

For each question, they were asked to indicate whether the aspect led to greater participation in the class; greater engagement with the course materials, professor, and peers; or both greater participation and engagement overall. We used the participation grades and overall course grades of students from the academic school years 2014-2016 to compare with those receiving the three-pronged teaching method during the 2017-2020 period to support the feedback comments. The results reported in Lundquist and Haden (2022) indicated an improvement in the participation grades ($t_{(276)} = -.9197$, $p = .36$) and approached significance in the improvement of the overall course grades of students over a three-year period ($t_{(256)} = -1.45$, $p = .0741$). Additional self-report measures indicated great satisfaction with the three-prong method and greater engagement with the course information, in general.

The Lundquist and Haden (2022) study was completed just before colleges and universities nationwide closed their doors to deal with the effects of the Covid-19 pandemic,

leading to a major change in the way students interacted with faculty and peers. The abrupt interruption in high school and college life in 2020 because of Covid-19 has unfortunately revealed unintended long-term social and motivational consequences for a large segment of the population. By the end of March, all but one U.S. public school district had been locked down (Zviedrite et al. 2021). More than 1300 colleges and universities immediately canceled in-person classes or shifted to online instruction (NCSL 2021). Whereas the protection of students was imperative, the unintended consequences of such action have led to significant mental health and social development problems that will be experienced for many years. After a six-month hiatus, students returned to campus, and some began taking courses in person again. It was clear from the start that the previously successful three-pronged teaching method would not be as successful as it had been in the pre-pandemic years.

Based upon the results of the previous Class Engagement and Satisfaction Survey, we designed a survey for a new study to compare students' attitudes and motivation toward learning two years into the pandemic. Because the three-pronged teaching method was built on the traditional tenets of self-determination theory (autonomy, competence, and relatedness), we took the successful aspects of teaching and learning that had been used before the pandemic and asked students to once again rate them after returning to campus. We asked students if they believed their academic motivation had increased, decreased, or was unchanged due to the pandemic. We then asked them to rate several aspects of learning and motivation before the lockdown and two years later. Specifically, we assessed students' attitudes and motivation toward classes and course engagement prior to the pandemic and during the pandemic. The results of the surveys completed after returning to campus revealed student self-reports of decreased academic motivation, decreased engagement with course work, decreased satisfaction with group experiences, decreased perceived usefulness in completing individual assignments, decreased interest in taking courses that are demanding or intellectually challenging, and increased preference for taking exams in a take-home format. These changes seem to primarily point to the concept of autonomy and, possibly, relatedness as areas in need of attention. Students seemed less interested in making decisions on their own and were seeking greater direction in the completion of their course work. Additionally, they reported getting less out of group work and being less satisfied because of the disparate motivation of group members.

The results of this pedagogy project were mixed. The engagement level of students in the six months to 2 years following the shutdown plunged noticeably. The three-prong method designed to engage students at the individual, group, and class levels that appeared to be successful pre-pandemic, did not return to the same positive levels upon students' return, in part due to the impact of the Covid-19 pandemic on student learning. These data suggest that we may be returning to a period of less active participation and preferred passive receipt of knowledge. Since the method has proven successful during a less stress-inducing period, rather than discarding the method altogether, we concluded that temporary changes would be needed before we could once again implement the three-pronged method. We concluded through further data analysis that this drop in motivation was most notably impacted by the pandemic in five specific areas: personal, academic, self-care, relationships, and finances. Thus, the current study was conducted to investigate the continuing impact of the Covid-19 lockdown on the mental health and social development of high school and college students.

Methods

Participants

One hundred forty-four college students completed a series of surveys and psychological instruments. We recruited the students from psychology classes with the only requirement that they be 18 years of age. We informed the students that the study would take approximately 45 minutes

to complete and that the identification number associated with their names would be placed in a raffle drawing for one of four monetary prizes to be awarded at the end of the study.

All participants completed a questionnaire consisting of demographic questions, questions concerning support during the pandemic, and questions regarding the impact of the pandemic since returning to college. Whereas 76.4% of the sample were in high school when the lockdown occurred, the distribution of participants at the time of data collection was comparative across years in college with 23.6% first-year students, 22.9% sophomores, 33.3% juniors, and 23.6% senior students. Nearly all the participants were living at home with parents or guardians during the height of the pandemic (95.8%). Over 75% of participants reported that their parents had at least some college education, with 22% reporting parents with post graduate education. A little more than half of the participants' jobs were disrupted by the pandemic, 24.3% did not lose their jobs, and 26.4% were not working at the time. Questions regarding adequate privacy and adequate academic support suggested that privacy was less of a concern than academic support. Whereas 74.3% reported adequate privacy regarding places to study, only 46.5% felt that they received adequate academic support while away from campus.

We asked participants to rate areas of distress found to be most impactful during the pandemic and areas of motivation continuing to be affected since returning to college. The results may be found in Table 1.

Table 1. Covid-19 Pandemic Fears and Impact 2020 to Present

| Greatest Stress Impact | Percentage |
|------------------------------------|-------------------|
| Fear of the virus and getting sick | 38.2% |
| Social Restrictions | 50.0% |
| Fear of economic pressures | 11.8% |

| Motivation areas negatively impacted | Percentage |
|---|-------------------|
| Motivation to initiate and complete tasks | 77.1% |
| Attend school and perform to the best of my abilities | 72.2% |
| Work (job-related) | 21.5% |
| Initiate new and maintain existing friendships & romantic relationships | 47.9% |
| Engage in self-care | 54.2% |

Materials and Procedures

The instruments participants completed were designed to measure motivational changes in social and cognitive development areas, and the extent to which such changes may have influenced participants' abilities to successfully navigate the continuing impact of the pandemic lockdown. All instruments were completed in an online format using Google forms. Upon submission of the consent form, participants were automatically taken to the demographic information form. Upon submission of the demographic information, participants then completed the Student Course Engagement Scale (Lin and Huang 2017). This instrument evaluated participants' academic engagement in three areas: (1) behavioral engagement or the extent to which students actively respond to learning tasks presented to them, (2) emotional engagement or the extent of affective attitude or emotional reaction to their professors and classmates, and (3) cognitive engagement which was broken down into three subscales of (a) performance engagement or extent to which students do well on tests and other forms of evaluation, (b) interaction engagement or the extent to which students are actively involved in class participation and group discussions, and (c) attitude engagement or the extent to which students contribute to learning activities and attend class.

Upon completion and submission of the student engagement scale, participants were taken to a series of six brief psychological instruments. The six characteristics investigated by

these measures had been reported by students through interviews from our previous work to be problematic due to the abrupt nature of the educational and social interruptions caused by the pandemic (Lundquist and Haden 2022). Participant impulsivity was measured by a 15-item version of the Barratt Impulsiveness Scale (Spinella 2007). Empathy was measured using the 16-item Toronto Empathy Questionnaire (Spreng et al. 2009). We measured locus of control using the Rotter Locus of Control Scale (1966). Stress as perceived by participants during the lockdown and thereafter was measured using the Perceived Stress Scale (Cohen et al, 1983). We measured the need for reinforcement (or external validation) using the Reward Responsiveness and Behavioral Inhibition Scale (Van den Berg et al. 2010), and finally, sociability and participants' sense of self was measured by the Social Self-Efficacy Scale (Grieve et al. 2013).

Results

We first compared our sample with the normative data published for each instrument. We found that our participants were not significantly different in their responses than those individuals who made up the normative dataset on all six brief psychological measures. Whereas our sample exhibited a greater external locus of control, reported higher perceived stress, and exhibited greater empathy toward others, they were a little less responsive to rewards and very similar to the normative sample regarding impulsivity and social self-efficacy scores. Our sample was significantly different from the normative data in three engagement areas (see Table 2).

Table 2. Comparisons of Sample to Normative Data Regarding Academic Engagement

| Instrument | Sample Mean (S.D.) | Norm Mean (S.D.) | z score | p value |
|--|--------------------|------------------|---------|---------|
| Overall Student Course Engagement Score (2018) | 10.15 (4.16) | 15.47 (2.67) | -1.989* | p < .05 |
| Skills Engagement Score | 3.01 (1.45) | 3.53 (.83) | -0.625 | p > .05 |
| Emotional Engagement Score | 2.81 (1.60) | 3.58 (.85) | -0.902 | p > .05 |
| Cognitive Engagement Overall Score | 4.69 (2.30) | 8.36 (.99) | -3.72* | p < .05 |
| Performance | 2.19 (1.14) | 3.11 (.89) | -1.027 | p > .05 |
| Interaction | 1.40 (1.11) | 2.92 (1.02) | -1.49 | p > .05 |
| Attitude | 1.29 (1.27) | 3.44 (1.07) | -1.996* | p < .05 |

Analysis of the survey and psychological test results indicated that level of perceived stress was the number one indicator of the lockdown's impact on the motivation to initiate and complete tasks. Those participants who had significantly higher perceived stress scores reported being less motivated to start or complete academic tasks ($t_{(142)} = 3.405$, $p < .001$) and reported having more difficulty creating new and sustaining existing relationships also ($t_{(142)} = 2.666$, $p = .009$). Participants who reported less engagement in self-care to maintain their mental health had significantly higher impulsivity scores ($t_{(142)} = 2.261$, $p = .025$), significantly higher perceived stress scores ($t_{(142)} = 3.979$, $p < .001$), significantly lower skills engagement (behavioral engagement) scores ($t_{(142)} = -2.53$, $p = .013$), emotional engagement scores ($t_{(142)} = -2.39$, $p = .018$), and cognitive performance engagement scores ($t_{(142)} = -2.327$, $p = .021$). Finally, fifty percent of the sample identified social restrictions placed on them because of the pandemic as their greatest stressor. These students had negatively and significantly lower behavioral, emotional, and cognitive engagement scores when compared with the other two groups (Fear of Getting Sick and Fear of Economic Pressure).

Discussion

This study was the middle of three studies investigating the immediate and longer-term impact of the Covid-19 pandemic's interruption on the education of high school and college students. The first study (Haden and Lundquist 2022) concluded that pre-pandemic students were ready to be more involved in their education, thus creating more engagement opportunities inside and outside the classroom reportedly improved their academic motivation. The swift onset of the pandemic significantly interfered with the motivation levels of students, thus when they returned to campus, these methods no longer produced the same results. Increased anxiety over the pandemic with its real health consequences, social restrictions, and potential economic pressures changed the way students interacted with professors and peers alike. Several studies conducted since 2021 have found that the lockdown with its social restrictions, feelings of isolation, and learning in online or hybrid modes all resulted in increased levels of anxiety and perceived stress and reduced academic motivation levels among college and high school students (Martin 2021; Usher et al. 2021; Gunaydin 2022).

This study attempted to further delineate specific factors that could be identified and provide the foundation for developing support programs for students who struggled during the lockdown and continue to struggle as they ineffectively transition back to traditional learning in traditional environments or navigate new environments with new modes of learning. Understanding the role of social stressors in meeting challenges presented by the pandemic can lead to better decision-making by those who teach and provide support for students during this (pandemic) and other times of transition. Students who were already less well equipped to handle stress were worse off during the pandemic and in the two years since returning to a form of normalcy. Adolescents' and young adults' social lives were disrupted during a time when the social environment, including school, family, and recreational settings, played a significant role in their development. When there is a discrepancy between adolescents' and young adults' needs and their social environments, negative psychological outcomes such as decreased motivation and self-perception are likely to occur (Dahl et al. 2018). The restrictions of the pandemic lead to both separation from others and from the self. Adolescence and young adulthood are important times in the development of a healthy self-concept and for learning to interact with others effectively in society (Crone and Fuligni 2020). One-half of the respondents in this study reported a decrease in self-care activities, which directly affected their willingness to be behaviorally, emotionally, and socially engaged with others (and society) upon returning to school. The interruption in this process will have continuing effects on students as they transition from high school to college and may impede their achieving skills such as emotional self-regulation and the ability to adapt to challenges, important skills for transitioning to adulthood.

The results of this study suggest that increased perceived stress and its accompanying anxiety have interfered with the foundational period for learning these skills. Colleges and universities must develop strategies for facilitating the transition from high school to college for students who were significantly affected by the challenges of the pandemic. We must create programs that address such questions as why starting and completing tasks have become so difficult, why students have become more impulsive in their thoughts and actions, and why passive learning has appeared to have crept back into higher education as the preferred learning style of students. The third part of this study will address these and other student identified issues through focus groups. These focus groups will provide both social support for students as they will have a place to discuss the impact of the pandemic on their motivation and will provide researchers and educators with the tools to construct programs such as The Covid Generation College Transition Project that will effectively and positively influence students transitions to college and its demands.

References

- Benjamin, Ludy. T., Jr. 1991. "Personalization and Active Learning in the Large Introductory Psychology Class." *Teaching of Psychology* 18: 68–74. https://doi.org/10.1207/s15328023top1802_1.
- Cohen, Sheldon, Tom Kazmarck, and Robin Mermelstein. 1983. "A Global Measure of Perceived Stress." *Journal of Health and Social Behavior* 24(4): 385-396. <https://doi.org/10.2307/2136404>.
- Crone, Eveline A., and Andrew J. Fuligni. 2020. "Self and Others in Adolescence." *Annual Review of Psychology*, 71:447-469. <https://doi.org/10.1146/annurev-psych-010419-050937>.
- Cummins, Molly . W., and Rachel A. Griffin. 2012. "Critical Race Theory and Critical Communication Pedagogy: Articulating Pedagogy as an Act of Love from Black Male Perspectives." *Liminalities: A Journal of Performance Studies*, 8:85–106. <http://liminalities.net/8-5/love.pdf>.
- Dahl, Ronald E., Nicholas B. Allen, Linda Wilbrecht, and Ahna B. Suleiman. 2018. "Importance of Investing in Adolescence from a Developmental Science perspective." *Nature* 554: 441-450. <https://doi.org/10.1038/nature25770>.
- Deveci, Tanju, and Nader Ayish. 2017. "Engineering Students' Well-being Experiences: A Freshman Year Experience Program." *Transformative Dialogues: Teaching & Learning Journal* 9(3):1-20.
- Ekeler, W. J. 1994. "The Lecture Method". In *Handbook of College Teaching: Theory and Applications*, edited by Keith.W. Prichard and R. McLaran. Sawyer, 85–98. Westport, CT: Greenwood Press.
- Goldsmid, Charles. A., and Everett K. Wilson. 1980. *Passing on Sociology*. Washington, DC: American Sociological Association Teaching Resources Center.
- Granger, Ellen M., Todd H. Bevis, Sherry A., Victor Sampson, and Richard L Tate. 2012. "The Efficacy of Student-centered Instruction in Supporting Science Learning." *Science* 338(6103):105–08. <https://doi: 10.1126/science.122370>.
- Grieve, Rachel, Kate Witteveen, G. Anne Tolan, and Brett Jacobsen. 2013. "Development and Validation of a Measure of Cognitive and Behavioural Social Self-efficacy". *Personality and Individual Differences* 59:71-76. <http://dx.doi.org/10.1016/j.paid.2013.11.008>.
- Gunaydin, Deniz. 2022. "The Impact of Social Problem-Solving Skills on Academic Motivation by Means of Covid 19 Fear." *Current Psychology* 41:427-436. <https://doi.org/10.1007/s12144-021-01665-z>.
- Karp, David. A., and William C. Yoels. 1976. "The College Classroom: Some Observations on the Meanings of Student Participation." *Sociology and Social Research* 60(4):421-439.
- Lee, Eunbae, and Michael J. Hannafin. 2016. "A Design Framework for Enhancing Engagement in Student-Centered Learning: Own It, Learn It, And Share It." *Educational Technology Research and Development* 64:707–734. <https://doi.org/10.1007/s11423-015-9422-5>.
- Lin, Shi-Hui and Yun-Chen Huang. 2017. "Assessing College Student Engagement: Development and Validation of the Student Course Engagement Scale." *Journal of Psychoeducational Assessment*, 36(7):694-708. <https://doi.org/10.1177/0734282917697618>.
- Lundquist, Arlene R, and Sarah C. Haden. 2022. May, 2022. "From Passive Participation to Active Engagement....and Back. Paper presented at the *Annual Meeting of Association for Psychological Science*, Chicago, IL.
- Martin, Andrew. 2023. "University Students' Motivation and Engagement During Covid 19 Pandemic: The Roles of Lockdown, Isolation, and Remote and Hybrid Learning." *Australian Journal of Education* 67(2):163-180. <https://doi.org/10.1177/00049441231179791>.
- National Conference of State Legislatures (NCSL), March 15, 2021. "Public Education's Response to the Coronavirus (COVID-19) Pandemic." Accessed March 1, 2022. <https://www.ncsl.org/education/public-educations-response-to-the-coronavirus-covid-19-pandemic>.
- Nejabati, Najva. 2015. "The Effects of Teaching Self- Regulated Learning Strategies on EFL Students' Reading Comprehension." *Journal of Language Teaching & Research* 6(6):1343-1348. <http://dx.doi.org/10.17507/jltr.0606.23>.
- Reeve, Johnmarshall. 2013. "How Students Create Motivationally Supportive Learning Environments for Themselves: The Concept of Agentic Engagement." *Journal of Educational Psychology* 105(3):579–595. <http://dx.doi.org/10.17507/jltr.0606.23>.
- Reeve, Johnmarshall., and Ching-Mei Tseng. 2011. "Agency as a Fourth Aspect of Students' Engagement During Learning Activities." *Contemporary Educational Psychology* 36(4):257–267. <https://doi.org/10.1016/j.cedpsych.2011.05.002>.
- Rotter, Julian. B. 1966. "Generalized Expectancies for Internal Versus External Control of Reinforcement." *Psychological Monographs: General and Applied* 80(1):1–28. <https://doi.org/10.1037/h0092976>.
- Spinella, Marcello. 2007. "Normative Data and a Short Form of the Barratt Impulsiveness Scale." *The International Journal of Neuroscience* 117(3):359-368. <http://dx.doi.org/10.1080/00207450600588881>.
- Spreng, R. Nathan, Margaret C. McKinnon, Raymond A. Mar, and Brian Levine. 2009. "The Toronto Empathy Questionnaire: Scale Development and Initial Validation of a Factor-Analytic Solution to Multiple

- Empathy Measures.” *Journal of Personality and Assessment* 9(1):62-71. <https://doi.org/10.1080/00223890802484381>.
- Usher, Ellen L. et al. 2021. “Psychology Students’ Motivation and Learning in Response to the Shift to Remote Instruction During Covid-19. *Scholarship of Teaching and Learning* 10(1). <http://dx.doi.org/10.1037/stl0000256>.
- Van den Berg, Ivo, Ingmar H.A., Franken, and Peter Muris. 2010. “A New Scale for Measuring Reward Responsiveness.” *Frontiers in Psychology* 1: Article 239.
- Zviedrite, Nicole, Ferdous Jahan, Sarah Moreland, Faruque Ahmed, and Amra Uzicanin. 2024. “COVID-19-Related School Closures, United States, July 27, 2020-June 30, 2022.” *Emerging Infectious Diseases*. 30(1):58-69. <https://doi.org/10.3201/eid3001.231215>.