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Community college students’ perspectives on online learning during COVID-19 and factors related to success

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ABSTRACT

This study’s purpose was to research trends in community college students’ perceptions of online learning during the COVID-19 pandemic and discover factors related their success, applying this knowledge to nursing education. Community college students (N = 156) participated in the 34-question survey that asked questions related to perception of online learning, instructor involvement and characteristics of success. Thirty-seven percent of the sampling self-reported that they were nursing or allied health majors (N = 51). A Bonferroni post hoc analysis showed strong differences between the students’ ages and self-reported characteristics of success. A Pearson two-tailed correlation showed a correlation between instructor support and ease of transition to online learning (r = .312, p < .000) as well as a correlation between instructors providing ways to effectively communicate, promoting a deeper connection during the online learning transition during the pandemic (r = .729, p < .000). An ANOVA showed a strong correlation between students who had not taken online courses before the pandemic and attitudes about how much was learned compared to live classroom formats (F(1,145) = 9.697, p = .002). There were no significant differences in nursing students’ responses and other majors regarding the transition to online learning or personal characteristics indicative of online learning success (Nursing SD = .738; N on-nursing SD = .781). Nursing students reported similarly of the correlation between instructor involvement/communication, deadline flexibility, student effort, and online learning success (Nursing SD = .964; Non-nursing SD = .967). Previous research was reinforced but more studies should be done to identify ways educators can enhance online learning to address student concerns.

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Introduction

In late 2019, the world was faced with a public health crisis brought on by the development of the Novel Coronavirus 2019 (COVID-19). What started as an isolated outbreak in the Wuhan Province of central China in late 2019, quickly spread to encompass the entire globe (Pokhrel & Chhetri, 2021). This virus spread to the United States by early 2020 causing local and state governments, businesses, and educational institutions to make rapid and drastic changes to ensure the health and safety of the population.

Community colleges experienced an immediate and long-term impact of COVID-19 related closures and safety measures as enrollment continued to drop. On average, community colleges experienced a near 10% reduction in enrollment from spring 2020 to spring 2021; nearly double the enrollment reduction 4-year institutions faced (Saul, 2021). In addition to rapid enrollment reductions putting a strain on the industry, students who continued courses during the pandemic were faced with additional challenges which included learning in the online environment for which they were not prepared. This study explored self-reported student characteristics that helped them be successful as well as the relationship between instructor support, the perceived feeling of connection, and ease of transition to online learning during the COVID-19 pandemic.

Background

COVID-19’s Effect on Higher Education Learning

Higher education was affected drastically by the spread of the novel virus COVID-19 across the world. Many state and public health agencies and governments like Illinois responded to the Centers for Disease Control’s (2020) recommendations by declaring state emergencies and issuing executive orders to stay at home unless deemed an essential service to the community (State of Illinois Coronavirus Response, 2020a). Restore Illinois, a plan developed by the state of Illinois and the Illinois Department of Public Health described the phases by which mitigations would change as the number of cases of
Charities of Students at Community Colleges

Community colleges play a very important role in higher education as an opportunity for the first generation, lower-income, and non-traditional students to receive an undergraduate education. Community college students tend to be older and have more family obligations than university students (Ma & Baum, 2016). The American Association of Community Colleges (2021) stated the average age of students was 28 years with 29% first generation, 15% single parents, 72% of students working part-time, and 62% reporting working full-time while attending school.

When considering that many community college students are older than traditional college students, have family obligations, and work part- or full-time, these students were especially at risk for stressors due to the COVID-19 pandemic. Some students were employed in essential jobs during the pandemic such as healthcare which may have impacted their learning.

Online Learning and Characteristics of College Student Success

Online learning has come with challenges which has continued throughout the years in the community college setting. This pedagogy has depended heavily on the student’s ability to maintain an internet connection, download information, and listen to either taped or live instruction. Students have reported a disconnect from the instructor, lack of communication and decreased engagement due to the structure of online learning (Mather & Sarkans, 2018; Thor & Moreau, 2016; Travers, 2016). Thor and Moreau (2016) stated that, for years, colleges have approached online learning utilizing a craft model in which the instructor was the only source of course information, electronic resources and student question thereby promoting a lack of quality and student support. In addition, many community college students who enrolled for online courses have been attracted to the convenient schedule that minimized live attendance but were unprepared for the lack of structure and decrease in active engagement that occurs through live communication (Travers, 2016).

Characteristics of successful online learning at the college level have included the ability to communicate through writing and the personal attributes of self-motivation and self-discipline. Successful online students can set a consistent schedule and establish a study environment free of distractions (University of Illinois Springfield, 2020; Quesada-Pallares, Sanchez-Marti, Cali-Ciraso, & Pineda-Herrero, 2019; University of Cincinnati Online, 2020; Mount Hood Community College, 2020).

Nursing Students and Online Learning Success

Through a literature review spanning 2005-2015, Jowsey, Foster, Cooper-Ioelu, and Jacobs (2020) studied the key factors that influence pre-licensure nursing student success in blended or online learning environments. From this literature review, two distinct themes that signified success included active learning and communication. According to students, active engagement was enhanced by instructors who offered varied learning activities with flexible schedules despite the distance barrier between instructor and learner (Owens, 2009, as cited in Jowsey et al., 2020). Nursing students stated that their confidence increased when the students perceived that they were valued or had a sense of belonging (Ballantyne, 2012, as cited in Jowsey et al., 2020). Communication barriers were minimized when instructors employed open and timely feedback with students (Dorrian & Wache, 2009, as cited in Jowsey et al., 2020). Jowsey et al. (2020) concluded that online communication must be even more purposeful than traditional formats of learning with clearly defined expectations for students, so they feel connected, confident, and motivated to learn.

When considering how the pandemic had impacted higher education, common characteristics of the community college students, and what factors indicate online learning success before COVID-19, the researchers sought to determine common explored self-reported factors that helped students be successful during the pandemic. Was the transition to online learning experienced by nursing students similar or different from other disciplines? What other factors, either personal or demographical, may have played a role in online learning success? The study also explored the relationship between instructor support, the perceived feeling of connection, and ease of transition to online learning as reported by students during the pandemic.

Methods

Study Design, Participants and Setting

This project used a cross-sectional, descriptive, correlational study design to determine community college students’ perceptions of online learning during the COVID-19 pandemic. Participants were solicited from five southern Illinois community colleges within a 75-mile radius. Two community colleges accepted the opportunity for students to be involved in the study. A Freedom of Information Act (FOIA) request was sent to one of the two community colleges to obtain student emails for all students resulting in 2,445 emails. All students regardless of area of study and enrolled part-time or full-time, were allowed to participate in the study at the first college. The second community college volunteered to participate in the research study by posting the link to the survey in the online learning platform specifically used by nursing students who were either enrolled part-time or full-time. Seventy-seven nursing students were accessible for the study through this method. A convenience sampling of 2,522 students was invited to participate in the study between the two community colleges. After participant information was collected, the study was reviewed and approved by the researcher’s human subjects committee.

At the conclusion of the survey period, 156 students participated, resulting in a 6.2% response rate. Time was an issue in execution of the survey because, either students who had been impacted by changes related to COVID-19 had graduated previously, or the students would be graduating with 2-year degrees by May 2021. The researchers concluded that completing the study before May 2021 graduation was important to measure impact of COVID-19.
that they were allied health or nursing majors. According to major, 51 students or 37.5% of the sampling reported.

Questions varied from the perception of online learning and instructor involvement to self-perception questions related to academic performance and characteristics of success. Student participants received two emails regarding the study in March 2021: an introductory email sent mid-March explaining the purpose and process for the survey with an option to be removed from the mail list. A 2-week follow-up email was sent for the 4-week survey. Researchers' contact information was provided as well for questions or concerns. After collecting student responses, the data were analyzed using SPSS 26 software. Analysis of Variance and Pearson correlations were utilized to determine significant findings as to self-reported characteristics of success with online/blended learning during COVID-19.

Table 1

| Ethnicity                  | Frequency | Percent | Valid percent | Cumulative percent |
|----------------------------|-----------|---------|---------------|--------------------|
| Valid                      |           |         |               |                    |
| Caucasian                  | 131       | 86.2    | 86.2          | 86.2               |
| Hispanic or Latino         | 5         | 3.3     | 3.3           | 89.5               |
| Black or African American  | 8         | 5.3     | 5.3           | 94.8               |
| Asian/Pacific Islander     | 1         | .6      | .6            | 95.4               |
| Other/Prefer not to answer | 7         | 4.6     | 4.6           | 100.0              |
| Total                      | 156       | 100.0   | 100.0         |                    |

Table 2

| Gender         | Frequency | Percent | Valid percent | Cumulative percent |
|----------------|-----------|---------|---------------|--------------------|
| Valid          |           |         |               |                    |
| Male           | 41        | 26.3    | 26.3          | 29.5               |
| Female         | 107       | 68.6    | 68.6          | 98.1               |
| Other/Prefer not to answer | 3 | 1.9 | 1.9 | 100.0 |
| Total          | 156       | 100.0   | 100.0         |                    |

Data Sources/Measurement

There was a total of 34 questions on the survey which included 9 demographic information questions that included their school, area of study and if they were currently taking online courses. The survey consisted of 14 opinion questions on online learning, and 11 questions addressing personal characteristics of success. Nineteen opinion questions were structured with a Likert scale with two questions as a multiple response format. A Cronbach's Alpha was conducted on these Likert questions that resulted in $\alpha = .765$ which indicated an acceptable consistency. Likert scale questions were on a scale of one to five, ranging from strongly disagree to strongly agree. First, the researchers sought to determine if ease of transition varied among different fields of study at the community college level with a focus on allied health or nursing. Second, the researchers wanted to explore self-reported factors related to successful online learning during the pandemic. Based on the programs available at the sample colleges, "allied health" programs included the following: nursing, surgical technology, dental assisting, radiology technician, and medical technology. Of particular interest was nursing student perceptions within this group. Other programs/fields of study included occupational/technical programs, business, math or science or technology, humanities or social science or communication, education or arts; and "none of the above" designation. Students were allowed to skip any other questions or discontinue participation at any point during the survey and were informed of these guidelines via email as well as signing survey consent.

Questions varied from the perception of online learning and instructor involvement to self-perception questions related to academic performance and characteristics of success. Student participants received two emails regarding the study in March 2021: an introductory email sent mid-March explaining the purpose and process for the survey with an option to be removed from the mail list. A 2-week follow-up email was sent for the 4-week survey. Researchers' contact information was provided as well for questions or concerns. After collecting student responses, the data were analyzed using SPSS 26 software. Analysis of Variance and Pearson correlations were utilized to determine significant findings as to self-reported characteristics of success with online/blended learning during COVID-19.

Research Questions and Variables

This study sought to identify and measure relationships between participants’ attitude and perception of online learning during the COVID-19 pandemic. Data were compared between allied health students and non-allied health students for significant differences. A second research question sought to determine if demographic factors or students’ perceptions of being self-motivated, a self-starter, self-
disciplined, confident with technology, distraction resistant, and the ability to work ahead contributed to the overall success of students learning online during this time. Eleven survey questions asked about characteristics of student online education success: “It is easy to motivate myself”, “I am a self-starter”, “I have self-discipline”, “I am confident in my computer skills”, “I am easily distracted”, “I will work ahead when given the opportunity”, and “It is easy for me to motivate myself to complete my work”. These variables were then aggregated into one variable “characteristics of success” creating an average score. Lastly, the researchers looked for correlations between student perceptions of online learning success, previous online learning, teaching style, and interaction. Five questions were analyzed to determine if the variables of teaching style, ease of transition, previous experience with online learning, and instructor interaction influenced student perception of online learning due to COVID-19.

Results

All students, regardless of demographic factors or area of study, reported similar experiences with online learning. In comparing the responses by allied health students to other disciplines at the community college related to success online during the pandemic, there was no statistical difference between these groups. Overall, 62.7% of students agreed or strongly agreed that they were self-starters, 71.8% stated that they were self-disciplined, 89.7% were committed to completion, 71.3% were willing to spend hours on schoolwork while 52.2% stated that they were easily distracted. A descriptive analysis of nursing compared to non-nursing students indicated similarities in responses between nursing students and non-nursing students when reviewing these self-reported characteristics of success.

An ANOVA was conducted to study the factors of age revealed a significant difference among groups. A Bonferroni post hoc analysis revealed differences among subgroups between students age ≥31 and 20–24-year-olds related to being self-starters (MD = −.787; CI = −1.49 to −.09; p = .018), commitment to complete (MD = .552; CI = .05 to 1.05; p = .021), and willingness to spend hours on schoolwork (MD = .715; CI = .07 to 1.36; p = .021). There was a statistically significant difference among students 31 years and older, 18–19-year-olds (MD = .885; CI = .23 to 1.54; p = .002) and 20–24-year-olds related to how easily they can be distracted (MD = 1.076; CI = .41 to 1.74; p = .000).

Pearson two-tailed correlation was used to determine relationship between the variables. When comparing ease of transition to online learning and instructor support, there was a statistically significant correlation between the two factors (r = .312, p = >.000). A strong correlation was found between instructors providing ways to effectively communicate, making clear expectations, feeling of instructor connection, and promoting ease of transition to online learning (r = .729, p = >.000). Again, the descriptive analysis indicated that nursing students showed no statistical difference in their responses in instructor communication, setting clear expectations and promoting an easier transition to online learning.

This supports Jowsey et al. (2020) findings that active engagement with the instructor and well-defined course parameters enhances overall student success. When choosing methods that could have improved the transition to online learning, the two top methods involved access to the entire course to work ahead as much as possible (50%) and flexibility with due dates and submissions (49.3%). Correlations revealed a significant result between students’ reported time spent studying and knowledge gained (r = .611, p = >.000) as well as time spent studying and ease of motivation (r = .582, p = >.000). A negative correlation (r = −.659, p = >.000) was found between the student variables of “I gain the same knowledge” and “face-to-face interaction is key”. It appears the nexus of the previous finding may lie in the difference in perspectives of those students who have voluntarily taken an online course before the pandemic. An ANOVA was performed on the variables “Voluntarily taken online courses prior to COVID” and “Face-to-face interaction is key” (F(1,145) = 9.697, p = .002) indicating a significant difference among students who had voluntarily taken an online course previous to COVID and those who had not. A correlation was conducted between “Voluntarily taken online courses prior to COVID” and “Opinion of online learning” (r = .414, p = >.000) resulting in a moderate association.

Further investigating “voluntarily taken prior to Covid” and student “characteristics for success” an ANOVA was conducted yielding significance (F(1,145) = 5.29, p = .023 indicating those who had previously taken an online course understood the potential requisites required for a positive learning outcome. In short, students who had not taken an online course before the pandemic did not think they learned as much online as they could have in a face-to-face course.

Discussion

The results of this study coincide with previous research related to student success with online learning. Bdair (2021) reported similar findings regarding perceptions from student interviews in August 2020 when online learning due to COVID-19 had occurred for 2 semesters. The students in Bdair’s (2021) study stated how online learning was flexible and had allowed them to direct their own learning but also expressed concern that online learning was less motivating at times. Regardless of discipline, community college students reported similar insights to their experiences during the past year dealing with learning affected by a pandemic. Although the number of nursing students was small (N = 26), the response averages were closely aligned with non-nursing majors (Nursing SD = .738; Non-nursing SD = .781) for characteristics of online learning success. Self-motivation and self-discipline were keys to student achievement online. The students reported similar findings to researchers who had explored online learning prior to COVID-19 (Jowsey et al., 2020). Student engagement and motivation depended to a large extent on instructor communication. Communication that is purposeful and clearly defined between instructors and students illustrates the instructor’s commitment to quality learning and a feeling of connection.

The experience with online learning this past year for all students at the community college did differ according to age and previous experience which also coincides with previous research (Mather & Sarkans, 2018; Travers, 2016). Students ≥31 years of age had differing perceptions than other age groups regarding characteristics of success and challenges. The students who had previous experience with online learning and the students who were asked to adapt for the first time due to COVID-19 had differing perceptions of levels of learning achievement when taking online courses.

The results also support research that identified keys to online learning success which can be generalizable to all disciplines including nursing. The characteristics of success for college students and specifically, nursing students, bear similarity to the findings of this research study: the ability to communicate, be self-motivated, be

| Table 3: Age range. |
|---------------------|
| Frequency | Percent | Valid percent | Cumulative percent |
| Valid   | 18-19  | 47       | 30.1     | 32.4     | 32.4     |
|         | 20-24  | 44       | 28.2     | 30.3     | 62.8     |
|         | 25-30  | 18       | 11.5     | 12.4     | 75.2     |
|         | 31-over| 36       | 23.1     | 24.8     | 100.0    |
| Missing | System | 11       | 7.1      |          | 100.0    |
| Total   | 156    | 100.0    |          |          |          |
self-disciplined, ability to set a schedule, and actively engage with instructors (Nursing SD = .964; Non-nursing SD = .967)

Some ways to enhance communication online and promote engagement include discussion boards, forums, interactive videos, and course evaluation responses. Waddington and Porter (2021) suggested promoting a Community of Inquiry (COI) model to online learning as a way of building a sense of community with nursing students. The COI model, applied by Garrison (2017) for online learning from work by John Dewey in 1916, included three elements that help promote learning: a social presence, a cognitive presence, and a teacher presence. Waddington and Porter (2021) developed an online two-week nursing seminar promoting a COI through a purposeful introductory discussion board that promoted informally social presence, a discussion board centered around the content of the seminar (cognitive presence) as well as teacher responses (teacher presence). The researchers concluded that when facilitators promote more open dialogue through purposeful open-ended questions while also participating themselves, and allow flexibility with the direction of discussion online, more active engagement is encouraged. An intentional approach to promoting social presence, cognitive presence, and teacher presence can address some of the students' concerns with learning illustrated in this study.

Conclusion

There were some limitations to this study. The 6.2% response rate was lower than the usual rate to reflect confidence in findings. Extending the time of the survey may have negatively impacted the results since college students impacted by COVID-19 were graduating within two months of study completion. Students who did respond may not completely represent the wider population which may have produced sampling bias although Hendra and Hill (2019) question whether a higher response rate makes a significant difference. The timing of this study, during a pandemic, may have been one of those times.

This study was a snapshot of time in which online learning was a necessity for higher education. Based on the significant correlations among all community college students from this study, nurse educators can glean useful knowledge about student perceptions of learning online as well as factors related to success. Across all disciplines, educators can collaborate for solutions to common challenges such as online education. More studies should be done to identify ways educators can enhance online to address some of the concerns highlighted from this pandemic.

Declaration of Competing Interest

The authors declare that they have no relevant or material financial interests that relate to research described in this paper.

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