

Time Management Challenges Faced by Online Students in Higher Education: A Mixed-Methods Study

Jemal Bedane Halkiyo, Arizona State University

Jemal Halkiyo is a Ph.D. Student in Engineering Education and Graduate Teaching Assistant at Arizona State University. Mr. Halkiyo has a Bachelor of Science from Hawassa University, and a Master of Science degree in Civil Engineering from Arba Minch University, both in Ethiopia. Mr. Halkiyo uses mixed methods to study his primary research interest: engineering education equity and inclusivity among diverse student groups: international and domestic undergraduate students in focus in the United States higher education institutions. In addition, Mr. Halkiyo is interested in broadening the participation of engineering education in Ethiopian universities to increase the diversity, inclusivity, equity, and quality of Engineering Education. He studies how different student groups such as women and men, rich and poor, students from rural and urban, and technologically literate and less literate can have quality and equitable learning experiences and thrive in their performances. In doing so, he focuses on engineering education policies and practices in teaching and learning processes, assessments, laboratories, and practical internships. Mr. Halkiyo has been teaching different Civil Engineering courses at Bule Hora University, Ethiopia, where he also served as a department head and conducted various research and community projects.

Abdisa Bedane Halkiyu, Bule Hora University

Abdisa Halkiyu is a Senior Lecturer in the Computational Science and Engineering College at Bule Hora University. He holds a Bachelor of Science degree in Applied Physics and a Master of Science degree in Astronomy, both obtained from Jimma University in Ethiopia. With a focus on learning theories, Mr. Halkiyu employs mixed methods to investigate how individuals can enhance their knowledge and skills through diverse learning approaches. His research primarily centers on creating equitable learning experiences in undergraduate physics and engineering education. In addition to his teaching and research endeavors, Mr. Halkiyu has actively engaged in various community service projects.

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Abstract

This mixed-methods study explores the time management challenges encountered by online students in higher education, focusing on how these challenges vary across demographic groups such as age, gender, ethnicity, and educational background. As online course enrollments continue to grow, it is essential to understand these challenges to design effective instructional interventions that improve the educational experience. Data were collected through quantitative surveys (n=59) and qualitative, semi-structured interviews (n=4) to investigate students' experiences, strategies, and obstacles to time management in online learning environments. The study identified six factors that significantly affect online students' time management skills: (1) lack of sufficient time management training, (2) challenges in balancing school, work, and personal life, (3) limited knowledge of effective time management strategies, (4) inadequate planning, (5) insufficient self-assessment or self-reflection, and (6) a tendency toward procrastination. Results reveal significant variations in time management practices across demographic groups of students. Adult learners and students from diverse ethnic backgrounds faced distinct challenges related to work-life balance, familial responsibilities, and resource accessibility, which hindered their ability to allocate sufficient time for online coursework. Consequently, these challenges often lead to procrastination and reduced engagement in learning activities. These findings underscore the complex interplay of time management skills with demographic factors and emphasize the need for tailored support services and interventions that address the unique needs of diverse student populations. The study recommends that educators

implement proactive time management training, provide technical support, and the development of a supportive learning environment before the commencement of online courses. Furthermore, future research should evaluate the effectiveness of specific interventions, such as a three-hour workshop on time management skills for online students prior to the start of courses, measuring their impact on completion rates and exam performance. Addressing these challenges is crucial for enhancing academic outcomes and improving the overall experience of online students.

Keywords: Time management skills, online learning, higher education, mixed-methods, demographic variations, procrastination

1. Introduction & Background

In recent years, significant transformations have occurred in the landscape of higher education, predominantly due to the rise of online learning environments that offer both opportunities and challenges for students. With increasing flexibility and accessibility, institutions are urged to develop effective strategies to support online students. According to the National Center for Education Statistics [1], enrollment in online courses surged to nearly 35% of all higher education students in the fall of 2020, primarily due to the COVID-19 pandemic. While online education provides unprecedented flexibility, it introduces unique challenges, particularly in the realm of time management. This study investigates the time management challenges faced by diverse online students, focusing on variances across demographic groups such as age, gender, ethnicity, and educational background.

Effective time management is crucial for academic success, particularly within online learning contexts where students must often self-regulate in the absence of structured face-to-face interactions [2], [3], [4]. The self-directed nature of online education requires students to not only master content knowledge but also develop efficient time management strategies. Research

shows that inadequate time management skills correlate with increased stress, diminished academic performance, and higher dropout rates [5]. Therefore, understanding the specific time management challenges faced by online students is important for crafting suitable interventions and support frameworks.

Time management entails a range of skills, including planning, prioritization, goal-setting, and self-monitoring, alongside the ability to balance competing demands from work, family, and academic obligations [3], [6]. The complexity of student life suggests that diverse contextual factors influence individual time management abilities. For example, age and life experience significantly affect time management practices, with adult learners often balancing multiple commitments that may impede academic progress [6], [7]. Furthermore, social and cultural elements—such as ethnicity and gender—impact students' access to resources and support networks, influencing their time management strategies [7], [8]. Despite the growing literature on time management within higher education, a gap persists in understanding how these challenges differ among diverse demographic groups in online learning settings. Previous research often focused on general trends or specific age groups, neglecting the interplay of demographic variables in shaping students' time management experiences [3], [7], [8]. While quantitative studies have identified common time management problems, qualitative insights into the lived experiences of online learners are limited, constraining our understanding needed for effective interventions. This study employs a mixed-methods design to bridge this literary gap by integrating quantitative surveys and qualitative interviews, offering a holistic view of the time management challenges faced by online students. The focal research question guiding this inquiry is: What specific time management challenges do diverse online students encounter in higher education, and how do these challenges vary across different demographic groups (e.g.,

age, gender, ethnicity, and educational background)? This question is particularly relevant to institutions striving to create inclusive and supportive environments that recognize the unique needs of their online student populations.

2. Theoretical Framework

This investigation is framed by two theoretical constructs that explore the connections between time management, student engagement, and academic success. Self-Regulated Learning (SRL) theory posits that students who effectively manage their time can set goals, monitor progress, and adjust strategies to overcome challenges [9]. In online learning contexts, SRL becomes critical due to the absence of immediate feedback from instructors and peers, making the understanding of demographic influences on self-regulated learning essential for recognizing the specific challenges diverse learners face. Additionally, Tinto's Model of Student Retention underscores the significance of institutional support and personal commitments in influencing students' academic persistence [10]. This model is especially pertinent when considering the time management challenges experienced by students from various demographic backgrounds, as minority students frequently encounter unique pressures related to cultural expectations and responsibilities, complicating their capacity to allocate time for academic pursuits [11]. By situating this research within these theoretical frameworks, the study aims to enhance understanding of the dynamic interplay among time management, student demographics, and academic success in online learning environments.

3. Methodology

This study employs a mixed-methods approach, integrating quantitative surveys with qualitative interviews to provide a comprehensive understanding of the time management challenges faced by online students. The quantitative component identifies trends and patterns among online

students, while the qualitative aspect offers deeper insights into their lived experiences and specific time management needs.

3.1 Participants and Data Collection

Participants were drawn from one of the Southwest public research universities in the U.S., focusing on online students enrolled in EDT 502: Design and Development of Instruction. A mixed sampling method was applied to ensure diverse representation. Convenience sampling was utilized for the survey, while purposive sampling guided qualitative interviews.

Four participants were selected from the survey pool based on their willingness to share insights and the reported time management challenges they faced, ensuring diversity in demographics. Each semi-structured interview, lasting approximately 40 minutes, was conducted via Zoom to accommodate participants' schedules. Interviews were recorded, transcribed, and analyzed, focusing on key themes such as time management experiences, challenges in balancing academic and personal commitments, perceptions of instructional support, and suggestions for enhancing time management resources. The demographic characteristics of participants selected for the interview are presented in Table 1.

Table 1. Participants’ Demographic Characteristics Selected for Interviews

Participant Anonymized Name	Age	Education Level	Study Program*
Jianyi	27	Pursuing PhD in Engineering	Anonymized
Cynthia	26	Pursuing a master’s in engineering	Anonymized

Jazmine	34	Pursuing a master's in engineering	Anonymized
Jessica	29	Pursuing both MS and a PhD in engineering	Anonymized

* The academic programs of study for participants have been anonymized to ensure confidentiality.

For quantitative data collection, the structured online survey was administered to a broad base of participants, allowing for variability in demographic factors, including age, gender, ethnicity, educational background, and work experience. A priori power analysis was conducted using G*Power (version 3.1) to determine the necessary sample size. The analysis indicated that a sample of $n = 34$ participants would be sufficient to detect a medium effect size (effect size = 0.3, $f = 0.3$) with a desired power of 0.95 and a significance level of $\alpha = 0.05$. The final sample size for this study comprised 59 participants, exceeding the sample size recommended by the power analysis and thus providing sufficient data for statistical analysis. Further, the structured online surveying served as the primary tool for quantitative data collection and included multiple sections designed to gather comprehensive information. The first section captured demographic information, including participants' age, gender, ethnicity, educational background, work settings, and prior experiences with time management techniques. The second section assessed participants' time management skills, utilizing validated scales that measure self-reported time management abilities alongside their knowledge and use of various techniques, such as S.M.A.R.T goals and the Pomodoro technique. Finally, participants provided their GPAs as academic performance indicators to explore correlations between their time management skills

and academic success. The detailed demographic characteristics of participants who participated in the online survey are presented in Table 2.

Table 2. Demographic Information of Participants

Characteristic	Frequency	In Percent
<i>Gender</i>		
Male	18	30.51%
Female	40	67.8%
Non-binary	1	1.69%
<i>Age</i>		
21-30 years	27	45.76%
31-40 years	15	25.42%
41 years and above	17	28.82%
<i>Race/Ethnicity</i>		
White	39	66.1%
Hispanic, Latino/Spanish origin	6	10.17%
Black/African American	4	6.73%
International	4	6.78%
Asian	5	8.47%
American Indian or Alaska Native	0	0%
Native Hawaiian or Other Pacific Islander	1	1.69%

3.2 Data Analysis and Coding

Data analysis involved two distinct yet complementary processes corresponding to the two components of the study. Quantitative data collected via the survey were analyzed using SPSS statistical software, with descriptive statistics employed to summarize participants' demographic information and time management skills. This analysis facilitated the identification of key trends and correlations. On the other hand, qualitative data were analyzed using a thematic analysis framework, a widely adopted qualitative method for analyzing textual data [12], [13], [14], [15]. The analytical process involved an inductive–iterative approach combined with ongoing reading and coding of emergent insights, along with deductive coding through a researcher-developed codebook consisting of 15 predefined codes. The sample analytic data processes are summarized in Table 3. First, we familiarized ourselves with the data by reading and re-reading all responses to gain an in-depth understanding of the content. Next, we developed preliminary codes by identifying recurring themes and significant statements related to time management challenges and instructional needs. Some examples of preliminary codes included “Work-life balance interruptions,” “Competing demands,” “Family distractions/interruptions,” and “Competing priorities/work-life balance interruptions.” For additional examples of preliminary codes, alongside excerpts from open-ended responses, refer to Column 2 in Table 3.

Following coding, we produced six themes that reflected the core elements of students' experiences and time management skill challenges. The themes were iteratively refined, merging or dividing them as appropriate to enhance clarity and coherence. During this process, we ensured consistency in code names with the research questions and organized codes of similar meanings into overarching categories to form thematic constructs. For example, the four preliminary codes mentioned earlier were aggregated into a theme titled “School-work-life

balance.” More examples can be found in Column 3 of Table 3. To strengthen the quality and trustworthiness of the study, we engaged in a collaborative feedback process throughout the planning, data collection, analysis, interpretation, and reporting stages. This included revising the survey questionnaires and codebook, as well as seeking input from co-authors and colleagues during the coding and analysis phases.

Table 3. Example Analytic Process for Data Excerpts

Interview excerpts [1]	Preliminary codes [2]	Themes [3]
¹ I struggle with accurately approximating how long a task will take to complete. It is difficult for me to determine if a task will take one or several hours to complete.... ² I tend to skip tasks when I do not write them down and set clear deadlines for them.... I tend to procrastinate when I do not understand and/or underestimate the urgency of the task.... ³ I procrastinate on less important tasks. I am often interrupted with other things like emails, phone calls, and text messages.... My family's schedule frequently changes.... ¹² Sometimes more urgent tasks come up at work or in my personal life... ¹³ I get interrupted by family members constantly; it's hard to focus on my studies... ⁴ Finding the balance between classwork, working full time, a social life, and physical/mental breaks - life can be exhausting sometimes.... ⁵ I have a lot of family and work obligations to juggle. Finding the best reference to support the ideas is hard for me.... ⁶ Not urgent/not important tasks sometimes get perpetually bumped in favor of more important things.... ⁷ I tend to skip tasks when I do not write them down and set clear deadlines for them.... I tend to procrastinate when I do not understand and/or underestimate the urgency of the task.... ⁸ I work two jobs, volunteer most nights, and am	¹ Difficulty estimating task duration ² Lack of planning, procrastination ³ Work-life balance interruptions ¹² Competing demands ¹³ Family distractions ⁴ Competing priorities/work-life balance interruptions ⁵ Lack of knowledge, competing priorities ⁶ Competing priorities ⁷ Lack of planning, procrastination ⁹ Lack of self-assessment, tracking tasks ⁸ Lack of planning,	School-work-life balance (3, 4, 6, 12, 13) Insufficient time management (1, 2) Limited awareness of time management strategies (3, 5, 6) Lack of planning (7, 8)

currently doing another master's program so I stay busy.	procrastination	
Maintaining good personal health habits is a priority for me	¹⁰ Lack of self-	No
this term.... ⁹ I don't generally block out time explicitly on a	assessment, tracking	retrospection
calendar, but I keep track in my head of what I need to do and	tasks	(9,10)
know when I have time to work on specific tasks.... ¹⁰ I may	^{11, 14} Procrastination	
not be the first to turn in assignments, but I will turn in		Procrastinati
quality work that I am proud of, and they will always be on		on (11, 14)
time... ¹¹ I procrastinate on undesirable tasks. I am frequently		
interrupted with other things like emails, phone calls, and text		
messages. My family's schedule frequently changes....not		
urgent/not important tasks sometimes get perpetually bumped		
in favor of more important things.... ¹⁴ Not urgent/not		
important tasks sometimes get perpetually bumped in favor of		
more important things...		

In the final step, qualitative findings were integrated with quantitative data, offering a holistic understanding of the time management challenges experienced by online students. Through this rigorous methodological framework, the study contributes valuable insights into instructional support's efficacy in enhancing online learners' time management skills.

4. Findings

The study's findings reveal the diverse time management challenges encountered by online students. Six primary themes emerged from the data analysis, capturing the intricate landscape of obstacles that impact students' time management skills:

Theme 1: Insufficient Time Management Training

The analysis highlights a significant deficiency in time management training among online students. A substantial majority (62.71%, n=37) of the 59 participants reported that they did not receive any formal time management training in their previous educational experiences (Table

4). Conversely, only 37.29% (n=22) reported receiving such training. This lack of training appears to correlate with negative academic outcomes, specifically impacting students' abilities to balance their academic responsibilities effectively, potentially leading to increased stress and diminished academic performance.

Table 4. Time Management Training Received in Previous Educational Experiences

Time management training received	Percentage
Yes	37.29%
No	62.71%

The demographic breakdown of the surveyed students—predominantly female (67.8%) and mostly aged between 21 and 30 (45.76%)—suggests that younger learners may disproportionately experience time management challenges. Specifically, of the 59 respondents to that specific question, a total of 27 (45.8% rounded) participants expressed difficulty in balancing coursework with competing responsibilities, particularly work and personal commitments, which frequently results in heightened levels of stress and anxiety. Furthermore, the findings indicate demographic variations in the challenges faced by students. Individuals from different ethnic backgrounds reported unique obstacles rooted in their cultural contexts. Hispanic and Black/African American students, in particular, noted that family responsibilities often interrupted their study time, a challenge likely influenced by cultural expectations surrounding familial obligations. These interruptions not only exacerbate their anxiety but also hinder their ability to adhere to academic schedules.

Theme 2: School–Work–Life Balance

The theme of school-work-life balance emerged as a significant challenge for online students, particularly regarding their ability to manage time effectively to complete academic coursework. Analysis of open-ended survey responses revealed that 27 out of 59 participants (45.8%) explicitly identified the interplay of full-time employment, personal obligations, and academic responsibilities as their primary time management hurdle. This struggle was frequently described in terms of competing priorities and the unpredictable nature of daily life. Participant narratives vividly illustrated these challenges. One student captured the core tension by stating, "Sometimes more urgent tasks come up at work or in my personal life, making it hard to stick to a study schedule." Another participant conveyed the overwhelming nature of their situation, stating, "Working full-time while taking care of an aging parent makes life feel overwhelming and leaves me little time for my studies." These sentiments were echoed by other participants, such as the student who reflected, "Finding the balance between classwork, working full-time, a social life, and physical/mental breaks—life can be exhausting sometimes."

Beyond the inherent challenges of balancing multiple commitments, the survey findings highlighted specific external factors that exacerbated these time management challenges. Participants frequently cited interruptions from family members and friends as significant distractions, hindering their focus and productivity during study time. Qualitative interviews supported this observation, revealing that many students studied in environments filled with various distractions. Moreover, many students reported challenges related to inadequate online learning facilities, particularly issues with unreliable internet connectivity. Respondents noted that technical difficulties—including slow internet speeds and frequent disconnections—exacerbated their struggles, leading to increased procrastination and missed deadlines. Collectively, these insights underscore the complexities of achieving a beneficial school-work-

life balance for online students. Work obligations, personal responsibilities, distractions from family and friends, and inadequate online learning facilities create a formidable barrier to academic success. Without targeted support and resources, these factors can significantly hinder students' ability to manage their time effectively and thrive in online learning environments.

Theme 3: Limited Awareness of Time Management Strategies

A significant theme emerging from the study is the limited awareness of effective time management techniques among online students. The survey results reveal that a substantial majority of participants are unfamiliar with essential strategies, including the ABC Model, ALPEN Method, and Eisenhower's Matrix (as illustrated in Figure 1). Specifically, nearly 79% of participants reported never having encountered Eisenhower's Matrix. Similar trends were observed for the ALPEN Method and other specific techniques. For example, while 68% of participants reported familiarity with the ABC Model, only 22% indicated regular use. Furthermore, among those who reported some familiarity with these techniques, a considerable level of disengagement was evident. Many students acknowledged prior knowledge of the methods but either admitted to never having applied them or found them to be ineffective in their contexts. This dual lack of exposure and application signifies a critical gap in both the theoretical knowledge and practical implementation of time management strategies. This gap is likely hindering students' ability to effectively manage their time and achieve academic responsibilities.

These findings underscore an urgent need for targeted educational interventions that increase awareness and the effective implementation of time management strategies within online learning environments. By integrating these techniques into academic curricula, offering specialized workshops, or incorporating them into online learning platforms, educational institutions can proactively support students in overcoming their time management challenges.

Such initiatives have the potential to improve academic performance, reduce stress, and create a more positive overall learning experience for online students.

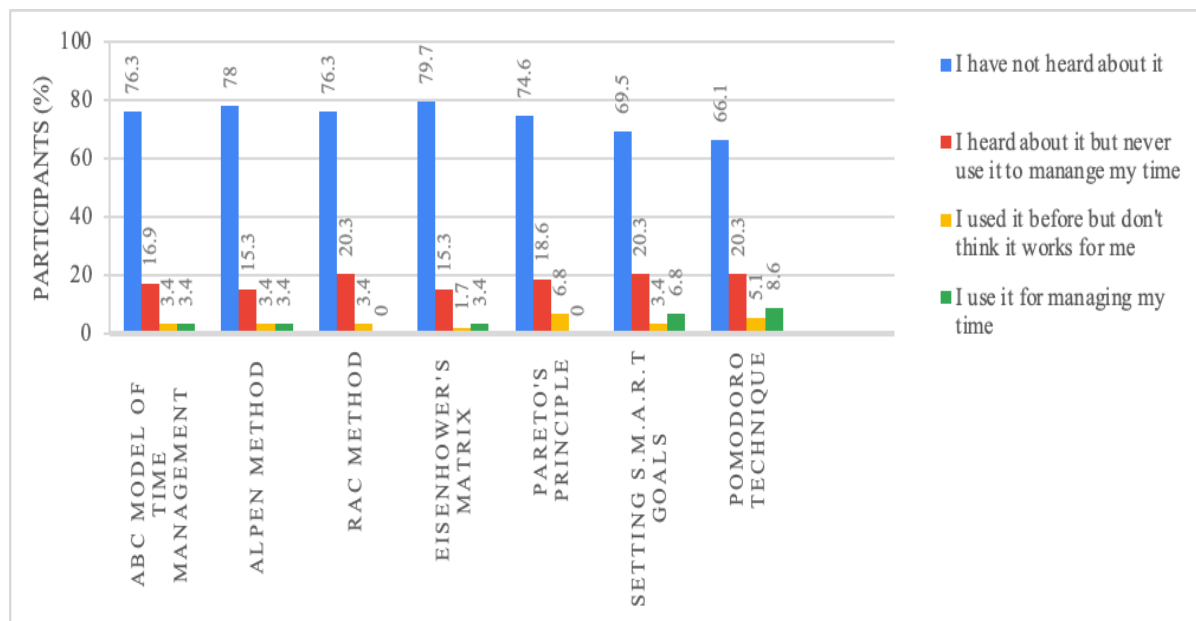


Figure 1. Familiarity with Time Management Techniques of Online Students

Theme 4: Lack of Planning

A prominent theme that emerged from student responses is a notable "lack of planning" regarding the time required to complete course assignments. Analysis of the data in Table 5 reveals a significant deficiency in proactive time assessment among online students. A small minority of respondents, only 18.9% (n=11), reported that they "always" consider their time needs before starting assignments. The majority of participants displayed less structured planning behavior, with 41.5% (n=25) indicating that they "rarely" engage in such assessments and 32.1% (n=19) responding "sometimes." Alarming, this data underscores a critical need for educational institutions to provide resources and training that foster effective planning and time management skills. Addressing this lack of proactive planning can equip students with the tools they need to manage their academic responsibilities more effectively. Such support has the potential to lead to improved academic performance and a reduction in the stress often associated with coursework.

The findings highlight the importance of cultivating a culture of strategic planning within educational environments, particularly as students navigate the unique challenges of online learning. The substantial proportion of students who "rarely" or "never" plan underscores a clear lack of intentionality in time management. This gap represents a vital area for improvement and emphasizes the need for educational institutions to implement initiatives that promote effective planning and time management skills among students.

Table 5. Percentage of Online Students Who Deliberately Analyze the Time Needed to Complete Course Assignments

Deliberation Frequency	Percentage (%)	Number #
Rarely	41.5%	25
Sometimes	32.1%	19
Always	18.9%	11
Never	7.5%	4

Theme 5: No Retrospection/ Limited Self-Assessment

The lack of retrospection and limited self-assessment emerged as a notable barrier to effective time management among online students. Despite observed deficiencies in planning, students rarely take the time to intentionally reflect on how they utilized their time after completing tasks. This is a crucial point; it directly addresses whether the student considers whether their time management was successful or if there are areas for improvement. Analyzing the responses (n=59), a significant proportion of students indicated infrequent self-evaluation: 39.0% reported that they "Rarely" assess the time spent on tasks (see Figure 2). This trend indicates a widespread neglect of regular self-reflection on time management practices. Further, 27.1% of students

indicated that they evaluate their time "Sometimes," suggesting inconsistencies in their self-assessment habits. Alarming, 23.7% admitted that they "Never" engage in such evaluations, highlighting a concerning gap in self-reflective practices among a significant portion of online students.

Only a small minority, 10.2%, reported that they "Always" evaluate their time usage. The data demonstrates that structured self-assessment of time management is not a common practice among respondents. The lack of regular evaluation can significantly hinder students' ability to optimize their study habits, maintain organization, and thrive in an online learning environment. Those who neglect periodic self-assessments may struggle to meet deadlines, maintain motivation, and experience increased stress due to ineffective time allocation. Conversely, students who reported "Sometimes" or "Always" evaluating their time were more likely to effectively manage their schedules, potentially enhancing their academic performance and overall satisfaction with their online learning experiences. Moreover, the study suggests a clear association between a lack of deliberate time evaluation and ineffective time management skills. Students who frequently fail to reflect on their time usage may find themselves ill-equipped to plan efficiently, prioritize tasks, or adapt study strategies as needed. This deficiency in self-monitoring can create barriers to setting realistic goals, maintaining a balanced workload, and achieving long-term educational objectives. Collectively, the data underscores a widespread tendency among students to neglect regular self-reflection on their time management practices. Combined, nearly 63% of students rarely or never evaluate the time spent on tasks. This gap in self-assessment significantly impacts their ability to optimize study habits, remain organized, and succeed in the online learning environment.

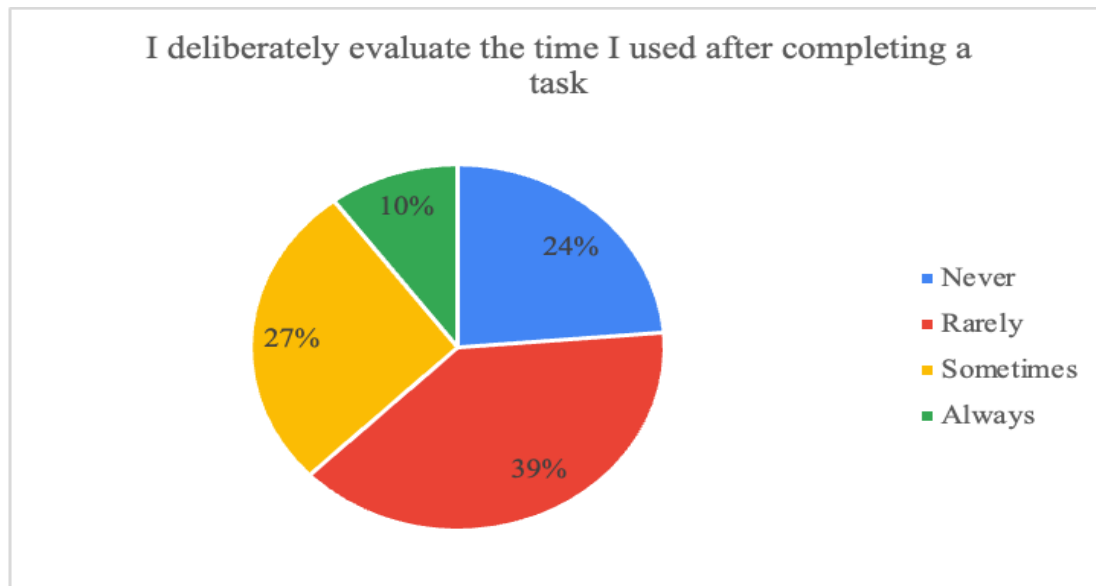


Figure 2. Percentage of Online Students Who Evaluate Their Time Use After Completing Coursework Tasks

Theme 6: Procrastination

An analysis of survey responses regarding the timing of assignment completion among online students provides significant insights into procrastination and time management behaviors. Out of the respondents, 48 responses indicate a strong tendency towards completing assignments close to the deadlines. A majority, 52.08%, reported submitting their assignments within 24 hours of the due date (see Figure 3), suggesting that many students operate under a deadline-driven approach that is indicative of a tendency to procrastinate, a behavior observed in academic settings.

The data shows a range of behaviors, including a small subset, 4.17%, who completed their tasks within 2 hours of the deadline, suggesting they may perform effectively under pressure.

Conversely, a considerable proportion, 27.08%, completed their assignments one day before the due date, indicating a proactive time management strategy among this group. Further, 10.42% of

participants reported that this was their first online course, potentially suggesting that they are still adapting to the demands of online learning, which could influence their assignment-completion habits.

These findings highlight the critical need for educators and institutions to acknowledge and address the procrastination behaviors exhibited by online students. By providing targeted support and strategies to enhance time management skills, institutions can help students mitigate procrastination and improve their academic performance and learning experience. Collectively, the analysis underscores the importance of understanding procrastination patterns among online learners and the need for strategic interventions to foster effective time management practices.

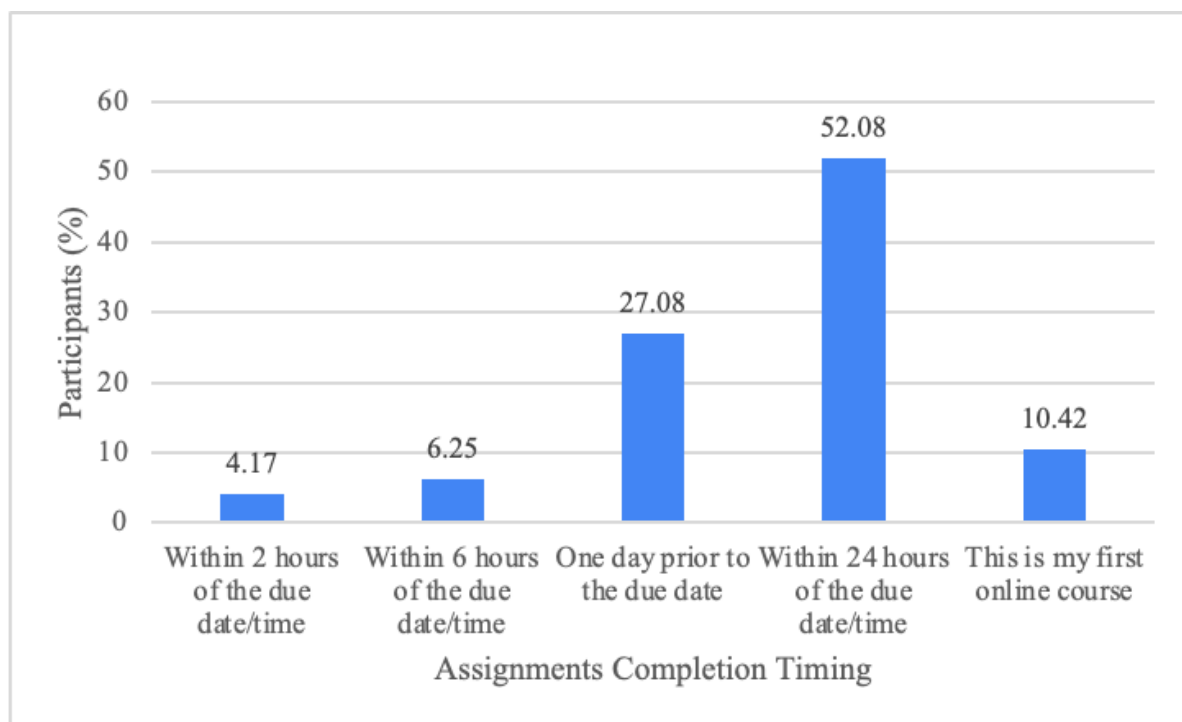


Figure 3. Online Students' Assignment Completion Times During Online Learning

5. DISCUSSION AND IMPLICATIONS

The findings from this study contribute to the growing body of literature on time management in higher education, particularly within the context of online learning environments. The challenges encountered by diverse online students at a public research university in the U.S. underscore the necessity for a more nuanced understanding of how various demographic factors influence students' time management skills and, consequently, their academic success. Our identification of prevalent time management obstacles aligns with prior research that discusses the difficulties students encounter when navigating multiple commitments within a digital learning context. Consistent with the work of Docka-Filipek and Stone [16] and Gray [3], the burden of balancing work, family, and academic responsibilities intensifies feelings of anxiety and overwhelm for online students. Supporting these findings, our study revealed that interruptions from family and friends significantly disrupted study patterns. This observation underscores the critical role of the home environment in shaping online learning experiences, particularly among students from ethnic minority backgrounds who often shoulder additional familial obligations.

In addition, the significant percentage of participants who reported low familiarity with time management techniques correlates with Mancini's [8] assertion that a lack of exposure to effective strategies impedes academic performance. Without a foundational understanding of time management principles, students are less likely to cultivate essential skills necessary for navigating the complexities of online coursework. This points to a systemic issue within higher education institutions regarding how they prepare students for the challenges of online learning, reinforcing calls for a more integrated approach to teaching time management, including workshops, embedded support in courses, and personalized coaching options.

Furthermore, our findings indicate a direct relationship between anxiety levels and academic performance, reinforcing the existing literature that connects emotional distress with reduced academic engagement and success [5], [8], [11], [17]. Approximately 75% of students reported experiencing heightened anxiety, resonating with research that shows emotional factors significantly affect time management efficacy [18]. This finding highlights the need for incorporating emotional wellness support within educational frameworks, as the stress and anxiety stemming from time management struggles can create a feedback loop that exacerbates students' difficulties in completing their coursework. Institutions should consider offering accessible mental health resources and proactively integrating stress management techniques into the curriculum.

5.1 Implications for Educational Equity

The findings of this study underscore an alarming gap in educational equity within online learning environments, particularly regarding diverse student groups. The disproportionate challenges faced by students from various demographic backgrounds align with existing research on educational inequality, suggesting that systemic barriers often obstruct access to the resources necessary for academic success [19], [20], [21]. The results signal a critical need for institutions to reassess their training and support mechanisms to promote equitable outcomes across diverse student populations. By adopting culturally responsive instructional practices—for example, effective instructional design courses [22]—institutions can begin addressing the unique challenges specific demographic groups face. This approach is consistent with recent calls for higher education institutions to implement comprehensive strategies aimed at reducing disparities in engagement and success among marginalized students [6], [7], [11]. Finally, our findings highlight the importance of further research into the experiences of online students.

Future studies should explore the more specific challenges faced by different groups of online learners, such as working professionals and students from diverse cultural backgrounds.

6. Conclusion & Recommendations

This study identified six factors that significantly affect online students' time management skills:

(1) lack of sufficient time management training, (2) challenges in balancing school, work, and personal life, (3) limited knowledge of effective time management strategies, (4) inadequate planning, (5) insufficient self-assessment or self-reflection, and (6) tendencies toward procrastination. The findings indicate that many online learners struggle primarily with procrastination and time management, which negatively impacts their academic performance and overall educational experience. Additionally, technical issues—such as unreliable internet connectivity and inadequate technical support—compound these challenges, further hindering academic success and engagement, underscoring the multifaceted nature of obstacles in online education. Given the increasing prevalence of online learning, higher education institutions must implement comprehensive support systems tailored to the unique needs of online students.

Institutions and instructors should consider offering targeted interventions, such as workshops on time management skills and organizational strategies, before they start online courses, along with technical support services. These initiatives can foster a more engaging and supportive learning environment, assisting students as they navigate the complexities of online education. Moreover, this research emphasizes the need for further exploration of the diverse experiences of students in online learning contexts. By understanding the various challenges faced by different demographics, educators can develop more nuanced strategies that enhance student engagement and success. Educational institutions should integrate targeted support and resources into their programs, including time management training, structured planning, and self-assessment

strategies (e.g., equip students with the tools and opportunities for self-assessment and reflection on their time management habits), as well as measures to reduce procrastination (e.g., the institutions should prioritize to offer highly encouraged pre-course or early-course workshops focused on time management skills, organizational strategies, and effective study habits). As online education continues to evolve, ongoing research and proactive institutional support are essential to ensuring that online students can thrive in digital learning environments.

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