Virtual Versus Reality: A Look into the Effects of Discussion Platforms on Speaking Course Achievements in *Gather.town*

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Abstract: The fusion of education with the digital world is still a developing and crucial phenomenon, especially in light of the growth of metaverse applications and the lingering effects of pandemic-induced educational changes. Learning about the efficacy of platforms like Gather.town becomes increasingly important in this situation. This study explores the changing educational environment, focusing on the widely used technique of small group discussions. Our main goal is to compare the effects of such group discussions in real classrooms against the online setting made possible by websites like Gather.town, especially regarding academic performance. We assessed two separate groups of students using a highly controlled experimental method. One group engaged in traditional, face-to-face small group discussions, while the other participated in discussions within the virtual realm of Gather.town. Our research produced notable results, showing a significant difference in academic achievement between the two modes of interaction. Unexpectedly, the online environment displayed higher standards of academic success. These findings highlight the potential effectiveness of digital platforms in educational initiatives. While conventional, face-to-face dialogues still have significance, incorporating digital technologies could result in equal or better educational outcomes. In essence, this research offers insightful viewpoints to the continuing discussion concerning hybridized learning strategies in the modern educational environment. By highlighting the part played by digital platforms in influencing pedagogical practices, it highlights the potential for such approaches to benefit the future of education.

Keywords: Metaverse applications, Small group discussions, Academic achievement, Gather.town, Online education, Blended learning

1. Introduction

The COVID-19 epidemic has accelerated online and remote learning adoption, raising the possibility of utilizing virtual reality and metaverse capabilities in learning environments. Since the COVID-19 limitations, distance and online learning have become crucial tertiary education components. The metaverse offers virtual venues for student participation and learning, possibly offering special advantages above conventional online or face-to-face education techniques, as demonstrated by platforms like Gather.town. Recent years have seen a significant increase in academic participation in online and remote learning, especially due to COVID-19 constraints. Studies on traditional classroom settings and the discourses around traditional instruction, including teaching materials and teaching strategies, have been conducted in this study's context (e.g., Alghazo, 2015; Rayyan et al. 2023; Zidan, Alghazo & Clymer, 2018; Zidan & Alghazo, 2019; Alghazo & Zidan, 2019; Clymer et al., 2020; Alghazo, Jarrah & Al Salem, 2023; Abusalim, 2020). Little research has contrasted traditional classroom settings, hybrid teaching strategies, and fully online modes, highlighting various aspects of effective teaching. At the same time, academic attention has turned to the positive impact that small group discussions have on students' progress (Van Blankenstein et al., 2013). However, studies on the use of metaverse tools in education and their potential benefits on student performance are noticeably lacking. As López-Belmonte et al. (2023) argue, "[d]ue to its short history, the potential of the metaverse in education is yet to be explored" (p. 1). The current study aims to close this knowledge gap by examining the effects of small group discussions in tertiary education while contrasting traditional settings with Gather.town's online setting. The study specifically examines student academic performance in a German as a second language speaking course to identify any variations dependent on the discussion platform. This investigation aims to shed more light on the evolving educational landscape while highlighting the potential value of metaverse platforms like Gather.town in boosting learning opportunities.

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1.1 Gather.town

A revolutionary online platform called Gather.town simulates physical locations so that users can participate in virtual discussions and activities that closely resemble real-life interactions. Language teachers can use this platform to develop immersive language learning experiences that encourage participation and in-context language use (Zhao & McClure, 2022). It provides gamified elements and avatars that improve interaction and participation in online learning groups, making it an important tool for language teachers.

A study by Latulipe and De Jaeger (2022) comparing synchronous computer science lectures in Zoom and Gather.town found that, due to its encouragement of peer socialization, agency, and interesting interactions, students favored Gather.town. This preference highlights how it can foster group learning and student involvement. Gather.town's game-like setting and user-friendly features showed promise for boosting engagement in higher education and developing engaging virtual classrooms, according to Sriworapong et al.'s (2022) usability research.

To enhance the learning of nursing staff, Chen, Ngu, and Hou (2022) included Gather.town into the instructional game "Emergency Room." According to preliminary studies, this method improved learning efficiency, highlighting Gather.town's potential for real-world teaching. McClure and Williams (2021) highlighted Gather.town's function in self-paced learning in distance education, emphasizing how it provides exceptional possibilities to participate, personalize their learning, and forge relationships in a virtual environment.

Gather.town's game-like concept, which mimics real classroom situations and provides a useful substitute for online language learning, was emphasized by Fitria's study in 2021. When Lee et al. (2023) evaluated how students perceived teamwork on Zoom and Gather.town, they found that students preferred Gather.town because of its characteristics for social interaction, mobility, and sense of presence. Lastly, Tang, Pang, and Fung (2022) introduced Gather.town as a learning space for a laboratory module, addressing "Zoom Fatigue" and student demotivation. Their study gave preliminary results while highlighting Gather.town's potential in academic settings.

The conclusion is that, taken together, the research under examination shows that Gather.town's distinctive gamified features and immersive surroundings have enormous potential to improve engagement, collaboration, and learning in various educational contexts. These results highlight the potential of metaverse tools like Gather.town to influence the direction of online education and cooperation.

1.2 Aims of the Study

This study compares the academic results of small group discussions in conventional face-to-face settings and those on digital platforms. This study aims to pinpoint any notable variations in the efficacy of small group discussions conducted on digital platforms like Gather.town versus those conducted in actual classrooms with regard to students' academic achievements. The following research question will be addressed in order to accomplish this goal:

In what manner does the modality of small group discussion (either in a physical classroom or online through Gather.town) influence student academic outcomes?

An evaluation of the academic results of students participating in small group discussions in conventional classrooms versus those using Gather.town for comparable interactions will be done as part of a comparative study to answer this question. This study aims to add to the body of knowledge on the use of online learning tools in educational settings by exploring this research question and highlighting the potential psychological effects of these tools on student academic performance.

1.3 Significance of the Study

Our investigation takes on a contemporary dimension thanks to the introduction of Gather.town as a tool for leading group discussions. This study will pave the way for future research in this area. Prior to our investigation, it was clear that there had been a noticeable shift toward digital teaching tools, particularly as a result of the COVID-19 crisis. During the pandemic, as Reich et al. (2020) noted, there was a pressing increase in the adoption of these digital tools, underscoring the significance of understanding their efficacy. In their guide on quick transition, Hodges et al. (2020) noted that while many institutions swiftly switched to online modalities, the pedagogical impact is still under investigation. Despite this development, empirical comparisons of cutting-edge digital strategies with tried-and-true face-to-face methods are still in their infancy. Bao (2020) has also shed light

on the challenges and opportunities brought about by the quick shift to digital learning, suggesting that while platforms like Gather.town hold promise, thorough research is essential to understand their complex dynamics.

2. Literature Review

2.1 Do Small Group Discussions Enhance Student Academic Achievement?

Studies in pedagogy have focused on the extent to which small group discussions affect students' academic outcomes. According to Springer, Stanne, and Donovan (1999), students who participate in these small groups usually gain a deeper understanding of the subject matter. Springer, Stanne, and Donovan (1999) found that learning in such groups not only noticeably improves academic outcomes but also student attitudes and content retention, supporting this viewpoint. Webb and Palincsar (1996) emphasize the value of collaborative learning by highlighting the role that peer engagement plays in enhancing comprehension and analytical skills. According to Cohen (1994), activities centered on group interactions lead to better academic outcomes and strengthen the sense of community among students. Kagan (1994) emphasizes the importance of structured small-group instruction, arguing that cooperative teaching strategies, in particular, are remarkably effective in increasing student achievement. In a related vein, Lou, Abrami, & d'Apollonia (2001) presented data suggesting that team-centric environments frequently outperform solo tasks in educational contexts regarding individual achievement.

2.2 A Comparison of Academic Achievement: Online vs. Face-to-Face Learning

Comparing traditional face-to-face learning with online learning in terms of academic achievement has received much attention in the field of educational research. After conducting a thorough investigation, Bernard et al. (2004) concluded that while there were differences in some factors, students' academic achievements were statistically comparable in online and traditional classroom settings. This viewpoint was supported by Means, Toyama, Murphy, Bakia, and Jones's (2009) meta-analysis, which found that students in online environments performed marginally better than those receiving direct face-to-face instruction. Allen and Seaman (2013) add to this argument when they claim that the prevalence of online education not only continues but frequently produces results that are on par with or even better than those of conventional teaching techniques.

On the other hand, despite the rapid expansion of online education, Parsad and Lewis (2008) highlight the ongoing challenge institutions face in maintaining the quality of their virtual courses. The authors Cavanaugh, Gillan, Kromrey, Hess, and Blomeyer (2004) suggested that the results of digital education might be comparable to or superior to those of traditional learning environments. While advantageous, the flexibility offered by online modules is not without its drawbacks. According to Jaggars and Bailey (2010), many students struggle with issues related to self-discipline and sustained motivation when learning digitally. On the basis of this account, Bowen, Chingos, Lack, and Nygren (2014) noted that while e-learning increases accessibility and flexibility, upholding student engagement and commitment is still a significant challenge in this paradigm of education.

The effects of incorporating mobile augmented reality learning media with a metaverse application on students' academic outcomes in Science classes were examined by Marini et al. in a separate study (2022). Seventy-five fifth-graders from Cluster I, Depok Subdistrict elementary schools participated in the study. Marini and colleagues discovered that using a metaverse app had a favorable impact on students' learning outcomes through pretest and post-test assessments. The students demonstrated greater engagement with the material, enhanced understanding, increased knowledge acquisition, and greater enjoyment in the learning process. This study highlights how augmented reality and metaverse applications can improve science education and produce more enjoyable learning environments.

2.3 Comparing Online Small Group Discussions and Face-to-Face Small Group Discussions

The choice between online and face-to-face formats for small group dialogues has attracted significant research interest in the context of student academic outcomes in the dynamically changing educational domain. In their investigation into the nuances of online discussions, Rourke and Anderson (2002) contrasted peer-led small groups with more traditional tutor-led discussions. Their research concluded that variables like moderator style and the interactive capabilities of platforms significantly influence the breadth and depth of dialogues, which in turn influences how well students understand the content.

Strijbos et al. (2006) highlighted the obvious differences in content quality and interactivity dynamics compared to face-to-face exchanges in their meticulous analysis of online dialogue content. They proposed that the mode of communication could influence both the profundity and the character of discussions.

Hrastinski (2008) examined the differences between synchronous and asynchronous e-learning interactions, delving deeply into online learning modalities. The research showed that while interactions with a temporal gap might give learners an extended reflection window, which could affect their academic success, real-time virtual dialogues may imitate the spontaneity inherent to face-to-face exchanges.

Hammick et al.'s (2007) evaluation of inter-professional education examined various pedagogical interactions and compared face-to-face and virtual dialogues. Even though their focus was on a broader range of educational outcomes, a recurring theme highlighted the influence of interaction mediums on academic outcomes, emphasizing the need for well-considered pedagogical strategies in both situations.

Numerous studies that examine how different techniques for facilitating small group dialogues affect academic success serve as a counterpoint to the growing scholarly focus on evaluating their efficacy.

Means et al. (2009) conducted a thorough meta-analysis to compare the academic outcomes of students who participated in online learning to those of students who attended traditional classroom settings. Their findings suggested that virtual learning environments gave students a slight performance advantage over direct, face-to-face instruction. Interestingly, hybrid learning environments, where digital discussions supplemented traditional instruction, were primarily responsible for the edge. This collection emphasizes that group dialogue's inherent characteristics can modulate academic outcomes when combined with various pedagogical strategies.

Dziuban et al. (2015) looked into the implications of online learning for student satisfaction, a factor that is loosely related to academic performance. Examining the psychological connection between students and teachers in a virtual environment, the research found that satisfaction levels—known as a sign of a student's commitment to their studies—were influenced by the standard and structure of online group interactions.

In essence, these academic pursuits highlight the complex relationship between small group discussions and academic achievement, highlighting the potential advantages of online discussions, particularly when incorporated into a comprehensive learning paradigm.

2.4 What is the Best Size of Groups in Small Group Discussions to Enhance Academic Achievement?

In order to maximize academic results, determining the ideal group size for small group discussions has consistently attracted attention in pedagogical studies. Although there is widespread agreement on particular ideal group sizes, most current research suggests a range of 2 to 10 participants. For instance, Lou, Abrami & d'Apollonia (2001) advocate for groups of 4-6 people. They stress that adding this element increases participation and fosters various viewpoints. This viewpoint is shared by Barkley, Cross, and Major (2014), who also warn about overly large groups. They draw attention to the danger of "social loafing" in larger gatherings, where some attendees may depend on others to carry the burden of participation and input.

However, the relationship between group size and academic results goes beyond simple math. Slavin (1996) emphasizes the idea that sometimes the collaborative nature of the task may eclipse the group's raw numerical strength. He does not, however, downplay the difficulties of handling larger groups of people. An in-depth analysis of this dynamic is provided by Webb (1991), who contends that group size and task complexity interact in a complex manner. According to Webb's analysis, while complex tasks may benefit from the varied viewpoints of a larger group, simple tasks frequently succeed in smaller groups.

In light of this body of research and to maximize academic outcomes in our study, we have purposefully decided to divide participants into groups of four to ensure compliance with the accepted standards established by existing literature.

2.5 Interim Summary

Modern research strongly emphasises the value of small group discussions in education, both offline and online. It emphasizes the complex nature of learning environments, student involvement, and the delicate balance between technology and instructor guidance, even though there is no definitive opinion on their efficacy. Online communities like Gather.town, which blend elements of real-world and virtual interactions, bring fresh viewpoints to this subject. Critical factors include task nature, instructor role, and course design. For instance, well-structured online discussions with pertinent questions can be as effective as face-to-face discussions. However, without organization, any discussion could be superficial. Interactions are impacted by technology. In contrast to synchronous platforms like Gather.town, asynchronous ones enable deeper Gather.town to strive for real-time participation. Although the growth of metaverse applications in education is exciting, understanding their full potential and difficulties requires careful research. New avenues for student

engagement develop as educational practices advance with technology. The educational community must continuously research and improve these techniques for the best learning results.

3. Methodology

Participants were split into the experimental group (4 groups of 4 students, total=16) and the control group (4 groups of 4 students, total=16) according to the research's quasi-experimental methodology. The experimental group participated in group discussions using the online platform Gather.town, which offered a distinctive and interesting virtual environment for collaborative learning. Conversely, the control group participated in customary face-to-face group discussions in a classroom setting.

3.1 Participants

The study involved 32 committed undergraduate students from the University of Jordan's second-year German Speaking course. These 32 participants were divided into two sets of 16, ensuring equity and fair representation. On the Gather.town platform, experimental group members participated in online group discussions. The control group, however, participated in customary classroom discussions. With this deliberate division, we hoped to contrast traditional classroom discussions with the online discussions Gather.town facilitated. With this impartial approach, we intended to carefully examine the differences and unique effects between these discussion techniques in relation to academic accomplishments.

3.2 Course Design Overview

The German-speaking course offered by the University of Jordan's Faculty of Foreign Languages is carefully designed to improve students' linguistic journeys. Its main objective is to develop students' speaking abilities and their ability to have natural discussions in German. The curriculum strongly emphasises active student participation in dialogue exercises that simulate real-world situations and situations that might arise in daily life. This course's incorporation of in-depth role-playing exercises sets it apart from others. Students take on different personas for these assignments; for instance, some might play airline agents while others take on the roles of passengers attempting to make German flight reservations. The course also incorporates a variety of interactive platforms, such as those that simulate settings like a movie theater, bakery, or post office. Students use these platforms in a rotating fashion to ensure that everyone has interactions in which they are both a provider and a seeker. With the help of this instructional approach, students can improve their conversational skills, comprehend nuanced cultural differences, and hone their ability to take part in genuine discussions in German.

3.3 Research Design

The participants in this study were divided into the experimental and control groups using a quasi-experimental methodology. The main goal of the study was to identify any appreciable differences in academic performance between students who participated in classroom discussions in person and those who used the online discussion platform Gather.town.

3.4 Procedures

Throughout the semester, both groups took part in small group discussions. The experimental group conducted their discussions in Gather.town's digital environments, while the control group did so in a conventional classroom. The same instructor taught the course and featured the same small group discussion activities and scenarios to ensure consistency and similar external variables. To ensure students did not veer off topic, the instructor closely watched the Gather.town and face-to-face participants.

3.5 Data Analysis

The main goal of this study was to identify notable differences in academic performance between the two groups. We conducted statistical analyses using techniques like figuring out means and standard deviations. These methods played a key role in the data analysis and provided crucial insight into the effects of various teaching philosophies on student performance.

4. Results

This section presents the results to illuminate the impact of small group discussion facilitation on academic success, whether in a physical classroom or online using Gather.town.

4.1 Impact of Small Group Discussions on Academic Achievement

This section of the results carefully compares the effects of small group discussions, whether they are conducted face-to-face or through online tools like Gather.town, to those of traditional in-class instructional techniques. The principal inquiry driving this section is:

Is there a statistically significant difference, at the α=0.05 level, between the mean scores of the control and experimental groups in academic achievement attributed to the teaching method used?

Before delving into the outcomes, it's essential to revisit the research methods employed. Our conclusions were drawn from the computed average scores and standard deviations related to academic achievement for both groups. Within this study's context, academic achievement is defined as an aggregate of scores derived from class participation, assessments, and project results. To identify disparities in academic performance between the two groups, we utilized the Independent Samples Test (t-test).

4.1.1 Detailed findings

Table (1) clearly indicates a substantial difference in academic achievement scores between the two studied modalities. The traditional method yielded a mean score of 67.94, with a standard deviation of 9.85. In contrast, the group discussion method showed a more promising mean score of 79.13, with a slightly increased standard deviation of 10.70.

Table 1: Mean, Standard Deviations, and t-test (Independent Samples Test) for the academic achievement scores of the study's two groups.

Teaching Method	no	Mean	Std	t	df	Sig
Traditional	17	67.94	9.85	-3.127	31	0.004*
Group Discussions	16	79.13	10.70			

*. The mean difference is significant at the 0.05 level.

The t-value of -3.127, significant at a level of 0.004, further cements the disparities in academic outcomes between the groups.

4.1.2 Effect size

To comprehend the practical significance of our findings, it's essential to consider the effect size, using the eta squared (η^2) measure. This metric gives context to the observed differences and assists in understanding the real-world implications of our results. Using the equation:

$$\eta^2 = \frac{t^2}{t^2 + df}$$

η^2-Eta Squared (Effect size)

t - T. TEST

df - degrees of freedom

we obtained an eta squared value of 0.24. This illustrates that 24% of the variance in academic achievement scores is due to the teaching modality, with the rest being influenced by other external factors.

4.1.3 Implications of the findings

The distinct variation in academic results between the two pedagogical approaches indicates the pronounced influence of small group discussions, especially when conducted via digital platforms like Gather.town, on academic success. The noticeable increase in the mean score from 67.94 in the face-to-face small group discussions method to 79.13 in the Gather.town small group discussions emphasizes the effectiveness of this approach. Even though the statistical difference is clear, it's important to consider how these findings might apply in actual life. A larger standard deviation in the group discussion approach might indicate a wider range of student performance, necessitating further research. In conclusion, the results of this study highlight the benefits of online small-group discussions over traditional teaching strategies in terms of academic success. While keeping in mind the potential for variability in results, educators and academic institutions may see the

emergence of digital platforms that support group dialogues as a valuable tool for improving student performance.

4.2 Analysis of the Predictive Power of Academic Achievement on Cumulative GPA

The secondary research query, pivotal to our analysis, aimed to determine the predictive capacity of students' academic achievement in relation to their cumulative GPA. In light of the growing emphasis on academic indicators in the realm of education, discerning this predictive linkage holds great significance for educators, academic institutions, and policy framers.

4.2.1 Methodological approach

To shed light on this relationship, we utilized a Simple Linear Regression analysis. This statistical method is instrumental in determining how much one variable (in this context, academic achievement) can serve as a predictor for another variable (cumulative GPA).

4.2.2 Interpretation

Table 2 provides valuable insights into our analysis. First, it underscores the significance of our regression model. The F-value, specifically 40.784, along with an associated significance level of 0.000, reaffirms the statistical soundness and substantial predictive capacity of our model concerning students' cumulative GPA based on their academic performance.

Table 2: Results of the Simple Linear Regression Analysis

Predictor Variable	B	Std. Error	F	Sig.	Beta	t	Sig.	Adjusted R Square
Constant	0.347	0.399	40.784	0.000*		0.869	0.391	
Academic Achievement	0.034	0.005			0.754	6.386	0.000*	0.554

*. is significant at the 0.05 level.

Furthermore, the R^2 value, measuring at 0.554, carries significant implications. This figure suggests that academic achievement, serving as the solitary predictor, elucidates a noteworthy 55.4% of the variability in students' cumulative GPAs. This finding is pivotal for educators, signifying that while academic achievement has substantial influence, other factors, constituting the remaining 44.6%, are also in play and warrant further investigation.

Of equal importance is the beta coefficient, which stands at 0.754 and demonstrates statistical significance with a t-value of 6.386 ($p<0.000$). This coefficient is central as it indicates that for every one-unit increase in academic achievement, there is a corresponding increase of 0.754 units in cumulative GPA. In simpler terms, this confirms a robust, positive association between these two variables, suggesting that interventions or strategies aimed at improving academic achievement can lead to marked enhancements in cumulative GPA.

In conclusion, the results of our linear regression model support the critical importance of academic achievement in predicting cumulative GPA. While there is no denying that academic performance has a significant impact, it is crucial that educators and institutions recognize that there are other factors that also play a role. These findings highlight the need for an all-encompassing educational strategy where academic success is just one element of a multifaceted approach supporting students' success.

5. Discussion

Modern educational frameworks are thoroughly examined in the investigation of the effectiveness of instructional approaches and modes, with a focus on contrasting small group discussions in both physical and virtual settings. The results of this study provide a rich basis for discussion, particularly when compared to earlier studies.

5.1 Influence of Mode of Small Group Discussions on Academic Achievement

The findings of this study support the potential effectiveness of online communities like Gather.town, particularly in facilitating small group discussions. Particularly when compared to conventional face-to-face

discussions, Gather.town was observed to elicit higher academic performance. This result is consistent with Kemp and Grieve's (2014) findings, which claimed that online and in-person activities produced comparable results in terms of academic performance. Our findings, however, diverge in terms of engagement. Our study suggests that digital platforms can be just as engaging, if not more so, than face-to-face interactions, which contradicts Kemp and Grieve's (2014) finding that students felt more engaged in face-to-face discussions.

In his study, Freiermuth (2001), found that online platforms' anonymity, which can lower inhibition, was especially helpful. This observation supports our findings and raises the possibility that some students may find comfort in online environments, enhancing their academic performance. The higher levels of engagement seen in our study when compared to Kemp and Grieve (2014) may also be explained by the feeling of comfort in an online environment.

Our study's findings are also supported by the flexibility that online platforms provide. Students in flexible learning environments, such as blended learning and flipped classrooms, demonstrated better learning performance, as mentioned in the study by Thai, De Wever & Valcke (2020). According to Kemp and Grieve (2014), the flexibility and convenience of digital platforms may be a factor in the increased academic success seen in Gather.town.

However, not all online discussions ensure enhanced educational results. Choi, Land & Turgeon (2005) note that even though there were more inquiries in online discussions, the level of discussion remained unaffected. This implies that while online discussion forums can promote participation, educators must ensure the caliber of the discussions.

Bliuc, et al. (2010) noted the correlation between students' conceptions of learning, their approach, and academic outcomes in both online and face-to-face discussions while taking student approaches into consideration. In order to make the best use of tools like Gather.town, educators should be aware of students' conceptions of learning, according to our findings and those of this study.

The effectiveness of online collaborative learning (OCL) is a recurring theme in the studies. Positive correlations between different aspects of OCL were discovered by Ng, Chan & Lit in 2022, supporting our findings about Gather.town's effectiveness. Similarly to this, Guo, et al. (2022) highlight the potential benefits of combining traditional and digital pedagogies by highlighting the advantages of blended learning approaches.

However, despite the potential of digital platforms that our study and others point out, problems still exist. The challenges highlighted by Nungu, Mukama & Nsabayezu (2023) included poor internet connectivity and a lack of ICT expertise. While imagining a future where education is more digitally integrated, it is crucial to understand these limitations.

In conclusion, it's important to integrate digital tools thoughtfully even though they offer the future of education promising prospects like Gather.town. Our attention should continue to be on upholding the standard of discussions, comprehending students' conceptions of learning, and addressing the difficulties associated with using online platforms as we continue to combine traditional and digital learning environments.

5.2 Predictive Potential of Academic Achievement on Cumulative GPA

Our findings confirm that academic performance accurately predicts cumulative GPA. The observed 55.4% difference in cumulative GPA attributable to academic achievement says a lot about how they are related. This correlation is in line with Crede and Kuncel's (2008) findings, which showed a consistent pattern in student outcomes across various academic evaluations. Our findings are consistent with those of Robbins et al. (2004), who proposed that academic performance metrics, such as GPA, can serve as strong indicators of university outcomes. In a related vein, Halasa et al. (2020) documented that a variety of teaching strategies—ranging from conventional to blended and flipped modalities—yielded varying effects on student success, emphasizing the challenges in drawing comparisons between teaching strategies and outcomes like GPA. However, Richardson, Abraham, and Bond (2012) took a slightly different tack and found that while academic performance did predict GPA, other factors like study habits and competencies also had an impact, pointing to a more complex interrelation.

However, the strength of the association found in our study (Beta = 0.754) appears to be greater than that found in some earlier studies. Although the relationship between academic achievement and cumulative GPA has frequently come up, the strong influence seen in our study is particularly noteworthy and demands more in-depth investigation.

5.3 Implications and Avenues for Further Exploration

While our study clearly shows the benefits of small group discussions, it also highlights a number of questions and potential obstacles. The noticeable effect underlines the fact that, even though teaching strategies are important, other outside factors also play a critical role in shaping academic results.

In the past, factors like socioeconomic status, innate test-taking skills, and personal motivation have been investigated as potential predictors of academic outcomes (Webb, Troper, & Fall, 1995; Prince, 2004). The significant influence of socioeconomic circumstances on academic performance and involvement was clarified by Sirin (2005). In addition, Wigfield and Eccles (2000) looked at motivation, making the argument that a student's self-perception of their own abilities can have a significant impact on their academic performance. The significance of understanding academic success as a complex construct influenced by a wide range of factors is highlighted by this study.

Additionally, the emerging field of digital education offers a double-edged sword, as demonstrated by tools like Gather.town. Reich et al. (2020) identified the COVID-19 crisis as a particularly compelling reason to understand the efficacy of such online mediums. While these digital tools promise to make education more accessible, they also necessitate scrutiny of their effectiveness in comparison to traditional methods—a topic our study starts to look into.

In essence, this study highlights the expanded significance of small group discussions in academic settings and offers a sneak preview of the rapidly developing field of online learning tools. While some of our findings are consistent with previous research, others differ, particularly in terms of the degree of effect, emphasizing the complexity of the factors influencing academic success.

5.4 Limitations

There are limitations to this research. The investigation's initial focus on a single course may limit the conclusions' potential for broader application. The extrapolation of these findings to other online platforms may also be constrained due to the platform's exclusive exploration. Additionally, the small number of participants may have an impact on how robust the statistical results are. As a result, it is wise to proceed cautiously when interpreting the results of this study. It emphasizes the need for more thorough research to support and expand on the current findings.

6. Conclusion

Our main goal was to determine how small group discourse, whether it was conducted in a traditional classroom setting or online using Gather.town, would affect students' academic results. Surprisingly, the results showed that Gather.town, an online platform, has a distinct advantage over conventional face-to-face settings in encouraging higher academic achievement. Such an unexpected result casts doubt on widely held beliefs and signals a paradigm shift in how educators may view and use digital tools.

The investigation of our research question also lays the groundwork for more extensive academic ramifications. While this study specifically tracked performance within Gather.town discussions, it raises the possibility of connections between short-term academic results and longer-term metrics like aggregate GPAs in tertiary education. It raises the possibility of an alignment or correlation that calls for additional, in-depth investigation.

These results highlight the changing dynamics of contemporary education and are based on the context of our research question. They highlight the need for tertiary institutions to review and possibly recalibrate their approach to pedagogy as well as the robust potential of platforms like Gather.town. The evidence provided here could act as a catalyst for educators to rethink traditional teaching strategies, weighing the real advantages of online learning environments against established norms.

In conclusion, these findings will influence the course of pedagogical evolution as the pace of digital integration in education quickens. The focus right now is on utilizing these insights to create a learning environment that is effective, inclusive, and optimized for all students.

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