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Humor Style and Academic Success in a Blended Learning Setting among Technical University Students

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Abstract

Students' personal growth and future employment prospects are significantly influenced by their academic performance, especially in technical education. Traditional teaching approaches have given way to blended learning as higher education increasingly incorporates information and communication technology, which can have a big impact on students' academic achievement and psychological health. This study examines the connection between students' academic performance and their humor preferences in a blended learning setting at a Malaysian Technical University Network (MTUN) institution. A survey using the Academic Self-Concept (ASC) and Humor Styles Questionnaire was completed by 307 students. SPSS version 26 was used to analyze the data using both descriptive and inferential statistics. According to the findings, pupils' academic performance was mediocre, and the most popular type was self-enhancing humor. Interestingly, aggressive humor had a negative relationship with academic achievement, but affiliative and self-enhancing humor types had a favorable correlation. Self-defeating humor and academic success did not significantly correlate. According to these results, a more stimulating and encouraging learning atmosphere can be created by strategically utilizing positive humor styles, especially affiliative and self-enhancing humor. This could lower stress, boost motivation, and improve student performance. In MTUN's technical education program, where the curriculum frequently includes difficult and complex material, comedy can be a useful teaching tool to enhance students' academic performance and general well-being. In order to promote deeper learning, student engagement, and emotional resilience, educators ought to think about incorporating humor into their lesson plans.

1. Introduction

The evolution of the Fourth Industrial Revolution and the ongoing impact of the COVID-19 pandemic have brought about significant changes in the education system, particularly in the teaching and learning methods employed at universities. Traditional teaching approaches have given way to those that rely on information and communication technology, including blended and hybrid learning, which have emerged as prominent methods in the academic world. These approaches place greater demands on students to be more creative, proactive, and adaptable to the new norms of teaching and learning, with a view to achieving academic success (Azahari & Rahimi, 2022).

In Malaysia, technical universities face a unique set of challenges in this evolving landscape. The Malaysia Technical University Network (MTUN)which includes institutions such as University Malaysia Pahang Al-Sultan Abdullah (UMPSA) and University Teknikal Malaysia Melaka (UTeM). MTUN plays a crucial role in shaping the nation's skilled workforce. MTUN institutions are known for their practical, application-oriented curricula, aimed at producing industry-ready graduates in engineering, technology, and applied sciences. As such, blended learning and digital pedagogical tools are especially relevant in MTUN, where hands-on training and theoretical knowledge must be effectively balanced. To improve student outcomes and assist their adaptation to the constantly changing educational landscape, it is essential to comprehend the elements that lead to academic accomplishment in blended learning contexts. Among these, examining the connection between humor style and academic achievement offers important insights into how to impact student success and offers direction for creating more efficient teaching and learning methods. A strong communication tool with a lot of educational potential is humor (Neff & Rucynski, 2021). Research has examined the effects of using content-related comedy in the classroom on students' emotional and cognitive development over the past few decades, and it has been shown to be an essential tool for improving the efficacy of both teaching and learning.

For technical students, such as those enrolled in MTUN institutions, the use of humor in teaching is especially important. Technical and engineering education often involves complex, abstract content that can be cognitively demanding and stress-inducing. Humor, when used appropriately, can serve as a coping mechanism, help clarify difficult concepts, and foster a more engaging learning atmosphere. Moreover, technical students who often face demanding schedules and pressure to excel can benefit from the emotional relief that humor provides. Humor can strengthen relationships between students and instructors, reduce anxiety in the classroom, and increase motivation, all of which are essential for academic perseverance and success. Past studies have explored various types of humor and the reasons behind their use, examining whether humor can aid in students' learning (Bakar & Kumar, 2019). However, much of this research has focused primarily on students' or researchers' perspectives on humor, often overlooking the role of lecturers. Specifically, there is a gap in understanding how lecturers themselves use humor effectively in the classroom and how this influences student engagement and academic success.

Blended learning, as defined by Mosa et al. (2012), refers to a learning approach that combines traditional classroom instruction with online learning. Similarly, Hussin et al. (2017) describe blended learning as the integration of conventional teaching methods with online components. In such environments, lecturers take on the roles of facilitators and mediators, while students are expected to be active participants in the learning process (Nguyen, 2022). The incorporation of educational technologies within blended learning enhances traditional teaching methods, facilitating a more student-centred approach that utilizes information, communication, and multimedia technologies (Halim & Aris, 2016). This approach fosters interactive self-learning among students, creating an environment that supports academic achievement and overall student success (Chong & Lim, 2023).
Universities play a significant role in shaping students' personalities and academic achievements. Along with providing services and support to students, the teaching and learning approaches adopted by universities also have a profound impact on student success. In response to the COVID-19 pandemic, many universities have shifted towards hybrid lecture systems and blended learning methods. While this approach encourages students to be more creative and learn independently, it may also present challenges that affect academic achievement, such as a lack of interest, dropout rates, and a lack of willingness to take responsibility (Madigan & Curran, 2021). Despite these challenges, blended learning has been found to reduce stress levels in students (Bowden, 2022). Therefore, blended learning may be a viable solution for students experiencing stress-related issues.

Panjaitan & Tambunan (2019) found that students generally accept blended learning methods, particularly the millennial generation, who are exposed to the use of information and communication technology such as laptops, smartphones, and the internet. However, their findings also suggest that blended learning has a negative perception among students, especially about managing teaching materials and assignments. Besser et al. (2022) also found that students enrolled in online and hybrid courses reported higher levels of stress than those in face-to-face courses. Furthermore, the study revealed that students in blended learning courses felt they had less control over their learning, which can contribute to higher levels of stress (Besser et al., 2022).

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1.1 The Effect of Humor

Files Humor can be defined as the quality of action, stimulating speech and writing happy emotions, strangeness, excitement, fun and entertainment (Simpson & Weiner, 1989). It can also be defined as any activity that entertains and causes laughter and fun (Beermann & Ruch, 2009; Carver & Connor-Smith, 2010). Lang & Lee (2010) state that humor refers to activities such as uttering words or sharing funny stories, teasing or imposing on others, spontaneous action, parodies, and committing acts that self-embarrassment. Humor works to reduce tension or stress experienced by an individual, anxiety (Cheung & Yue, 2012), attract people's attention, promote effective communication between individuals, help forget the problem that has been experienced for a while, manage emotions, and build a sense of belonging (Cruthirds, 2006; Terrion & Ashforth, 2002).

According to Parsonson (2012), the use of humor in teaching and learning can reduce stress, increase a positive learning atmosphere, and make teaching and learning activities more enjoyable. It can also attract students' attention and increase the interaction between students and teachers. Less interactive delivery methods in teaching and learning can cause students to become bored and lose focus on the lesson to be delivered, leading to various disciplinary issues such as skipping class, lack of attention during class, vandalism, and so on (Wan Mansor, 2014). To overcome these issues, it is important to create a classroom environment that is more attractive and encourages students to participate more during classes. For example, if the classroom is balanced with humor and laughter, then it is certain that the pressure faced by students will be less (Manan & Yahya, 2011). Injecting elements of humor in teaching and learning activities can stimulate the interest and creativity of students if carried out appropriately.

Humor has been recognized as a valuable tool for fostering social connections and alleviating stress. Additionally, research suggests that humor can positively impact student achievement. Loo & Wan (2013) observed that incorporating humor into classroom activities led to improved student engagement and academic performance, while another study by Loo & Wan (2014) found that humor facilitated better retention of information. Isa et al. (2019) further found that students who displayed affiliative and self-enhancing humor were able to regulate their stress levels. In the absence of humor in the classroom, the learning environment may be negatively affected, leading to diminished learning experiences and decreased student engagement. To address this, Hellman (2007) recommends the use of humor in online instruction to increase participation and engagement, particularly in more challenging subjects and courses.

The potential benefits of humor on student achievement have been explored by researchers from various angles. One possible explanation for the positive effect of humor is that it helps students relax and focus better, as humor is related to positive emotions and the satisfaction of social relationships among students (Dozois et al., 2009). Additionally, humor has been shown to enhance creativity and improve information retention (Cayirdag & Acar, 2010). Another possible reason is that humor contributes to a more positive classroom environment, which in turn leads to better student achievement. Desberg (1981) posits that humor can reduce stress and tension immediately, which creates a more positive and enjoyable learning experience for students.

Empirical evidence also supports the positive relationship between humor and student achievement. For instance, Humor and Education Research (HER) found that students exposed to humorous teaching methods scored significantly higher on standardized tests than those who were not exposed to humor (Patton, 2006). Similarly, a study by Lefcourt and Martin (2012) found that students who experienced humorous teaching methods achieved higher grades in math and science courses compared to those who did not. These findings highlight the potential of humor as a tool to improve student engagement and academic performance.

Humor has long been recognized as a powerful tool in education, capable of engaging students, reducing stress, and promoting a positive classroom environment. However, despite the growing body of research on the topic, the precise relationship between humor and student achievement remains a topic of debate among scholars. Some researchers argue that humor has a positive effect on student achievement. For instance, Patton (2006) asserts that the use of humor in pedagogy can lead to increased student engagement and better learning outcomes. Similarly, Lefcourt and Martin (2012) contend that humor can be an effective coping mechanism for students facing stress and adversity.

Nevertheless, others argue that the impact of humor on student achievement is less clear. For instance, some scholars have noted that the use of humor can be culturally specific, with certain types of humor being more effective in certain contexts (Mazer et al., 2015). Additionally, there is evidence to suggest that humor can be misused or overused in the classroom, leading to a negative impact on student achievement (Berk, 2001).

One challenge in understanding the relationship between humor and student achievement is the lack of a unified theory of humor. Duncan et al. (1990) note that there is no specific theory that explains the various types, functions, and characteristics of humor. However, Martin (2003) has identified several distinct styles of humor behavior, including affiliative, self-enhancing, aggressive, and self-defeating humor. These styles differ in terms of their underlying motivations and effects on interpersonal relationships. Despite the ongoing debate, the majority of research suggests that humor does have a positive effect on student achievement. For instance, a meta-analysis

of over 100 studies on humor and education found that the use of humor was associated with improved student performance on a variety of measures, including academic achievement and engagement (Mora-Ripoll, 2017). In a nutshell, while the exact relationship between humor and student achievement remains unclear, the evidence suggests that humor can be an effective tool for promoting engagement, reducing stress, and improving learning outcomes in the classroom. Meanwhile, educators should be mindful of the potential risks associated with the misuse or overuse of humor, as well as the importance of cultural context and individual differences in the use of humor.

2. Methodology

A quantitative survey was conducted on a sample of 307 students who were randomly selected from a two MTUN; Universiti Teknikal Malaysia Melaka (UTeM) and Universiti Tun Hussein Onn Malaysia (UTHM). The research instrument utilized was a set of questionnaires that contained both negative and positive phrases. Prior to analysis, the negative items were converted into positive items. The questionnaire comprised three sections, which aimed to measure (i) students' demographics, (ii) student achievement using the Academic Self-Concept (ASC) scale developed by Reynolds (1988), and (iii) students' humor style using The Humor Styles Questionnaire (HSQ) developed by Martin (2014). All items were measured using a seven-point Likert Scale, ranging from "totally disagree" to "totally agree." The data was analyzed using SPSS version 26, and a range of statistical analyses were conducted, including reliability analysis, descriptive statistics, mean comparisons, Pearson Correlation coefficient, and regression analysis. The data was interpreted using a mean scale, which was categorized into low (0.00 - 2.33), medium (2.34 - 4.67), and high (4.68 - 7.00) degrees.

3. Findings and Discussion

This section presents the findings of the study on the use of humor in teaching technical students and discusses their implications in relation to the research objectives. The results highlight how humor influences students' emotional well-being, classroom engagement, and overall academic motivation. Each finding is interpreted to explain how humor contributes to reducing anxiety, strengthening student–teacher relationships, and supporting persistence among students who often face demanding schedules and performance pressures. The discussion also connects these findings to existing literature, examining areas of alignment and divergence. Through this analysis, the study seeks to provide a clearer understanding of the role of humor in enhancing the learning experience of technical students and to offer valuable insights for educators and future research.

3.1 Student Demographic

The survey sample comprised 307 respondents, including 135 males (44.0%) and 172 females (56.0%). Respondents were from two universities: University Teknikal Malaysia Melaka (UTeM) with 122 participants (39.7%), and University Tun Hussein Onn Malaysia (UTHM) with 185 participants (60.3%). The majority identified as Malay (47.6%, *n* = 146), followed by Chinese (26.4%, *n* = 81), Indian (23.5%, *n* = 72), and others (2.6%, *n* = 8). In terms of education, most respondents were pursuing a bachelor's degree (84.4%, *n* = 259), while smaller proportions were enrolled in diploma (7.5%, *n* = 23) and master's degree programs (7.5%, *n* = 23). Only two respondents (0.7%) were pursuing PhDs. Details of the data as Table 1.

Table 1 *Demographic of respondents*

Item	Sub item	Frequency (n)	Percentage (%)
Gender	Male	135	44.0
	Female	172	56.0
Nationality	Malay	146	47.6
	Chinese	81	26.4
	Indian	72	23.5
	Others	8	2.6
Level of education	Diploma	23	7.5
	Bachelor's Degree	259	84.4
	Master's Degree	23	7.5
	Doctor of Philosophy	2	.7
Course	Engineering	144	46.9
	Non-Engineering	163	53.1

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Item	Sub item	Frequency (n)	Percentage (%)
University	UTeM	122	39.7
	UTHM	185	60.3

According to the analysis in Figure 1, the majority of non-engineering course students preferred physical classes over online classes, with 163 out of 307 respondents (53.1%) indicating this preference.

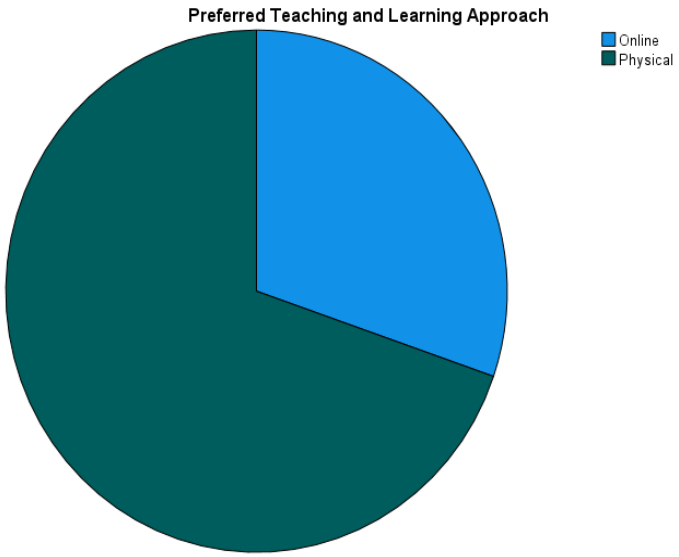

Fig. 1 *Preferred teaching and learning approach*

3.2 Student Achievement

The findings show in Table 2 that the comparison means technique provides important insights into students' academic self-concept, an essential predictor of academic motivation and achievement. With an overall mean score of 4.23 (moderate), the results suggest that while students generally view themselves as capable and motivated, there remains room for growth in strengthening their academic confidence.

The analysis of students' academic self-concept yielded a moderate overall mean score of 4.23, indicating that students generally perceive themselves as academically competent but not exceptionally so. The highest-rated item, *"If I try hard enough, I will be able to get good grades"* (mean = 5.49), reflects a strong internal locus of control and belief in the value of effort. This belief aligns with the concept of academic self-efficacy, which recent research continues to identify as a key predictor of academic persistence and achievement (Putwain et al., 2021). High mean scores in items such as *"Being a student is a very rewarding experience"* (5.46) and *"I do well in my courses given the amount of time I dedicate to studying"* (5.03) further support the view that students find personal value and satisfaction in their academic pursuits. This intrinsic motivation is essential for sustained academic engagement, as emphasized in recent literature on student motivation post-COVID (Martin & Marsh, 2022).

In contrast, several items received much lower scores, such as *"I feel I do study enough before a test"* (mean = 3.11) and *"In most of the courses, I feel that I prepared better than my classmates"* (mean = 2.95). These results suggest students may struggle with self-regulated learning strategies, an area of concern that has gained prominence considering increased online and hybrid learning environments (Panadero et al., 2021). The moderate-to-low confidence in preparation also points to a potential mismatch between students' aspirations and their academic behaviors. Interestingly, students expressed a strong desire for self-improvement, as shown by the item *"I'd like to be a much better student than I am now"* (mean = 5.15), consistent with a growth mindset orientation. Recent studies show that fostering growth mindsets in higher education leads to better learning outcomes, particularly when coupled with feedback and reflective learning (Yeager et al., 2023).

The perception of a generally just academic environment is shown by items such as "I feel capable of helping others with their class work" (mean = 4.94) and "I usually get the grades I deserve" (mean = 4.81). These items show confidence in one's academic talents and fairness in evaluation. Academic resilience and well-being are favorably correlated with this perspective (Zhou et al., 2021). All things considered, the results indicate that although students understand the value of work and have a moderate level of confidence in their skills, there are

still gaps in their study habits, time management, and academic self-regulation. Academic coaching, individualized feedback, and time management training are examples of interventions that support these areas and have been demonstrated to improve student achievement and lessen academic anxiety (Credé & Phillips, 2021). Universities and instructors should take these into consideration.

Table 2 *Mean of student achievement*

Label	Items	Mean	Std. Deviation	Mean Interpretation
z1	Being a student is a very rewarding experience	5.46	1.424	High
z2	If I try hard enough, I will be able to get good grades	5.49	1.401	High
z3	Most of my instructors think that I am a good student	4.59	1.465	Medium
z4	If I try hard I will do well in school	4.08	1.671	Medium
z5	I often expect to do greatly on exams	4.03	1.761	Medium
z6	All in all, I feel I am a capable student	4.89	1.432	Medium
z7	I do well in my courses given the amount of time I dedicate to studying	5.03	1.414	High
z8	My parents are satisfied with my grades in college	4.26	1.750	Medium
z9	Others view me as intelligent	4.67	1.441	Medium
z10	Most courses are very easy for me	4.16	1.716	Medium
z11	I don't feel like dropping out of school	3.70	1.750	Medium
z12	I do better than most of my classmates in school	3.22	1.582	Medium
z13	Most of my instructors think that I am a good student	4.5	1.483	Medium
z14	At times I feel college is too easy for me	3.27	1.520	Medium
z15	All in all, I am proud of my grades in college	4.77	1.479	High
z16	Most of the time while taking a test I feel confident	4.64	1.480	Medium
z17	I feel capable of helping others with their class work	4.94	1.420	High
z18	I feel teachers' standards are achievable for me	3.46	1.545	Medium
z19	It is easy for me to keep up with my class work	3.28	1.412	Medium
z20	I am satisfied with the class assignments that I turn in	4.86	1.364	High
z21	I don't feel like a failure	3.32	1.587	Medium
z22	I feel I do study enough before a test.	3.11	1.524	Medium
z23	Most exams are easy for me	3.94	1.538	Medium
z24	I have confident that I will do well in my major	3.41	1.467	Medium
z25	For me, studying hard pays off	5.05	1.660	High
z26	I don't have a hard time getting through school	3.32	1.595	Medium
z27	I am good at scheduling my study time	4.51	1.626	Medium
z28	I have a fairly clear sense of my academic goals	4.67	1.528	Medium
z29	I'd like to be a much better student than I am now	5.15	1.556	High
z30	I often get encouraged about school	3.70	1.534	Medium
z31	I enjoy doing my homework	4.76	1.688	High
z32	I consider myself a very good student.	4.65	1.512	Medium
z33	I usually get the grades I deserve in my courses	4.81	1.423	High
z34	I study as much as I should	3.50	1.607	Medium
z35	I usually feel on top of my work by finals week	4.69	1.484	High
z36	Others consider me a good student	4.75	1.423	High
z37	I feel that I am better than the average college student	4.51	1.560	Medium
z38	In most of the courses, I feel that I prepared better than my classmates	2.95	1.429	Medium
z39	I feel that I do have the necessary abilities for certain courses in my major.	3.42	1.531	Medium
z40	I have good study habits	3.62	1.740	Medium
	Total	4.23	1.538	Medium

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3.3 Humor Style

Figure 2 presents the mean scores of four humor styles, namely affiliative humor, self-enhancing humor, aggressive humor, and self-defeating humor, among Malaysian students. The four factors are identified as items a, b, c, and d. The results indicate that self-enhancing humor obtained the highest mean score of 4.450, followed by affiliative humor with a mean score of 4.301. Self-defeating humor recorded a mean score of 4.045, whereas aggressive humor demonstrated the lowest mean score at 3.758.

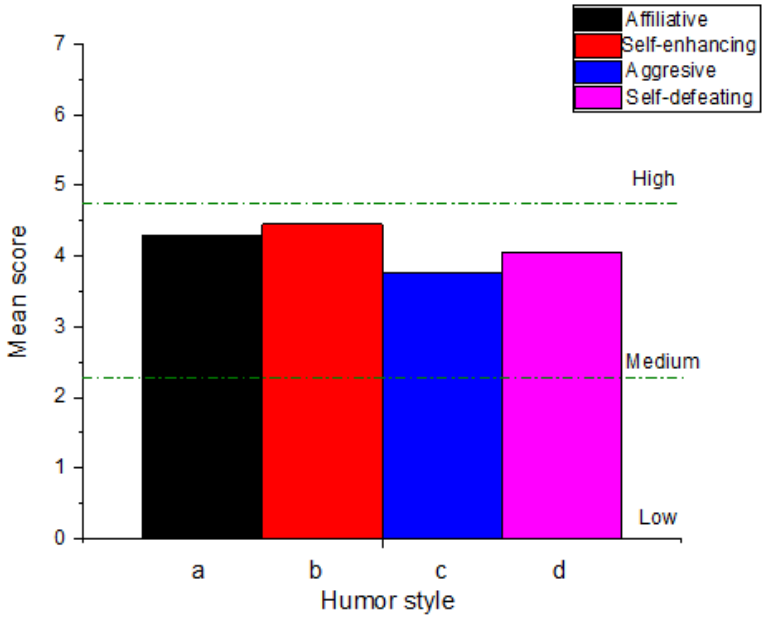

Fig. 2 *Total mean score of humor style*

The mean scores of four humor styles consist of affiliative, aggressive, self-defeating, and self-enhancing—among students are shown in Figure 4. Self-enhancing humor (mean ≈4.45) received the highest score, according to the results, suggesting that many students utilize comedy as a coping strategy to keep a positive attitude and handle stress. This is consistent with new research showing that students who engage in self-enhancing humor have improved resilience, emotional control, and psychological well-being (Tian et al., 2022). According to Heintz and Ruch (2021), affiliative humor came in second, indicating students' propensity to utilize humor to form social bonds, which has been demonstrated to foster peer affection and lessen social anxiety. The lowest mean score, on the other hand, indicated that aggressive humor which is typified by sarcasm and ridicule is the least desired style, most likely because it negatively affects relationships and classroom dynamics (Samson & Gross, 2021). Self-defeating humor also registered a moderate score, indicating that some students may use humor to downplay their insecurities or gain social approval, a pattern that has been linked to lower self-esteem and increased stress (Heintz et al., 2020). Overall, the predominance of adaptive humor styles suggests that the student population tends to use humor in positive and socially constructive ways.

Meanwhile, the data presented in Table 3 illustrates the mean score for the affiliative humor style. It was found that the item with the highest mean score in the self-efficacy factor was "a6 - I enjoy making people laugh" with a mean score of 4.94, followed by "a4 - I laugh and joke a lot with my friends" with a mean score of 4.89. Additionally, several other items in the affiliative humor style scored a medium mean score, including "a1 - I usually laugh or joke around much with other people", "a2 - I don't have to work very hard at making other people laugh", "a3 - I rarely make other people laugh by telling funny stories about myself", "a5 - I usually like to tell jokes or amuse people", "a7 - I often joke around with my friends", and "a8 - I usually can think of witty things to say when I'm with other people", with mean scores of 4.30, 4.34, 4.45, 3.64, 4.16, and 3.68, respectively.

Table 3 *Mean score and standard deviation of affiliative humor*

Label	Items	Mean	Std. Deviation	Mean Interpretation
a1	I usually laugh or joke around with other people.	4.30	1.883	Medium
a2	I don't have to work very hard at making other people laugh -- I seem to be a naturally humorous person	4.34	1.705	Medium
a3	I rarely make other people laugh by telling funny stories about myself	4.45	1.777	Medium
a4	I laugh and joke a lot with my friends.	4.89	1.603	High
a5	I usually like to tell jokes or amuse people.	3.64	1.719	Medium
a6	I enjoy making people laugh.	4.94	1.653	High
a7	I often joke around with my friends.	4.16	1.788	Medium
a8	I usually can think of witty things to say when I'm with other people.	3.68	1.665	Medium
	Total	4.30	1.724	Medium

Table 4 presents the mean scores for the self-enhancing humor style. The results showed that the two items with the highest mean scores were "b5 - If I'm by myself and I'm feeling unhappy, I try to think of something funny to cheer myself up" and "b8 - I don't need to be with other people to feel amused -- I can usually find things to laugh about even when I'm by myself," both with a mean score of 4.78. The item with the next highest mean score was "b3 - If I am feeling upset or unhappy, I usually try to think of something funny about the situation to make myself feel better" with a mean score of 4.70.

Meanwhile, items "b1 - If I am feeling depressed, I can usually cheer myself up with humor", "b2 - Even when I'm by myself, I'm often amused by the absurdities of life", "b4 - My humorous outlook on life keeps me from getting overly upset or depressed about things", "b6 - Even if I am feeling sad or upset, I usually still have my sense of humor", and "b7 - I don't need to be with other people to feel amused - I can usually find things to laugh about even when I'm by myself" scored medium mean scores with mean scores of 4.55, 4.38, 4.54, 3.48, and 4.39, respectively.

Table 4 *Mean score and standard deviation of self-enhancing humor*

Label	Items	Mean	Std. Dev.
b1	If I am feeling depressed, I can usually cheer myself up with humor.	4.55	1.702
b2	Even when I'm by myself, I'm often amused by the absurdities of life.	4.38	1.723
b3	If I am feeling upset or unhappy, I usually try to think of something funny about the situation to make myself feel better.	4.70	1.810
b4	My humorous outlook on life keeps me from getting overly upset or depressed about things.	4.54	1.659
b5	If I'm by myself and I'm feeling unhappy, I try to think of something funny to cheer myself up.	4.78	1.686
b6	Even If I am feeling sad or upset, I usually still have my sense of humor.	3.48	1.655
b7	It is my experience that thinking about some amusing aspect of a situation is often a very effective way of coping with problems.	4.39	1.683
b8	I don't need to be with other people to feel amused -- I can usually find things to laugh about, even when I'm by myself.	4.78	1.668

Table 5 reports the mean scores for the aggressive humor style. The results indicate that all items demonstrated mean scores within the medium range. Among these items, item c5, "Sometimes I think of something that is so funny that I cannot stop myself from saying it, even if it is not appropriate for the situation," recorded the highest mean score, with a value of 4.23. The second highest mean score was for item "c6 - I will participate in laughing at others when all my friends are doing it," with a mean score of 3.052. The third highest mean score was for item "c3 - When telling jokes or saying funny things, I am usually not very concerned about how other people are taking it," with a mean score of 4.05.

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Other items in the aggressive humor style were interpreted as having medium mean scores. These items included “c1 - If someone makes a mistake, I will often tease them about it,” “c2 - People are usually offended or hurt by my sense of humor,” “c4- I like it when people use humor as a way of criticizing or putting someone down,” “c7 - If I don't like someone, I often use humor or teasing to put them down,” and “c8 - When something is really funny to me, I will laugh or joke about it even if someone will be offended.” These items meant scores of 3.64, 3.97, 3.14, 3.59, and 3.36, respectively.

Table 5 *Mean score and standard deviation of aggressive humor*

Label	Items	Mean	Std. Dev.
c1	If someone makes a mistake, I will often tease them about it.	3.64	1.895
c2	People are usually offended or hurt by my sense of humor.	3.97	1.637
c3	When telling jokes or saying funny things, I am usually not very concerned about how other people are taking it.	4.05	1.685
c4	I like it when people use humor as a way of criticizing or putting someone down	3.14	1.800
c5	Sometimes I think of something that is so funny that I can't stop myself from saying it, even if it is not appropriate for the situation.	4.23	1.743
c6	I will participate in laughing at others when all my friends are doing it.	4.08	1.685
c7	If I don't like someone, I often use humor or teasing to put them down.	3.59	1.962
c8	When something is really funny to me, I will laugh or joke about it even if someone will be offended	3.36	1.746

Table 6 shows the mean scores for self-defeating humor. The highest mean score was obtained for the item "d7 - If I am having problems or feeling unhappy, I often cover it up by joking around, so that even my closest friends don't know how I really feel" with a score of 4.72, indicating that this type of humor was frequently used by the participants. The remaining items in self-defeating humor were found to have medium mean scores.

The item "d1 - I let people laugh at me or make fun at my expense more than I should" had a mean score of 3.82. The item "d2 - I will often get carried away in putting myself down if it makes my family or friends laugh" had a mean score of 4.21, while "d3 - I often try to make people like or accept me more by saying something funny about my own weaknesses, blunders, or faults" had a mean score of 3.77. The item "d4 - I often say funny things to put myself down" had a mean score of 3.2899. The item "d5 - I often go overboard in putting myself down when I am making jokes or trying to be funny" had a mean score of 4.15, and "d6 - When I am with friends or family, I often seem to be the one that other people make fun of or joke about" had a mean score of 4.18. Finally, "d8 - Letting others laugh at me is my way of keeping my friends and family in good spirits" had a mean score of 4.22. Relatively, these findings suggest that the participants use Self-defeating Humor to cover up their problems or unhappy feelings, to make others like or accept them more, and to keep their friends and family in good spirits. However, they also revealed that participants might go overboard in putting themselves down or letting others make fun of them, which might indicate some self-esteem issues.

Table 6 *Mean score and standard deviation of self-defeating humor*

Label	Items	Mean	Std. Dev.
d1	I let people laugh at me or make fun at my expense more than I should.	3.82	1.941
d2	I will often get carried away in putting myself down if it makes my family or friends laugh.	4.21	1.696
d3	I often try to make people like or accept me more by saying something funny about my own weaknesses, blunders, or faults.	3.77	1.860
d4	I often say funny things to put myself down	3.29	1.739
d5	I often go overboard in putting myself down when I am making jokes or trying to be funny.	4.15	1.596
d6	When I am with friends or family, I often seem to be the one that other people make fun of or joke about.	4.18	1.839
d7	If I am having problems or feeling unhappy, I often cover it up by joking around, so that even my closest friends don't know how I really feel.	4.72	1.678
d8	Letting others laugh at me is my way of keeping my friends and family in good spirits.	4.22	1.924

4. Pearson Correlation Analysis

Table 7 revealed Pearson correlation analysis provided insightful information about the connection between academic success and students' humor preferences. Academic achievement was shown to be significantly positively correlated with both self-enhancing humor ($r = .183$, $p < .01$) and affiliative humor ($r = .372$, $p < .01$). According to these results, children who often utilize humor to maintain a happy emotional state or to create social interactions typically do better academically. According to recent studies, affiliative and self-enhancing humor is associated with increased levels of motivation, psychological resilience, and classroom engagement—all of which have been shown to have a favorable effect on academic success (Heintz & Ruch, 2021; Tian et al., 2022).

On the other hand, a strong negative association was found between aggressive humor and academic achievement ($r = -.119$, $p < .01$), suggesting that students who use humor or sarcasm at the expense of others are more likely to perform poorly academically. This is in line with research by Samson and Gross (2021), who point out that aggressive humor can result in less peer support and interpersonal conflict, both of which are bad for academic performance. Iinterestingly, no significant relationship was found between academic achievement and self-defeating humor ($r = .020$, $p > .05$), and the correlation coefficient was near zero, suggesting a negligible connection. While some studies have shown that self-defeating humor can be associated with lower self-esteem or stress coping (Heintz et al., 2020), it appears that in this sample, such humor does not meaningfully influence academic performance. Overall, the findings emphasize the potential academic benefits of adaptive humor styles and underscore the importance of discouraging maladaptive humor, particularly aggressive forms, in educational contexts.

Generally, the findings indicate that humor styles can influence student academic achievement, and the effect may vary depending on the type of humor style used. Some styles of humor may have a positive effect on academic performance, while others may have a negative effect. This idea is supported by previous research, which suggests that the use of appropriate humor in the classroom can enhance student learning and engagement (Coté & Allahar, 2011; Martin & Lefcourt, 1984), whereas the use of inappropriate humor, such as aggressive or self-defeating humor, can lead to negative outcomes (Kuiper et al., 2004).

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Table 7 *Pearson correlation analysis*

		Academic	Affiliative	Self-enhancing	Aggressive	Self-defeating
Academic	Pearson Correlation	1	.372**	.183**	-.119*	.020
	Sig. (2-tailed)		.000	.001	.038	.729
	Sum of Squares and Cross-products	48.478	29.062	22.859	-7.985	2.739
	Covariance	.158	.095	.075	-.026	.009
	N	307	307	307	307	307
Affiliative	Pearson Correlation	.372**	1	.277**	-.186**	-.095
	Sig. (2-tailed)	.000		.000	.001	.098
	Sum of Squares and Cross-products	29.062	126.044	55.711	-20.221	-21.088
	Covariance	.095	.412	.182	-.066	-.069
	N	307	307	307	307	307
Self-enhancing	Pearson Correlation	.183**	.277**	1	-.129*	.485**
	Sig. (2-tailed)	.001	.000		.024	.000
	Sum of Squares and Cross-products	22.859	55.711	321.752	-22.392	172.394
	Covariance	.075	.182	1.051	-.073	.563
	N	307	307	307	307	307
Aggressive	Pearson Correlation	-.119*	-.186**	-.129*	1	.373**
	Sig. (2-tailed)	.038	.001	.024		.000
	Sum of Squares and Cross-products	-7.985	-20.221	-22.392	93.626	71.498
	Covariance	-.026	-.066	-.073	.306	.234
	N	307	307	307	307	307
Self-defeating	Pearson Correlation	.020	-.095	.485**	.373**	1
	Sig. (2-tailed)	.729	.098	.000	.000	
	Sum of Squares and Cross-products	2.739	-21.088	172.394	71.498	393.295
	Covariance	.009	-.069	.563	.234	1.285
	N	307	307	307	307	307

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

5. Regression Analysis

The primary objective of this study was to determine the relationship between the four humor styles (Self-defeating, Affiliative, Aggressive, and Self-enhancing) and student academic achievement using multiple regression analysis. The Independent Variables (IVs) included eight (8) items for each humor style, while the dependent variable comprised 40 items in total. The results of the analysis are presented in Table 8, which indicates an R-value of 0.385. This value suggests that there is a positive correlation between the four humor styles and student academic achievement overall. In other words, the type of humor used by students may impact their academic achievement in a positive manner.

The R^2 value obtained in this study was 0.149, indicating that the four independent variables (Self-defeating, Affiliative, Aggressive, and Self-enhancing) collectively explained 14% of the variance in student academic achievement. However, the adjusted R Square was found to be 0.137, with a standard error of the estimate of 0.370. This means that the linear regression model only describes 13% of the variance in the data, which is a relatively small amount. Therefore, the regression equation may not be very useful for predicting the contributing factors to student academic achievement due to the low value of R^2. To support this finding, previous studies have suggested that humor can improve cognitive functioning, academic motivation, and academic performance (Martin & Lefcourt, 1983; Crawford & Caltabiano, 2011). Additionally, humor has been linked to increased

creativity, problem-solving ability, and reduced stress, which can contribute to academic success (Ruch & Heintz, 2013; Fry & Hakim, 2016).

Table 8 *Model summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.385[a]	.149	.137	.36969

a. Predictors: (Constant), Self-defeating, Affiliative, Aggressive, Self-enhancing

6. Conclusion

The study's conclusions show that while aggressive humor has a negative correlation with student academic achievement, affiliative and self-enhancing comedy have a favorable correlation. Academic performance was not substantially correlated with the self-defeating humor style, indicating that it has little effect in academic settings. The results demonstrate the significant influence humor can have on students' academic performance, even if the multiple regression analysis revealed that humor types only partially account for the diversity in academic achievement. This implies that other instructional, psychological, and environmental elements probably have a greater impact on academic achievement. Crucially, humor is a behavior that is formed by culture and individual characteristics, and its effects on learning might alter depending on the situation and the audience. Future studies should examine how educational environments and cultural norms affect how different comedy styles are perceived and how effective they are, especially in multicultural and varied classrooms.

These findings are particularly useful to technical students, who frequently deal with demanding workloads and high standards of success in disciplines like computer science, engineering, and applied sciences. It may be possible to lower academic stress, promote peer collaboration, and boost motivation by incorporating affiliative and self-enhancing humor into technical education. These elements are crucial for student retention and performance in challenging programs. Without sacrificing academic integrity, teachers in technical fields can humanize difficult subjects and make difficult material more approachable by using suitable humor. On the other hand, it is best to refrain from using aggressive humor since it can create a bad learning atmosphere and make students feel less confident or like they belong, especially in technical courses where competition is fierce.

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Conflict of Interest

Authors declare that there is no conflict of interest regarding the publication of the paper.

Author Contribution

The authors confirm contribution to the paper as follows: ***study conception and design:*** *Sarala Thulasi Palpanadan, Khairunesa Isa, Nurliyana Md Rosni;* ***data collection:*** *Khairunesa Isa, Nurliyana Md Rosni;* ***analysis and interpretation of results:*** *Nurliyana Md Rosni, Wan Hanim Nadrah binti Wan Muda;* ***draft manuscript preparation:*** *Sarala Thulasi Palpanadan, Khairunesa Isa, Nurliyana Md Rosni, Wan Hanim Nadrah binti Wan Muda and Binti Maunah, M.Pd.I., Author All authors reviewed the results and approved the final version of the manuscript.*

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