

Research Article

Level of Art Flow among Faculty Students of Design and Applied Arts at Taif University

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The current study sought to determine the flow level of students at Taif University's College of Designs and Applied Arts and the disparities in average student grades based on gender, specialization, and academic level. The sample was drawn randomly from Taif University's College of Designs and Applied Arts and included (51) male and (138) female students majoring in arts, graphic design, interior design, fashion design, and textiles. The flow scale was produced by Al-Ghamdi (2021). Overall, there is an average flow level among the sample members, with no statistically significant gender differences in flow in the first, second, and sixth dimensions, but there are disparities in flow in the third, fourth, and fifth dimensions. Aside from one group (interior design, graphic design) that favored interior design, there were no statistically significant changes in flow related to expertise. According to the data, there were no statistically significant differences in the flow due to the dimensions' academic level variables (1st–6th). However, there were differences between the sample members in both dimensions (3rd–5th). Anxiety and tension, a lack of clarity of objectives, and dissatisfaction with the results were identified as the main reasons that impede the flow. Enrichment programs and material support were developed to boost student flow at Taif University's College of Designs and Applied Arts.

1. Introduction

Flow is a high-end sensation that many people encounter. It occurs when a person enters a state of unconsciousness while executing any activity, as he is wholly concentrated on his work, experiencing pleasure and contentment, and deferring personal demands and requirements. The flow comes to the university student, and he feels alone throughout his practice of the activities he undertakes with total concentration, forgetting himself, forgetting the time and place, and being in a state comparable to that of unconsciousness. This condition is related to enjoyment and mental clarity, motivating him to persevere and pursue creativity and mastery regardless of promotion or reward [1–4]. Taylor [5] defined flow in the artistic area as a balance of ability and challenge, focusing on activities with clear objectives and active participation in work under control and responsibility. Thus, creative individuals are compelled to engage in their training.

While university students studying art and design are assigned a set of assignments that demand artistic originality, Ahmed and Al-Borai [6] suggested that the academic quality of university students can be anticipated. Bukhari [7] established that theoretical flow and academic excellence are positively correlated. Additionally, it is suggested that the condition of flow is a significant component in constructing one's life purpose and contributes to creativity [8–11].

When it comes to designing levels, “flow” refers to the generalized pattern of player movement across the level. Flow refers more to the experience, feel, and fluidity of movement across a level [12–14]. Games with an arcade-style tempo may prioritize a continuous flow that has broad, generous turns and little pauses. The creation of the game's levels, as well as its maps and objectives, falls within the scope of the “Level Design” part of the process of developing video games [14–17]. The overarching goal of level design is to generate interactive situations or events inside the world of the game, intending to

test the player's skills and keep them interested in the experience. The term "flow" refers to the mental state that occurs when one is so engrossed in an activity that they forget about their surroundings [14,18,19]. Major aspects of flow include, as indicated in the definition, complete absorption in an activity and the experience of pure, uninhibited pleasure [20]. Among the many definitions and descriptions of flow found in the literature (e.g., [14, 18, 21–23], Shin [24] has identified five dimensions of flow experiences in the context of online participants' learning: enjoyment, telepresence, focused attention, engagement, and time distortion. In other words, when students are in a state of flow, they are fully immersed in the online learning environment mediated by media; they are fully attentive to tasks at hand; they are actively interacting with classmates and instructors; and they have lost all sense of physical time while learning [14, 24–27].

Numerous kinds of research have shown that characteristics such as self-efficacy [14, 28–30] and intrinsic value [31, 32] are predictors of learning flow. Furthermore, learners' interest and progress in learning may be impacted by how lessons are structured [33, 34]. For this reason, the researchers here included one external environment variable and two learner factors in their research hypothesis. In addition, a literature study shows that being in the zone has a good effect on performance in the classroom. For instance, Kiili [35] developed a multimedia learning model based on the idea that students are more likely to experience learning flow and succeed in class if they are engaged in activities that require less mental resources. Alnamrouti et al. [36], Joo et al. [14], Köprü and Ayas [37], and Marks [38] all found that there is a positive relationship between learner engagement and academic achievement. Overall, it seems that flow, among other factors, may play a significant part in determining academic success.

As a result, it is evident how critical it is to maintain a high flow of students at the College of Designs and Applied Arts, which this study will attempt to validate using the variables of gender, specialty, and academic level.

2. Research Problem

The researcher observed, through her work in the field of art education, that students have varying levels of flow; some take longer to complete artistic careers to the point of losing consciousness of time and place, while others demonstrate evident creativity in their works intending to be creative. At the same time, others complete their job more traditionally to pass the course. According to the study, the same stemmed from individual variances in artistic ability, which resulted in a variable flow level. Thus, the current study's objective was to ascertain the disparities in the flow level of students enrolled in the College of Designs and Applied Arts at Taif University as a function of specific variables.

Thus, the following questions are to identify the research problem:

- (1) What is the flow level among students of the College of Designs and Applied Arts at Taif University while performing artistic works according to certain variables?

- (2) Are there statistically significant differences between the average marks of students on the flow scale due to gender, specialization, and academic level?
- (3) What are the important reasons that hinder the flow of students while performing artistic works?

3. Objectives and Significance of the Study

This study has three main objectives. Firstly, it aimed to identify the flow level of students of the College of Designs and Applied Arts at Taif University according to certain variables. Secondly, it tried to identify the differences between the average marks of students on the flow scale according to certain variables. The third objective of this study is to identify the critical reasons that hinder the flow of students while performing artistic works.

The study is significant due to four main reasons. First of all, the research provides theoretical knowledge that aids in identifying factors that contribute to the theoretical concept's value in the applied arts. Moreover, the flow has a beneficial effect and significance for students at the College of Designs and Applied Arts, which emphasizes the practical side and requires its presence to engage in work and achieve the highest levels of artistic creativity [39, 40]. Thirdly, the study's findings can be beneficial to individuals interested in implementing programs to increase the flow of students at the College of Designs and Applied Arts as one of the favorable variables contributing to the growth and advancement of creativity. Lastly, the study unveils the feasibility of generalizing the flow scale to Saudi Arabian schools and universities.

3.1. Theoretical Framework. The term flow was coined in 1975 by a Hungarian scientist, Csikszentmihalyi [41], to study athletes' and artists' creativity and the exposure of their motivations for work that needs significant psychological and physical sacrifices. It turns out that they all used the phrase (Flow), which refers to the psychological state in which an individual experiences joy, as well as the term (Go with the flow), which refers to the fact that they live in a state of flow and flow with the water stream [42, 43]. Linguistically, the term "flow" refers to a forceful rush or engrossment; thus, "the water rushed" indicates that it flows strongly.

According to Al-Sadiq [44] and Al-Bahas [45], flow is a passing experience. Jackson and March [46] describe flow as the experimental situation when an individual is completely engaged in performance and a state of balance between personal abilities and required tasks. According to the researcher, flow is when a person is unaware while performing an activity because he is completely absorbed in it, unaffected by external conditions, and experiencing pleasure. It is defined procedurally as the grade earned by pupils on the flow scale employed in this study.

3.2. Flow Components. According to Saad and Ahmed [47], flow is a balance of challenge and skill, complete engrossment, clear objectives, task focus, control, and domination. Ali [48] defined flow as clear aims, immediate reactions

toward reaching the goal, and focusing on the current job. Al-Sayed [49], Harb et al. [50], and Mansour [51] verified these dimensions. According to the researcher, the flow of this study consists of six dimensions. A balance between the challenge and the artistic skill is required of students, which means that the student performs creative works with focus, attention, and complete engrossment until becoming fully immersed in the performance, accompanied by a sense of happiness, without waiting for external promotion, in addition to completely forgetting time and place.

3.3. The Importance of Flow. Al-Bakr [52] summarized points that assist the individual in achieving flow, including performing work that he enjoys while practicing, mastering its performance, and relating to his previous talents and experiences, as well as performing work that is of a reasonable level of difficulty, slightly exceeds his capabilities, and requires extensive effort during practice. He also emphasized the need of focusing on the current moment in which the action is being performed. Focus is the essence of flow and enables the release of self-power to execute tasks effortlessly. According to the researcher, flow enables development and prosperity, promotes mindful organization, and assists students in reaching their ideal experience.

3.4. Prior Studies. Al-Ghamdi [53] sought to ascertain the flow and detect disparities in students' average grades. Additionally, the flow scale was applied to a sample of 75 undergraduate art education students who were purposefully chosen. The study used a correlative descriptive technique and discovered gender differences favoring females at the flow level.

Al-Enezi [54] established a relationship between psychological flow and problem-solving in Kuwaiti students to ascertain gender disparities. The psychological flow and problem-solving scales were administered to a convenience sample of 120 male and female students using a comparative correlative descriptive technique. The researchers determined that flow is significantly connected with problem-solving, and there is a significant difference between male and female averages.

Ahmed and Al-Borai [6] used a descriptive approach to determine the level of psychological flow, optimistic thinking, and their link to certain variables. The psychological flow and positive thinking measures were administered to a randomly selected group of 240 female students from King Faisal University and Jeddah. The study revealed a positive association between the parameters of the psychological flow and optimistic thinking among the sample members.

Al-Enezi [55] sought to ascertain the degree of psychological flow experienced by female students at Al-Jouf University. The psychological flow and emotional balance scales were administered to a sample of 479 female students, and the study used a descriptive correlative technique. The findings indicated that female students had a moderate psychological flow and emotional balance and a relationship

between achievement and specialty in psychological flow and emotional balance.

Abu Ased [56] measured the psychological flow experienced by Mutah University students and its relationship to psychological resilience. The sample consisted of 830 students, and a flow scale was used to assess them and the development of the psychological resilience scale. The data indicate that females exhibit greater psychological flow and resilience, and there is an association between psychological flow and psychological stability.

It is evident from the studies discussed above that the flow of university students was studied in various ways, including descriptive, analytical, and experimental research, and the scales employed to quantify the quantity of flow in the study samples differed. While the current study is comparable to others in terms of objectives, sample size, and technique, it is distinguished by its focus on Taif University students enrolled in the College of Designs and Applied Arts, and this is the first study in this area.

3.5. Approach to the Study. The study has utilized a descriptive correlative approach in which the researcher is primarily interested in describing relationships among variables, without seeking to establish a causal connection.

3.6. Population under Study. During the academic year 2021, all undergraduate students at the College of Designs and Applied Arts were selected as a population for the study. They were 1,520 in total. Taif University was selected since it houses a variety of departments relevant to the researcher's field of study.

3.7. The Study's Sample. The study used random sampling. It comprised 189 male and female students, which represents approximately 13% of the study population, as indicated in Table 1.

Al-Ghamdi's [53] scale was used to achieve the study's objectives.

3.8. Scale Validity

3.8.1. Face Validity. The scale was submitted to 3 arbitrators to judge its appropriateness for the application, and the arbitrators agreed that there were no modifications.

4. Results and Discussion

4.1. Construction Validity (Internal Homogeneity of the Flow Scale). The internal homogeneity of the flow scale was verified by calculating the value of the Pearson correlation coefficient between the marks of the paragraphs and each of the total degrees of the dimension to which it belongs and the complete degree of the scale. It is shown in Table 2.

As shown in Table 2, all correlation coefficients between paragraphs and the dimension to which they belong are more significant than correlation coefficients between sections and total marks. Additionally, all correlation values are

TABLE 1: Numbers of the study sample according to demographic variables.

Independent variable	Sections of the independent variable	Number of sample members	Rate (%)
Gender	Male	51	27
	Female	138	73
	Total	189	100
Specialization	Arts	120	63.5
	Interior design	30	15.9
	Graphic design	18	9.5
	Fashion and textile design	21	11.1
Academic level	Total	189	100
	Lower levels	96	50.8
	Higher levels	93	49.2
	Total	189	100

positive and statistically significant at the significance level of ($\alpha = 0.05$), indicating the paragraphs' consistency with the dimension to which they belong and the validity of their association with the primary general feature, flow.

4.2. The Stability of Scale. The scale's stability was determined in two ways: the internal consistency coefficient was determined using Cronbach's alpha equation, and the corrected split-half coefficient was determined using the Spearman-Brown method for each of the scale's three dimensions and the total degree, as shown in Table 3.

According to Table 3, Cronbach's alpha stability coefficients for the six major scale dimensions ranged between 0.286 and 0.739, whereas the adjusted split-half method based on the Spearman-Brown equation ranged between 0.265 and 0.673. The total degree level implies that the scale is stable, and these values were deemed appropriate for the study's aims.

4.3. Answering the First Question. What is the flow level among students of the College of Designs and Applied Arts at Taif University?

Table 4 summarizes the arithmetic means, standard deviations, relative weight, and degree of consistency of the study sample members' responses to the flow scale's paragraphs, which consisted of 40 five-graded sections distributed over six key dimensions.

The extent of consistency was determined as follows:

Concerning the scale paragraphs, their scores ranged from 1 to 5, and the scale was divided into three categories:

- (i) (1–2.33) with a weak degree
- (ii) (2.34–3.66) with an average degree
- (iii) (3.67–5) with a high degree

The total score ranged from 40 to 200. The scale was divided into three categories:

- (i) (40–93.33) with a weak degree
- (ii) (93.33–146.66) with an average degree
- (iii) (146.67–200) with a high degree

Table 4 shows the total score level for the scale as a whole, and its value indicates an average degree of flow owned by the study sample members.

4.4. Answering the Second Question. Are there statistically significant differences between the mean scores of students on the flow scale due to gender, specialization, and academic level?

Multivariate analysis of variance (MANOVA) test was used to detect differences in response on the six-dimensional flow scale that are attributed to demographic variables, as shown in Table 5.

The impact of demographic variables on the dimensions of the flow scale and its total degree are detailed as follows.

4.5. The Effect of the Gender Variable on the Flow Level. Table 5 indicates no statistically significant differences in the flow of the study sample in the dimensions (first, second, and sixth) due to the gender variable. The aforesaid is indicated through the values of the F test and its statistical significance. If the total statistical significance values are more significant than 0.05, there are no statistical differences. The study sample members of different genders have the same flow level in these dimensions.

However, there are differences between the sample members in the dimensions (third, fourth, and fifth) due to the gender variable, and this is evident through the significance level, whose value is less than 0.05 for these dimensions; the study sample members have a different level of flow due to their gender and to know for which group of these differences are the arithmetic averages compared, as Table 6 indicates.

As shown in Table 6, the arithmetic means of males at the three dimensions (third, fourth, and fifth) and the total degree was more significant than the arithmetic means of females, indicating that males have a higher level of flow than females at these dimensions and the total degree in general. This finding contrasts with the study results of [54] and the study of [56].

4.6. The Effect of the Specialization Variable on the Flow Degree. Table 6 indicates that there are no statistically significant differences in the flow of the study sample in the fourth dimension due to the variable of specialization, as demonstrated by the value of the test (F), which is (2.087) with a statistical significance of (0.104); the study

TABLE 2: The internal homogeneity of the flow scale by the Pearson correlation coefficient.

Dimension	Paragraph no.	Text of the paragraphs	Paragraph correlation The dimension to which the paragraph belongs	Coefficient The overall degree for the scale
First: Balancing the challenge with the technical skills of the students	1	I can face any emergency that occurs while I am carrying out my artwork	0.230**	0.048
	2	I perform my tasks and my artwork regardless of my abilities and skills	0.508**	0.375**
	3	My abilities and skills are commensurate with the work of art	0.314**	0.124
	4	My skills and abilities allow me to perform challenging artworks	0.450**	0.233**
	5	I try to carry out challenging artworks in any way, even if it is incorrect, to pass the course	0.516**	0.393**
	6	I do challenging artwork	0.335**	0.249**
	7	I distribute my artwork over more than one day because I cannot double my efforts	0.586**	0.438**
	8	My success in performing my artwork is the result of chance and luck	0.625**	0.571**
	9	I move from one artwork to another without completing the first because it requires more effort	0.493**	0.479**
	10	I am concerned that the artworks assigned to me are beyond my abilities and skills	0.453**	0.322**
	11	I carry out my assigned artwork through reliance on my abilities and skills	0.449**	0.331**
Second: Paying attention and engrossment in the performance of the artwork	12	I get distracted while performing my assigned artwork	0.539**	0.424**
	13	I focus on performing the artwork until I finish it	0.461**	0.276**
	14	I perform my artwork, but my colleagues distract me, making me postpone work for another day	0.531**	0.447**
	15	My focus increases the more I am engrossed in the artwork assigned to me	0.633**	0.434**
	16	I feel overwhelmed and tired after completing my assigned artwork	0.466**	0.402**
	17	I can overcome the disrupting elements that distract me while performing artwork	0.583**	0.424**
Third: Feeling of enjoyment while performing artwork	18	I feel pleasure and enjoyment while performing my assigned artworks	0.480**	0.233**
	19	I feel tired and do my best to get my artwork done on time	0.585**	0.297**
	20	I do my assigned artwork due to fear of failing courses	0.621**	0.414**
	21	I feel like I exerted much effort while doing my artwork, and I got low grades	0.443**	0.284**
	22	I feel satisfied when I get the artwork done	0.392**	0.201**
	23	If I have the opportunity to change my major, I will do so	0.535**	0.318**
	24	I am eagerly waiting to complete my studies.	0.684**	0.440**

TABLE 2: Continued.

Dimension	Paragraph no.	Text of the paragraphs	Paragraph correlation The dimension to which the paragraph belongs	Coefficient The overall degree for the scale
Fourth: Loss of sense of self, time, and place	25	I often forget to eat and do not remember until after I finish doing my assigned artwork	0.688**	0.468**
	26	While I am doing artwork, I feel like time flies by without even realizing it	0.432**	0.238**
	27	When I perform my assigned artwork, I lose my sense of things around me	0.628**	0.256**
	28	I am tired, bored, and exhausted from the amount of artwork I have to do	0.667**	0.396**
	29	I get easily distracted while performing artwork	0.638**	0.389**
	30	I continue to perform the artwork until it is completed	0.475**	0.442**
Fifth: Feeling has the control and dominance when performing the artwork	31	I prefer to participate in easy artwork	0.608**	0.395**
	32	I prefer participating in artwork that requires competition and challenge	0.398**	0.184*
	33	I feel confident in myself to create artwork creatively	0.281**	0.183*
	34	When a colleague criticizes my artwork, I feel anxious and stressed	0.609**	0.522**
	35	I feel impatient as I perform my assigned artwork	0.631**	0.437**
Sixth: Clarity of objectives	36	I set my objectives precisely and clearly	0.839**	0.407**
	37	The objectives that I set for myself are achievable	0.776**	0.337**
	38	I perform my artwork spontaneously without a specific objective	0.540**	0.502**
	39	I develop a plan to perform my artistic objectives	0.783**	0.360**
	40	I carry out what I plan to achieve my artistic objectives	0.829**	0.343**

*Correlation is significant at the 0.05 level (two-tailed). **Correlation is significant at the 0.01 level (two-tailed).

TABLE 3: The values of the stability coefficients for the social responsibility scale and its main dimensions.

Dimension	Number of paragraphs	Cronbach's alpha	Stability coefficient	
			Before correction	After correction
First	11	0.651	0.493	0.265
Second	6	0.387	0.358	0.536
Third	7	0.363	0.174	0.507
Fourth	6	0.592	0.482	0.564
Fifth	5	0.286	0.360	0.543
Sixth	5	0.739	0.522	0.673
The total degree of the flow scale	40	0.818	0.721	0.720

sample members have the same flow degree in this dimension regardless of their specialization. This conclusion is consistent with the investigation findings of Ahmed and Al-Borai [6].

However, there are differences between the sample members in the dimensions (first, second, third, fifth, and sixth) attributable to the variable of specialization, as indicated by the significance level for these

dimensions being less than (0.05). The study sample members exhibit varying degrees of flow due to their specialization, and to ascertain which group these differences favor, dimensional comparisons using Scheff were conducted.

As indicated in Table 7, there are differences in dimensions according to the variable of specialization. These distinctions are as follows.

TABLE 4: Arithmetic averages and standard deviations of the responses of the study sample to the paragraphs of the flow scale.

Dimension	Paragraph no.	Arithmetic average	Standard deviation	Relative weight	Order of the paragraph	The extent of the consistency
First dimension	1	3.73	0.915	74.60	22	High
	2	3.83	1.165	76.51	18	High
	3	3.86	1.099	77.14	16	High
	4	3.38	1.093	67.62	28	Average
	5	3.03	1.348	60.63	31	Average
	6	4.02	1.034	80.32	9	High
	7	3.70	1.153	73.97	24	High
	8	2.51	1.323	50.16	40	Average
	9	2.76	1.345	55.24	34	Average
	10	2.97	1.250	59.37	32	Average
	11	4.17	0.903	83.49	4	High
Second dimension	12	2.67	1.185	53.33	37	Average
	13	4.06	1.085	81.27	7	High
	14	2.52	1.335	50.48	39	Average
	15	4.08	0.999	81.59	6	High
	16	3.98	1.151	79.68	11	High
	17	3.60	1.050	72.06	26	Average
	18	3.86	1.156	77.14	17	High
	19	4.03	1.115	80.63	8	High
Third dimension	20	3.51	1.299	70.16	27	Average
	21	3.19	1.359	63.81	29	Average
	22	4.44	0.853	88.89	1	High
	23	2.67	1.588	53.33	38	Average
	24	3.95	1.243	79.05	13	High
Fourth dimension	25	4.00	1.158	80.00	10	High
	26	4.16	1.147	83.17	5	High
	27	3.83	1.050	76.51	19	High
	28	3.67	1.158	73.33	25	High
	29	2.76	1.369	55.24	35	Average
	30	4.21	1.044	84.13	2	High
	31	3.73	1.090	74.60	23	High
Fifth dimension	32	3.76	1.154	75.24	21	High
	33	4.21	1.059	84.13	3	High
	34	2.73	1.420	54.60	36	Average
	35	3.19	1.128	63.81	30	Average
Sixth dimension	36	3.87	1.034	77.46	15	High
	37	3.98	0.986	79.68	12	High
	38	2.86	1.210	57.14	33	Average
	39	3.83	1.179	76.51	20	High
	40	3.90	1.006	78.10	14	High
Dimensions and total degree						
First dimension: It consists of paragraphs 1–11		3.45	0.50	69.00	6	Average
Second dimension: It consists of paragraphs 12–17		3.49	0.57	69.74	5	Average
Third dimension: It consists of paragraphs 18–24		3.66	0.57	73.29	3	Average
Fourth dimension: It consists of paragraphs 25–30		3.77	0.66	75.40	1	High
Fifth dimension: It consists of paragraphs 31–35		3.52	0.60	70.48	4	Average
Sixth dimension: It consists of paragraphs 36–40		3.69	0.76	73.78	2	High
Total degree		143.21	16.382	71.60	Average	

TABLE 5: Findings of the multivariate analysis of variance to examine the differences attributable to demographic variables in the flow.

Source of variance	Dimension	Sum of squares	Degrees of freedom	Mean square	F percentage	Level of significance	Significance of differences
Gender	First	8.123	1	8.123	0.281	0.596	Not significant
	Second	10.498	1	10.498	1.027	0.312	Not significant
	Third	330.012	1	330.012	23.529	0.000	Significant
	Fourth	343.390	1	343.390	23.838	0.000	Significant
	Fifth	137.607	1	137.607	17.789	0.000	Significant
	Sixth	8.924	1	8.924	0.655	0.419	Not significant
Specialty	Total degree	2,655.396	1	2,655.396	10.791	0.001	Significant
	First	361.408	3	120.469	4.173	0.007	Significant
	Second	282.643	3	94.214	9.213	0.000	Significant
	Third	172.739	3	57.580	4.105	0.008	Significant
	Fourth	121.847	3	40.616	2.819	0.060	Not significant
	Fifth	156.796	3	52.265	6.757	0.000	Significant
Academic level	Sixth	222.727	3	74.242	5.448	0.001	Significant
	Total degree	4,119.600	3	1,373.200	5.581	0.001	Significant
	First	7.098	1	7.098	0.246	0.621	Not significant
	Second	4.699	1	4.699	0.460	0.499	Not significant
	Third	180.121	1	180.121	12.842	0.000	Significant
	Fourth	41.716	1	41.716	2.896	0.091	Not significant
Fault	Fifth	56.957	1	56.957	7.363	0.007	Significant
	Sixth	3.465	1	3.465	0.254	0.615	Not significant
	Total degree	923.996	1	923.996	3.755	0.054	Not significant
	First	5,282.799	183	28.868			
	Second	1,871.444	183	10.226			
	Third	2,566.764	183	14.026			
Total integer	Fourth	2,636.195	183	14.405			
	Fifth	1,415.603	183	7.736			
	Sixth	2,493.820	183	13.627			
	Total degree	45,030.947	183	246.071			
	First	5,660.571	188				
	Second	2,161.810	188				
Total integer	Third	2,976.952	188				
	Fourth	2,990.571	188				
	Fifth	1,688.571	188				
	Sixth	2,716.667	188				
Total degree	50,454.952	188					

TABLE 6: Arithmetic averages of the flow scale and its three significant dimensions according to the multivariate analysis of the gender variable.

Dimension	Gender	Number	Arithmetic average	Standard deviation	Average of standard error
Third	Male	51	27.12	3.856	0.540
	Female	138	25.11	3.900	0.332
Fourth	Male	51	24.41	3.683	0.516
	Female	138	21.96	3.904	0.332
Fifth	Male	51	18.59	3.119	0.437
	Female	138	17.26	2.880	0.245
Total degree	Male	51	147.24	18.842	2.638
	Female	138	141.72	15.180	1.292

4.7. *Balancing the Challenge with Technical Skills.* The data reveal no statistically significant differences in flow degree due to specialization for the first dimension, except when comparing the specializations of (graphics, fashion, and textile) to the specialty of fashion and textile design.

4.8. *Focusing Attention and Immersion in Performing the Artwork.* There are no statistically significant differences in the second dimension between the comparison groups except for the group (arts and interior) in favor of interior design, the group (arts, fashion, and textile) in favor of fashion and textile design, the group (interior and

TABLE 7: Dimensional comparisons by Scheffe method for the flow scale and its dimensions according to the multivariate analysis according to the specialization variable.

Dimension	Groups of comparison		Differences average	Standard error	Level of significance	Nature of significance	In favor of
	Group (A)	Group (B)					
First	Arts	Interior	-2.30	1.059	0.197	Not significant	—
		Graphics	1.73	1.311	0.627	Not significant	—
		Fashion and textile	-3.17	1.227	0.087	Not significant	—
	Interior	Graphics	4.03	1.546	0.082	Not significant	—
		Fashion and textile	-0.87	1.476	0.950	Not significant	—
		Graphics	Fashion and textile	-4.90*	1.666	0.037	Significant
Second	Arts	Interior	-2.35*	0.622	0.003	Significant	Interior
		Graphics	1.62	0.771	0.225	Not significant	—
		Fashion and textile	-2.26*	0.721	0.022	Significant	Fashion and textile
	Interior	Graphic	3.97*	0.909	0.000	Significant	Interior
		Fashion and textile	0.09	0.868	0.930	Not significant	—
		Graphics	Fashion and textile	-3.88*	0.979	0.002	Significant
Third	Arts	Interior	0.12	0.754	0.999	Not significant	—
		Graphics	-0.48	0.934	0.968	Not significant	—
		Fashion and textile	-0.90	0.874	0.785	Not significant	—
	Interior	Graphics	-0.60	1.102	0.961	Not significant	—
		Fashion and textile	-1.03	1.051	0.812	Not significant	—
		Graphics	Fashion and textile	-0.43	1.187	0.988	Not significant
Fourth	Arts	Interior	-0.42	0.735	0.953	Not significant	—
		Graphics	-0.02	0.911	0.960	Not significant	—
		Fashion and textile	-0.67	0.852	0.893	Not significant	—
	Interior	Graphic	0.40	1.074	0.987	Not significant	—
		Fashion and textile	-0.24	1.025	0.997	Not significant	—
		Graphics	Fashion and textile	-0.64	1.157	0.958	Not significant
Fifth	Arts	Interior	-1.90*	0.555	0.010	Significant	Interior
		Graphics	-0.27	0.688	0.985	Not significant	—
		Fashion and textile	0.97	0.643	0.518	Not significant	—
	Interior	Graphics	1.63	0.811	0.259	Not significant	—
		Fashion and textile	2.87*	0.774	0.004	Significant	Interior
		Graphics	Fashion and textile	1.24	0.874	0.572	Not significant
Sixth	Arts	Interior	-1.23	0.627	0.286	Not significant	—
		Graphics	2.67*	0.777	0.009	Significant	Arts
		Fashion and textile	1.53	0.727	0.221	Not significant	—
	Interior	Graphic	3.90*	0.916	0.001	Significant	Interior
		Fashion and textile	2.76*	0.874	0.021	Significant	Interior
		Graphics	Fashion and textile	-1.14	0.987	0.720	Not significant

TABLE 7: Continued.

Dimension	Groups of comparison		Differences average	Standard error	Level of significance	Nature of significance	In favor of
	Group (A)	Group (B)					
The total degree of flow scale	Arts	Interior	-8.08	3.012	0.070	Not significant	—
		Graphics	5.26	3.730	0.576	Not significant	—
		Fashion and textile	-4.50	3.490	0.645	Not significant	—
	Interior	Graphics	13.33*	4.399	0.030	Significant	Interior
		Fashion and textile	3.57	4.198	0.867	Not significant	—
		Fashion and textile	-9.76	4.740	0.240	Not significant	—

Based on the means reported in Table 7, the error term is mean square (error) = 217.738. *The mean difference is significant at the 0.05 level.

TABLE 8: Arithmetic averages of the dimensions of flow scale according to multivariate analysis according to the academic level variable.

Dimension	Academic level	Number	Arithmetic average	Standard deviation	Average of standard error
Third	Low levels	132	25.95	4.453	0.388
	High levels	57	24.95	2.46	0.326
Fifth	Low levels	132	17.86	3.008	0.262
	High levels	57	17.05	2.918	0.387

graphics) in favor of interior design, and the group (graphics, fashion, and textile) in favor of fashion and textile design.

4.9. The Feeling of Enjoyment and Loss of Self-Awareness, Time, and Place. The comparison reveals no statistically significant differences in the third and fourth dimensions due to the specialty variable.

4.10. The Feeling of Control in Performing Artwork. The comparison reveals no variations in the fifth dimension due to the variable of specialties. All students experience the same level of control while creating artwork, except for my two groups: arts and interior and interior, fashion, and textile, which lean toward interior design.

4.11. Clarity of Objectives. The comparison reveals no variation in the sixth dimension due to the specialty variable. All students, except for the following groups, have an equivalent degree of clarity on their objectives: arts and graphics for arts, interior and graphics for interior design, and interior, fashion, and textiles for interior design. In terms of the total degree of specialization on the flow scale, the data indicate no changes in flow between the comparison groups due to the variable of specialization. Each student has a similar degree of flow, except for one group (interior and graphics) that is more inclined toward interior design.

4.12. The Effect of the Academic Level Variable on the Flow Degree. The preceding table indicates that there are no statistically significant differences in the flow of the study sample in the dimensions (first, second, fourth, and sixth) associated with academic level, and the values of the F test indicate that members of the study sample, regardless of their educational level, have the same degree of flow in these four dimensions. This conclusion is similar to the findings of Al-Ghamdi [53] and Ahmed and Al-Borai [6].

However, there are differences between sample members in two dimensions (third and fifth) that are attributable to the academic level variable, as evidenced by the significance level for these dimensions being less than (0.05); members of the study sample exhibit varying degrees of flow as a result of their academic level. To determine which group these differences pertain to, Table 8 compares the arithmetic averages of various dimensions.

As shown in Table 8, the arithmetic mean of students at the lowest levels (first, second, third, and fourth) at the level of the two dimensions (fifth, sixth, seventh, and eighth) was more significant than the arithmetic means of students at the highest levels. It indicates that the flow degree of students at lower levels is greater than the flow degree of students at higher levels on these two dimensions.

4.13. Answering the Third Question. What are the most important reasons that impede the flow of students while performing artistic works?

TABLE 9: Notation of the paragraphs that have the least value in the arithmetic mean.

Paragraph no.	Text of the paragraph	Main idea
q8	My success in performing my artwork is fortuitous, the result of luck	Chance and luck
q14	I do my artwork, but my colleagues are distracting me, making me put off work for a day	Distraction and the effect of comrades
q12	I get distracted quickly while performing my assigned artwork	Distraction
q23	If I have the opportunity to change my major, I will do so	Dissatisfaction with the major
q34	When a colleague criticizes my artwork, I feel anxious and stressed	The effect of comrades, anxiety, and stress
q29	I get easily distracted while performing artwork	Distraction
q9	Move from one artwork to another without completing the first because it requires more effort	Fatigue
q38	I perform my artwork spontaneously without a specific goal	Lack of target
q10	I am concerned that the artworks assigned to me are beyond my abilities and skills	Anxiety and lack of self-confidence
q5	I try to accomplish challenging artworks in any way, even if it is incorrect, to pass the course	Anxiety
q35	I feel impatient as I perform my assigned artwork	Impatience
q21	I feel like I put in much effort while doing my artwork and got low degrees	Dissatisfaction with the findings
q4	My skills and abilities allow me to perform challenging artworks	Trust
q20	I do my assigned artwork for fear of failing courses	Fear
q17	I can isolate the stimuli that distract me while I am doing artwork	Distraction

The arithmetic mean was utilized for the paragraphs with the lowest value, and if the paragraphs with an average smaller than 3.67 are examined, they indicate a moderate degree of use, as indicated by Table 9.

After reviewing the major themes and grouping them according to their frequency of repetition between these paragraphs, the breakdown in flow is summarized as a distraction and lack of attention, the influence of comrades, anxiety, and tension, a lack of clear goals, and dissatisfaction with the findings.

5. Conclusion, Limitations, Suggestions, and Implications

According to the researcher’s findings, the reasons for the low student flow can be attributed to various factors. It includes those related to the course and its professor and factors related to the student himself, such as lack of enthusiasm, patience, and confidence in his ability to complete the assigned artwork. It is a failure to design a schedule corresponding with the duties allotted to him and a failure to establish an acceptable location and environment to perform his artwork.

Like all studies, this study was not free from limitations. The first limitation is related to the objective of the study. It means that this study only considered the flow level of students of the College of Designs and Applied Arts according to certain variables. The second limitation goes with participants. Only the students of the College of Designs and Applied Arts at Taif University participated in this study. Insufficient time was another limitation. This study was conducted in the second semester of the academic year 2021. Lastly, this study was conducted in the city of Taif, Kingdom of Saudi Arabia.

Future researchers are recommended to use a flow scale to assess the flow level in an art education course with a sample of school students. Moreover, they are suggested to

conduct a comparative study of art education teachers using the research’s proper factors. Moreover, it is recommended to conduct similar studies in other geographical contexts with more participants.

The study recommends increasing the number of students enrolled at Taif University’s College of Designs and Applied Arts by giving material and spiritual assistance and developing enrichment programs. Furthermore, it recommends enabling high-flow pupils to develop their artistic creativity through reasonable possibilities.

Flow, as a whole, is associated with a lot of positive outcomes. It has been linked to an increase in happiness, as well as higher levels of intrinsic motivation, more creativity, and improved emotional control, among other beneficial impacts. In addition, the flow may speed up the process of learning and the advancement of skills. Because flow occurs after we have mastered a skill, people who persistently sought out new challenges to discover flow experience a growth in their capabilities as well as an increase in their self-assurance. Moreover, the flow may increase your productivity by a factor of two. According to the findings of recent studies, the typical professional only spends 5% of their working day in a “flow state.” Productivity would double if the circumstances were such that an increase in flow experience to 15% could be achieved. Additionally, the flow has the potential to result in enhanced performance. Researchers have determined that one of the primary advantages of flow is that it can improve human performance in all aspects of human labor and creativity. This is one of the most significant benefits of flow. When you use flow, you obtain better outcomes in a shorter amount of time.

Data Availability

The data used to support this study are included in the manuscript.

Conflicts of Interest

The author declares that there are no conflicts of interest.

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