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Student Perceptions of Meaningful Learning and Academic Performance in Aeronautical Courses: A Quantitative Study

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Current literature on the predictive correlation between a student's perceived course value and their end-of-course results utilizing the Course Valuing Inventory (Nehari & Bender, 1978) has not been studied in aeronautics education. While research investigating various attributes of academic success exists, quantitative studies specifically addressing predictive variables of course success related to end-of-course grades in aeronautics education do not exist. Given the results of quantitative data, aeronautics academia can strategically implement specific variables into course planning and designing to create academic content that appeals to aeronautic students. The purpose of this quantitative, predictive correlational study is to examine the predictive correlational relationship between the predictor variables (course valuing, cognitive content, affective-personal, and behavioral factors) and the criterion variable (end-of-course grade) for undergraduate aeronautical degree-seeking students at a large, accredited, faith-based, non-profit, private university in the southeastern United States with a large student population. The convenience sample consisted of 137 undergraduate aeronautics students. Data were analyzed using multiple linear regression. The study results showed no significant connection between the predictor variables (course valuing, cognitive content, affective-personal, and behavioral factors) and the criterion variable (end-of-course grade).

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Introduction

This research aims to answer the research question, "How accurately can end-of-course grade be predicted by the subscales of the Course Valuing Inventory (CVI) for an undergraduate aeronautical student?" The empirical significance of this study lies in its potential contribution to the humanistic educational theory. The practical significance of this study lies in its potential contribution to the predictive factors related to the personalization of course content based on student perceived meaningfulness of their educational experience. The literature review presents a thorough review of the literature related to this topic. This literature review opens with the theoretical framework. The theoretical framework is guided by Untari's (2016) humanistic educational theory, supported by Carl Rogers' (1969) humanistic worldview. Following the theoretical framework, a thorough review of the related literature is provided. Immediately following the literature review, the methodology used in this research study is addressed. The findings are then presented, emphasizing the predictability of end-of-course grade by measuring the student's perception of course value, cognitive content, affective-personal, and behavioral factors measured by the Course Valuing Inventory (CVI; Nehari & Bender, 1978). The discussion, limitations, and recommendations for future research are presented. This article ends with a conclusion that provides a summary of the article. The findings and results of this study could not support the connection between the predictor variables and the criterion variable among undergraduate aeronautical students.

Literature Review

The purpose of this study is to explore whether specific factors—course valuing, content learning, personal learning, and behavioral learning—can predict the end-of-course grades of undergraduate aeronautical students enrolled in non-flight, non-ground courses required for their pilot degree program. Grounded in humanistic educational theory (Rogers, 1969; Untari, 2016), which emphasizes the motivations behind human learning, this study examines how these predictor variables influence academic success. The literature review investigates both cognitive and non-cognitive factors related to academic performance, with a focus on how undergraduate students perceive the meaning and value of coursework unrelated to their degree program.

Theoretical Framework

Carl Rogers (1969) emphasized that man is primarily in control of every facet of his life, including successes and failures (Hatlevik & Hovdenak, 2020; Purswell, 2019; Untari, 2016). Man controls his choices, investments, and values, freely deciding what is good or bad for himself. While man has this control, choices can be influenced by upbringing and environment (Cooper, 2013; Rogers, 1969). Thus, control is directed by consciousness. The humanistic approach to life emphasizes that man has a conscious that dictates the good and bad of an experience.

Humanism

The humanistic approach emphasizes that man has a conscience that dictates the value of experiences. Man desires growth, fulfillment, and meaning from life. Rogers (1969) noted that

conscience compels individuals to derive meaning from experiences. However, consciousness has limitations due to the fulfillment factor (George-Williams et al., 2019; Gupte et al., 2021; Rogers, 1969; Untari, 2016). How a man perceives an experience is shaped by whether his conscious desires are met (Nehari & Bender, 1978). Humans have self-directed awareness, and their consciousness influences their control over their environment. A man's reality is defined by his consciousness, making individualized reality difficult to observe. Although individuals create their reality, they can overcome influenced consciousness by finding personal value in experiences (Cooper, 2013; Purswell, 2019).

Humanistic Educational Theory

Humanistic educational theory draws from Maslow's (1968) needs hierarchy, Stenhouse's (1975) process-oriented curriculum, Knowles' (1980) andragogy, Freire's (1970) critical pedagogy, and Rogers' (1969) principles (Untari, 2016). The humanistic educational theory places the learner at the center of education. Humans determine their learning needs, design their paths, and apply knowledge as they see fit. Learning must fulfill internal needs and desires despite perceptions of usefulness. Humanistic educational theory emphasizes that learning must be self-directed and driven by a personal desire to derive meaning from experience (Untari, 2016).

Humanism in Humanistic Educational Theory. Humanism posits that man, as a product of nature, also controls it. The humanistic educational theory asserts that man governs his learning by combining control over nature with innate learning ability. Humanism positions man as the creator and owner of his education (Cooper, 2013; Untari, 2016). The humanistic educational theory is grounded in humanistic principles. “The educational principles of humanistic educational theory are based on the assumption that human beings have consciousness, understanding of self and reality, the ability to control their actions, and objectives for all activities” (Untari, 2016, p. 71).

Humanistic Educational Theory in a Learning Environment. According to Maslow (1968), man has an innate desire for self-actualization (Cooper, 2013; Purswell, 2019; Untari, 2016). Students must interpret experiences as tangible and purposeful to fulfill self-actualization. Learning experiences should elicit meaningful behaviors that align personal effort with learning outcomes. Considering the elements of humanism, humans exhibit predictors within the learning environment (Daniels & Mthimunye, 2019). They will invest effort if they believe their inputs yield practical outcomes. Despite individuality, humanistic educational theory identifies predictive patterns among students (Daniels & Mthimunye, 2019). Implementing humanistic educational theory as a framework for meaningful learning experiences can help unlock the predictive code of academic success. The learning environment must incorporate elements that motivate students to achieve learning objectives, providing a framework for customizable and meaningful educational experiences. Adult learners can pursue what they deem valuable, independent of societal opinions (Purswell, 2019; Yang & Hsu, 2020). Humanistic educational theory advocates for the development of the whole learner, integrating emotional, social, and cognitive growth to derive meaning from the learning experience (Purswell, 2019).

Related Literature

Contributors to Academic Success

Though research has laid out many contributing factors to academic success, there is no uniform definition or descriptor (Goegan & Daniels, 2021). Defining academic success and its contributors is dependent upon the academic environment. Many researchers believe that academic success is a catch-all phrase for a conglomerate of ideas associating student success with learning outcomes and contributions to the workforce (Goegan & Daniels, 2021). Research does agree on two broad contributing factors to academic success - non-cognitive (academic mindset, academic perseverance, learning strategies, social skills, and academic behaviors), placing the responsibility of academic success on the student and cognitive factors (course content, curriculum delivery methods, and teaching methodologies and pedagogies), placing responsibility on knowledge facilitators (Tepper & Yourstone, 2018).

Cognitive Factors

Course Valuing and Academic Success. Course valuing refers to learning experiences that are valuable, meaningful, and influential (Gupte et al., 2021; Hatlevik & Hovdenak, 2020; Nehari & Bender, 1978; Nel, 2017). Valuing an experience involves how students think and feel before, during, and after interactions (Galloway & Bretz, 2015; Heddy et al., 2017). Meaningful learning integrates thinking, feeling, and acting, empowering commitment and responsibility (Galloway & Bretz, 2015). Students ultimately decide to engage based on their perceived value of the experience (Cooper, 2013; Purswell, 2019). This decision hinges on their thoughts about content and feelings about the experience (Galloway & Bretz, 2015), affecting how much they value the experience. Finding value in an experience motivates achievement despite challenges (Cooper, 2013; Purswell, 2019). The experience must be perceived as worthwhile to overcome difficulties, as this found value can help students cope and succeed despite content-related challenges (Tepper & Yourstone, 2018).

Content Learning and Academic Success. Content learning, or the cognitive domain, pertains to how students acquire knowledge from subject matter (Nehari & Bender, 1978). According to Ausubel's (1963) theory of meaningful learning and Novak's (1993) human constructivism, learning occurs when new knowledge connects with prior knowledge and applies to practical situations like employability skills (Gupte et al., 2021; Parte et al., 2018; Schneider & Preckel, 2017). Mastery of content is achieved when learners incorporate knowledge into their existing frameworks (Parte et al., 2018). Cognitive content focuses on knowledge, free from emotions and assumptions.

Non-cognitive Factors

Personal Learning and Academic Success. Personal learning, or the affective-personal domain, encompasses the attitudes and motivations necessary for achievement (Daniels & Mthimunye, 2019; Gupte et al., 2021; Nehari & Bender, 1978). Students who relate academic experiences to their everyday lives demonstrate personal learning (Heddy et al., 2017; Priniski et al., 2018; Schneider & Preckel, 2017). Academic success is likely when content is personally

relevant (Priniski et al., 2018). Personal learning merges cognitive content with course valuing (Daniels & Mthimunye, 2019; Gupte et al., 2021; Nehari & Bender, 1978).

Students' perceptions of experiences can be skewed; however, fulfilling both academic and personal factors enhances engagement. When educators focus on personal relevance, cognitive content becomes more engaging (Galloway & Bretz, 2015; Gupte et al., 2021). Learners derive meaning from experiences that engage their interests (Maghiar et al., 2015; Nehari & Bender, 1978; Nel, 2017; Untari, 2016). Yang and Hsu (2020) found that integrating personal learning materials significantly affected academic success. Students need to see connections between their needs and realities (Hatlevik & Hovdenak, 2020; Sheldon & Kasser, 2001). Yang and Hsu (2020) noted that internal motivation stems from the practicality of courses. Success increases when course content is personally meaningful and practical (Hatlevik & Hovdenak, 2020; Sheldon & Kasser, 2001; Yang & Hsu, 2020).

Behavioral Learning and Academic Success. Behavioral learning is how the learner perceives the experiences as affecting relationships with others and interactions with course content (Nehari & Bender, 1978; Schneider & Preckel, 2017). Research indicates that positive behavioral patterns contribute to academic success, with students demonstrating these patterns showing greater persistence (Chen et al., 2018; Kassarnig et al., 2018). Student behaviors and attitudes toward the learning experience influence their motivation to succeed. Factors like class attendance and community building foster collaboration, impacting academic success. Kassarnig et al. (2018) showed that peer interactions correlated with greater community among peers leading to increased collaboration and information exchange, significantly impacting academic outcomes. Class attendance was also vital for fostering this community and enhancing behavioral learning. Behaviors, whether direct or indirect, significantly affect learning within the community (Cao et al., 2018; B. Chen et al., 2018; Kassarnig et al., 2018).

Kassarnig et al. (2018) noted that self-esteem and conscientiousness are key behavioral predictors of academic success, influencing both personal and community achievements. Cao et al. (2018) found that students exhibiting orderliness in their lives achieved greater academic success, as orderliness influenced their interactions and the behaviors of others. Students who value the curriculum display behavioral patterns, self-esteem, and conscientiousness conducive to achieving learning objectives (George-Williams et al., 2019). B. Chen et al. (2018) concluded that positive self-attitude and conscientiousness lead to higher achievements. If students perceive educational processes as unaligned with their motivations, their behaviors reflect this perception (B. Chen et al., 2018; Kassarnig et al., 2018). Overall, students' experiences shape their learning behaviors, university experience, community building, and academic achievements (Cao et al., 2018; George-Williams et al., 2019; Hatlevik & Hovdenak, 2020).

Summary

This literature review examined the foundational literature surrounding the various domains of the CVI (course value, content learning, personal learning, and behavioral learning) and their impact on academic success (end-of-course grade) (Maghiar et al., 2015; Sobral, 2004). According to the humanistic educational theory, the educational experience is successful if the student finds the experience valuable and meets a personal need (Nehari & Bender, 1978). After

a thorough literature review as well as correlation with the theoretical framework, aeronautics education has not been an area of research in correlating the specific domains of the CVI with student academic success resulting in the need to add to the literature on how the specific CVI predictors affect aeronautical students' academic success.

Methodology

The purpose of this non-experimental, predictive correlational study was to examine the predictive relationship between the predictor variables (course valuing, content learning, personal learning, and behavioral learning) and the criterion variable (end-of-course grade) for undergraduate aeronautical degree-seeking students. The outcome of this study lies in its potential contribution to the predictive factors related to the personalization of course content based on the individualized student perceived value and meaningfulness of their educational experience. The following research question and null hypothesis guided this correlational study:

Research Question

RQ1: How accurately can end-of-course grade be predicted by the subscales of the Course Valuing Inventory for an undergraduate aeronautical student?

Null Hypothesis

$H_0$1: There will be no significant predictive relationship between the criterion variable (end-of-course grade) and the linear combination of predictor variables (course valuing, content learning, personal learning, and behavioral learning) for undergraduate aeronautical students, as measured by the Course Valuing Inventory (CVI).

A non-experimental, predictive correlational design was chosen because numerical values were statistically analyzed, variables were not manipulated, and variables were compared to determine a relationship (Creswell, 2015; Gall et al., 2007). The predictive correlational research design allowed the researcher to examine relationships between two or more variables and allowed the researcher to determine the strength and direction of the variables and any predictive ability. (Creswell, 2015).

The study used a convenience sample of 113 undergraduate aeronautical pilot degree seeking students from a large, regionally accredited, faith-based, non-profit, private university in the southeastern United States. The sample consisted of participants who were at least 18 years old, were undergraduate aeronautical pilot degree-seeking students, had taken a non-ground or non-flight course (courses not directly related to piloting) at the university the term before the administration of the survey, and were willing to share their end-of-course grade. The sample size was determined to be sufficient to detect a correlational coefficient of 0.3 with a significance level of 0.05 and a statistical power of 80% (Creswell, 2015).

The survey instrumentation used to collect the data was the Course Valuing Inventory (CVI). The CVI (Nehari & Bender, 1978) has been used in past research studies to determine if a student's perception of value in the learning experience influenced academic success (Lawless; 1982; Maghiar et. al., 2015; Sobral, 2004). In this research study, the CVI (Nehari & Bender, 1978), was utilized to measure the independent predictor variables (course valuing, content

learning, personal learning, and behavioral learning). The CVI is a survey design that contains 40 questions, divided into four categories of predictor variables, with ten statements in each category (See Appendix A). When measuring the reliability (Cronbach's alpha) of the 4 categories independently, the reliability of the categories range between 0.77 and 0.92. Reliability values range from acceptable to excellent which indicates the CVI categories are reliable and consistent (Nehair & Bender, 1978). When measuring the reliability of the 4 categories dependent upon each other, the reliability range was wider, 0.54 to 0.93 (Nehari & Bender, 1978). These scores indicate intercorrelations between the categories and their effects on the learning experience; however, those intercorrelations are unique and may or may not be independent of each other. Participants had unlimited time to respond to the 40 statements using a 4-point Likert scale.

The end-of-course grade, the dependent criterion variable, was obtained by the end-of-course results after the course had ended and was provided by the participant at the time of participation. The end-of-course grade was assigned a numeric equivalency (A = 1; B = 2; C = 3; D = 4; F = 5), transforming it into a categorical variable (Creswell, 2015; Gall et al., 2007).

The study was conducted after Institutional Review Board (IRB) approval. Data was gathered through voluntary participation. All information that could identify the participants was protected during all data collection stages. Ethical considerations were ensured through the confidentiality and anonymity of the participants. Because this research study utilized an online survey, the survey results were stored securely in an online cloud-based database.

Findings

Background

The quantitative study sought to determine if the aeronautical student's perception of course value, cognitive content, affective-personal, and behavioral factors of courses not directly tied to piloting impacted the student's academic success as measured by the student's end-of-course grade. The findings present a data analysis, results, and a summary. The study examined humanistic educational theory to determine whether a relationship exists between the perceived value and meaningfulness of an experience and the investment made in it.

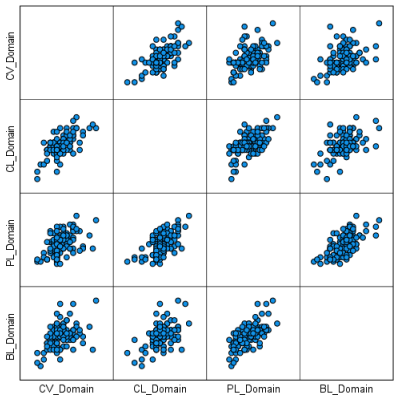
Data Analysis

Data Screening

The researcher sorted the data and scanned for missing data points and inconsistencies in each variable. No data errors or inconsistencies were identified. A matrix scatter plot was used to detect bivariate outliers between the predictor variables and the criterion variable. No bivariate outliners existed. See Figure 1.

Figure 1

Matrix Scatter Plot



Descriptive Statistics

Descriptive statistics were obtained on each of the variables. Participants' responses ranged from 1 to 4, where 1 represented strongly agree, 2 represented agree, 3 represented disagree, and 4 represented strongly disagree. The mean indicates the extent to which the participant evaluated the course as having been a meaningful, valuable, and significant learning experience. Table 2 provides the descriptive statistics for each variable.

Table 2

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CV_Domain	113	1.60	3.40	2.3319	.32162
CL_Domain	113	1.40	3.10	2.3496	.27553
PL_Domain	113	1.40	3.60	2.2947	.48987
BL_Domain	113	1.50	3.50	2.4274	.34154
Valid N (listwise)	113				

Assumption Testing

The multiple regression requires the assumption of linearity and bivariate normal distribution be met. Linearity and bivariate normal distribution were examined using a scatter plot. Both assumptions were met. See Figure 1 for the matrix scatter plot. A Variance Inflation Factor (VIF) test was conducted to ensure the absence of multicollinearity. The absence of multicollinearity was met. Table 3 provides the collinearity statistics.

Table 3

Collinearity Statistics

Model		Collinearity Statistics	
		Tolerance	VIF
1	CV_Domain	.560	1.786
	CL_Domain	.462	2.163
	PL_Domain	.470	2.126
	BL_Domain	.550	1.818

a. Dependent Variable: Grade_Earned_Scale

Results

The results showed no significant relationship between the predictor variables and the criterion variable ($F(4, 108) = 2.115$, $p = .084$) (Nehari & Bender, 1978). The findings of this study verified the null hypothesis, meaning the study failed to reject the null hypothesis: The predictor variables are statistically independent of the criterion variable. Table 4 provides the regression model results.

Table 4

Regression Model Results

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.057	4	.514	2.115	.084[b]
	Residual	26.261	108	.243		
	Total	28.319	112			

a. Dependent Variable: Grade_Earned_Scale
b. Predictors: (Constant), BL_Domain, CV_Domain, PL_Domain, CL_Domain

The model's effect size was large where $R = .270$. Furthermore, $R^2 = .073$ indicating that approximately 7.3% of the variance of criterion variable can be explained by the linear combination of predictor variables. Table 5 provides a summary of the model.

Table 5

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.270[a]	.073	.038	.49311

a. Predictors: (Constant), BL_Domain, CV_Domain, PL_Domain, CL_Domain

Further Analysis

Because the null hypothesis could not be rejected, analysis of the coefficients was not required. However, evaluating the coefficients further, there is a negative correlation between course valuing domain and end-of-course grade. This means that as the end-of-course grade increased the meaningfulness of the experience, as measured by the course valuing domain, decreased (a downward slope of the linear relation). There is a positive correlation between end-of-course grade and content learning, personal learning, and behavioral learning. This means that as the end of course grade increased the meaningfulness of the experience, as measured by content learning, personal learning and behavioral learning domains, increased (upward slope of the linear relation). All coefficients had a relationship to end-of-course grade as each coefficient fell between 1 and -1. Even though there was a relationship, it is a notably weak relationship as each coefficient approached 0, meaning as the coefficient approaches 0 there is no relationship between the domain and end-of-course grade. Based on analyzing the domain coefficients further to determine which coefficient has the strongest relationship with end-of-course grade, it was found that personal learning had the highest relationship to end-of-course grade when compared with the coefficients of the other three domains. In addition, comparing the four domains with each other, personal learning domain was the best predictor of end of course grade because it had the strongest positive linear relationship at .258, greatest t score at 1.909, and the greatest probability where $p = .059$ (5.9%) which was the closest domain to $p < .05$ (5% likely). Table 6 provides the coefficients..

Table 6

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.523	.455		1.150	.253
	CV_Domain	-.017	.194	-.011	-.086	.931
	CL_Domain	.041	.249	.022	.165	.870
	PL_Domain	.265	.139	.258	1.909	.059
	BL_Domain	.007	.184	.004	.036	.971

a. Dependent Variable: Grade_Earned_Scale

Discussion

This study's results have practical and empirical implications, suggesting that the Course Valuing Inventory (CVI) survey tool can effectively measure student reflection on personal learning and the value they place on their learning experiences. To date, there are no other quantitative studies examining the predictive relationship between the criterion variable (end-of-course grade) and the linear combination of predictor variables (course valuing, content learning, personal learning, and behavioral learning) for undergraduate aeronautical students, as measured by the CVI. Because no quantitative study like this exists, no direct comparisons with previous research can be made. However, studies conducted in other disciplines associate the CVI's

predictor variables with the criterion variable utilizing the CVI or an adaptation of the CVI.

In stark contrast to this study, the CVI was the best predictor of end-of-course grades among undergraduate medical students enrolled in Human Anatomy and Physiology courses (Sturges et al., 2012). Researchers Sturges et al. (2012) utilized the CVI survey to measure at-risk students to address and mediate performance in a Human Anatomy and Physiology course. Using the CVI in such a way, professors were able to target students and provide remedial measures to promote academic success. Sturges et al. (2012) spoke to the significant predictor power in utilizing the CVI to evaluate student perceptions regarding course value in meeting student needs.

This study supports humanistic educational theory, emphasizing the impacts of personal relevance and self-reflection in learning. Utilizing the CVI, research of Sobral (2004), Sturges et al. (2012), and Maghiar et al. (2015) found that there is a significant predictive correlation between the CVI's predictor variables and student reflection on personal learning and the value students place on that learning experience. The research concludes that the CVI is an accurate and valuable tool predicting a student's quest for meaning, measuring the reflection and motivation of students, as well as gauging student interest. In agreement with this study's findings, Sobral (2004) concluded that the CVI is an accurate tool for measuring the mindset towards learning rather than academic achievement measured by end-of-course grade. Similarly, and in agreement with this study, Sobral (2004) found unexpected relationships between predictor variables. In conclusion, the CVI is a significant tool supporting the humanistic educational theory when used to appraise the correlation between educational experience with self-reflection or self-regulation of the learner (Maghiar et al., 2015; Sobral, 2004; Sturges et al., 2012; Untari, 2016).

Limitations and Future Research

Limitations

Limitations included nonresponse bias, with the sample skewed toward students earning higher grades, which may not represent the entire population (Gall et al., 2007; Halbesleben & Whitman, 2013). The restrictive nature of the sample—limited to undergraduate aeronautical pilot focused students—also poses challenges for generalizability (Konig et al., 2021). The limitation of a non-neutral response within the Likert scale may have skewed the results requiring students to make a choice towards agree or disagree. Additionally, the correlational design restricts the ability to establish causation (Gall et al., 2007), and self-reported data may be affected by recall biases (Halbesleben & Whitman, 2013).

Future Research

This study sought to add to the existing literature on determining predictive variables and their contributions to end-of-course grade. At the time of this study, there currently exists no literature relating the predictability of the four CVI domains (course valuing, content learning, personal learning, and behavioral learning) to the criterion variable (end-of-course grade) for an undergraduate aeronautical degree-seeking student. However, this study unexpectedly found a

predictive correlation between each of the four CVI domains (course valuing, content learning, personal learning, and behavioral learning). Consequently, and reflecting on the limitations presented, the following suggest a few areas for future research:

1. Since this study presented unexpected findings of internal validity between predictor variables, future studies should purposefully study how those four predictor variables relate to one another in various disciplines.
2. Future studies should broaden the sample population to determine if the CVI domains can predict an end-of-course grade. Gender, class standings, GPA, and other participant uniqueness' were not evaluated as part of this study. Future studies may consider adding and evaluating diversity in the participant population. In addition, future studies may consider evaluating how diversity contributes to the CVI's predictors and end-of-course grade.
3. Finally, determining if an end-of-course grade can be predicted by the subscales of the Course Valuing Inventory should expand to other disciplines. As in similar studies presented, some disciplines showed a predictive correlation between the CVI and an end-of-course grade. Future research should narrow down the causation of selected disciplines.

Conclusion

This study explored the predictive relationship between course valuing, cognitive content, affective-personal, and behavioral factors and undergraduate aeronautical students' end-of-course grades using the Course Valuing Inventory (CVI). Guided by humanistic educational theory, the study aimed to understand how students' perceptions of meaningful learning experiences correlate with their academic performance. Despite thorough analysis, the findings did not reveal a significant predictive relationship between the CVI domains and end-of-course grades. However, the study identified that personal learning exhibited the strongest, albeit weak, positive relationship with academic success among the predictor variables.

The findings contribute to the broader understanding of humanistic educational theory by emphasizing the value of personal reflection and relevance in the learning process. While the CVI proved to be a valuable tool for measuring student perceptions and reflections, its predictive power for academic outcomes in this specific context was limited. Limitations such as sample bias and self-reported data suggest that broader and more diverse research is necessary to refine the CVI's application across disciplines.

Future research should focus on exploring the interplay between the CVI domains, expanding participant demographics, and examining predictive relationships in different academic fields. By addressing these areas, future studies can deepen the understanding of how meaningful learning experiences influence academic success and contribute to the personalization of educational strategies, further advancing humanistic educational principles.

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APPENDIX A

Course Valuing Inventory*

Instructions: Please select only one scale rating from 1-4, one being strongly agree and four being strongly disagree, per statement to indicate the extent to which you evaluated last semester's course as having been a meaningful, valuable, and significant learning experience for yourself, and the extent to which you perceived the course as having had some impact upon yourself.

			Strongly Agree	Agree	Disagree	Strongly Disagree
	Domain	Question:	1	2	3	4
1.	CV	This course was a very valuable learning experience for me				
2.	PL	This learning experience helped me to become more aware of my own feelings and reactions				
3.	CV	I consider this learning experience as time and effort very well spent.				
R4.	PL	This course had no impact on my personal growth.				
5.	CL	The course helped me to acquire important basic knowledge.				
R6.	BL	This course had no impact on the ways in which I communicate.				
7.	CL	I can now relate to the subject matter of the course from a wider perspective.				
R8.	BL	In this course, I had not developed my own learning goals.				
9.	BL	Somehow I worked harder in this course than I usually do.				
R10.	CV	This was not a meaningful learning experience.				
R11.	CL	I did not gain much information in this course.				
12.	PL	This experience helped me to realize the importance of my own feelings.				
13.	CV	This course was a rewarding learning experience.				

14.	BL	This course was useful in helping me develop new ways of learning.				
15.	CL	I am aware of many significant experiences which resulted from taking this course.				
16.	CV	Overall, I would rate my experiences related to my enrollment in this course as positive.				
17.	PL	I feel more perceptive of others now, and more sensitive to their needs.				
R18.	CV	This was not an inspiring course.				
19.	BL	Somehow, I was more open and sharing in this course.				
20.	CL	I am now better able to conceptualize problems presented in this course.				
21.	PL	I understand better how others perceive me.				
22.	CV	This was a constructive and definitely helpful learning experience.				
R23.	BL	I participated in this course less than I usually do.				
24.	PL	I have reflected upon what happened to me as a result of having participated in this course.				
25.	PL	In some ways, I feel good about myself due to this course.				
R26.	CL	My understanding of the subject matter of the course has not increased much.				
27.	BL	Somehow I have taken more risks in this course, and I feel good about it.				
28.	CV	I would like to take another course like this one.				
R29.	PL	This course had no impact on understanding of who I am or what I want.				
30.	CL	The course helped me achieve a deeper understanding of the field.				
R31.	BL	I did no more reading or thinking than was actually expected.				

R32.	CL	This course did not help me gain thorough knowledge of the field.				
33.	BL	I feel this course transformed me, enriched my life, and made me a more complete person.				
34.	PL	Some of my values have been clarified due to this learning experience.				
R35.	CV	I would not recommend this course to a friend.				
36.	CL	I have now a much clearer integrated notion of the subject matter of the course.				
37.	PL	I think I have learned to be more tolerant.				
R38.	CV	Taking the course made little difference to me.				
R39.	CL	I have not been able to tie things together and make much sense of the content presented.				
40.	BL	In this course, I have taken more responsibility for my own learning than I usually do.				

1 = Strongly Agree, 2 = Agree, 3 = Disagree, 4 = Strongly Disagree

R denotes reverse polarity

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