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The Model of Creative Thinking, Critical Thinking, and Entrepreneurial Skills Among University Students

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ABSTRACT

Digital skills for the twenty-first century are comprise of four fundamental capabilities: cognition abilities; process capabilities; systems capabilities; and social skills. Using one's ability to think creatively to demonstrate cognitive abilities can be very effective. On the other hand, critical thinking is a skill that can be developed at the university level and is used to transform raw data into meaningful information. Furthermore, the study purpose is investigate the relationship the entrepreneurial skills in students in the world of education, both in terms of educational and economic issues. Researchers are looking into the relative importance of creative thinking (CRE), critical thinking (CRI), and entrepreneurial skills (ETS) as primary predictors of success when it comes to learning and mastering skills in the technologically advanced development society (TCDS). In this study, which takes a quantitative approach, a cross-sectional survey gathers data. In order to analyze the relationship formed by CRE, CRI, and ETS among university students in TCDS, we used the structural equation model (SEM) method. In this study, 85 students from the Faculty of Teacher Training and Education, and 315 students from the Faculty of Economics and Business at Universitas Muhammadiyah Purwokerto participated, for a total of 315 students. The following research procedures were used in this investigation: (3) The relationship between CRE, CRI, and ETS was determined using a Structural Equation Model (SEM). In addition, the findings of this study include the following points: The EFA and CFA analysis revealed that the CRE construct contained four valid sub-constructs, while the CRI and ETS constructs each contained five valid sub-constructs. The results of the SEM analysis revealed a statistically significant relationship between CRE, CRI, and ETS, with a moderately significant relationship between CRE and ETS (β = 0,291), as well as a statistically significant relationship between CRI and ETS (β = 0,143). The correlation between CRE and CRI, on the other hand, was found to be high (β = 0.894). Finally, demonstrate that the CRE, CRI, and ETS have played a role in improving the performance of university students during the TCDS era.

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A. INTRODUCTION

The 21st Century Digital Skills (TCDS), which can be converted as digital skills in the twenty-first century, is a topic that has received a lot of attention recently. The ability of humans to adapt to new technology is a distinguishing characteristic of TCDS. The ability to

develop oneself in a digital community is also a valuable supporting skill. Based on the work of Novita and Herman (2021), the TCDS is comprised of four fundamental capabilities: cognition abilities; process abilities; systems abilities; and social skills. The ability to train and enrich the work of the human brain, according to Mashrah (2017), is described as cognitive abilities in accordance with this thought. The ability to think creatively can be used to demonstrate cognitive abilities in this situation. According to the findings of Maharani's research (2018), which explains that human cognitive abilities are primarily based on creative thinking, the same thing is discussed. As a major component of the higher education system, creative thinking is also the most important skill that students must learn (Padget, 2017). Results of a study conducted at the University of Corollado in the United States show that students' ability to think creatively is an important factor in their mastery of knowledge. In the Faculty of Education and Economics, as many as 78.54 percent of students achieve a high level of academic achievement (Brown, 2020).

Furthermore, according to the findings of a study conducted by Yudha, Dafik, and Yuliati (2018), students at the University of North Sumatra demonstrated a low level of creative thinking, which was comparable to that of only 51 percent of the general population. As a result, according to Morald (2018), the findings of his research demonstrate that students' ability to think "outside the box" serves as a benchmark in the process of encouraging them to do so. This can be interpreted as a way for students to think freely and not be influenced by generalized thinking practices. This is done in order for students to be role models in terms of discovering the most recent ideas and breakthroughs in the twenty-first century today. Creative thinking problems, on the other hand, are still relatively understudied, according to Ramalingam et al. (2018), because there are still a large number of students in Indonesia who are formed from the "prints" of their educators rather than from the "hard work" of the students' own thinking processes in solving problems that arise. complex.

Critical thinking is another issue that arises as a result of the fulfillment of digital skills. According to Luke (2016), critical thinking is a process skill that must be learned and practiced in order to be effective. This is in accordance with Karakoc (2016) belief that critical thinking in learning at the university level is an ability that can convert pure data into meaningful data that includes multiple understandings seen from the interconnectedness of various multidisciplinary sciences such as computer science, business and economics, and education, as well as an ability to convert pure data into meaningful data that includes multiple understandings seen from the interconnectedness of various multidisciplinary sciences such as education. According to the findings of Changwong, Sukkamart, and Sisan research (2018), Colombia University students' critical thinking skills include the ability to organize multi-assignment projects ranging from computer design to business networking to mathematical function systems. These multi-projects provide students with the opportunity to examine problems from a variety of perspectives and to test their problem-solving abilities in the context of the multi-disciplinary disciplines that they have learned. It also helps the author better understand the significance of critical thinking in today's digital age, thanks to the findings of Facione's research in 2020. His explanations of the complex thinking processes of students in solving problems in technology-based education and digital economics at the University of Cairo, Egypt, were based on his own experiences.

It is sufficient to mention the two studies above in order to demonstrate the significance of mastering critical thinking in the world of higher education. The mastery of critical thinking, on the other hand, remains hampered in Indonesia by the absence of a knowledge integration system that is linked to student learning activities. This is a roadblock in the process of mastering this ability. Tiara and Masruhim's research (2016) revealed that only 7,25 percent of students at the Faculty of Education and Science Technology perform at a high level, with the remaining 48,33 percent performing at a moderate level. Some of the factors that contribute to students' poor critical thinking skills in Indonesia include a teaching system that is not connected in a multi-disciplinary way (Paul, 2019), a lack of understanding of task integration and digital mastery (Gabennesch, 2019), and a lack of use of technology in the problem solving process (Paul Chow & Pepe, 2019). As a result, if these issues are not addressed simultaneously, they will become critical.

Furthermore, in today's technological age, the fulfillment of human needs can be accomplished through the use of technology, both in terms of basic life necessities and scientific requirements. According to Bishnoi (2021), this has evolved into a new spirit for students who want to be able to enter the world of technology-based business in order to meet the needs of the human science community. In accordance with Rudmann' thinking (2006), digital business is now a significant commodity in terms of generating income for people. As a result, it is essential to improve the ability to conduct business in the digital world as it exists today. Entrepreneurial skills, according to Cooney (2020), are one of the abilities required in the business world, both in the business world and in educational institutions. According to Bolat (2020), entrepreneur skill is a human social ability that includes the ability to coordinate with others, emotional intelligence, negotiation, persuasion, service orientation, and the ability to train and teach others. Entrepreneur skill is defined as follows: It is possible that the development of entrepreneurial skills will serve as the foundation for managing business opportunities and developing the character of students who are constantly on the lookout for new business opportunities and business opportunities Sousa (2018).

In particular, Krishna (2020) raised the theme of entrepreneurial skills analysis for business and management school students and technology education faculty at the University of India, which is an example of research that promotes entrepreneurial skills in the world of education. According to the findings of this study, students' entrepreneurial abilities improve as a result of the increasing role of technology in social interaction on campus. Graham (2020), who explained that students gained entrepreneurship skills through assignments in economic mathematics course assignments in semesters V and VII, conveyed the same message. According to the results obtained, 73.22 percent of students demonstrated strong entrepreneurial abilities in completing the task at hand. As a result of the description of the research that has been conducted by the experts, the author has gained an understanding that entrepreneurial skills are capable of enabling students to have good business fighting power, to always see opportunities, and to always seek profit in the world of education. Research conducted in Indonesia, on the other hand, has found that this is not the case. As a result, it is necessary to concentrate research efforts on developing entrepreneurial skills in students in the world of education, both in terms of educational and economic issues.

Based on the findings of several research studies, the researcher concludes that it is necessary to investigate the issues that have arisen during the settlement process in order to provide an overview of the factors that can influence the success of mastering student abilities in the digital age, namely creative thinking, critical thinking, and entrepreneurial skills. When it comes to achieving student success in the digital world, the three factors listed above can be used as benchmarks for comparison. In other words, students who lack creative thinking are unable to think "outside the box" in order to gain an advantage over their peers (Pappas & Pappas, 2018), students who lack critical thinking are more likely to be drawn to simple problems and find it difficult to solve complex problems (Uribe-Enciso, Uribe-Enciso, & Vargas-Daza, 2017), and students who lack entrepreneurial skills find it difficult to compete with others in today's rapidly developing technological era (Norbert, 2017).

This problem will be focused on the formulation of research problems based on an examination of the position of creative thinking, critical thinking, and entrepreneurial skills as the primary constructs for the success of mastering skills in the TCDS era. What is the impact of entrepreneurial skills, creative thinking, and critical thinking on students in the TCDS era, and how can they be improved? 2) What role do structural models of creative thinking, characteristic thinking, and entrepreneurial skills play in helping students master their abilities in the TCDS era? and 2) Is it possible to use the variables in the constructs of creative thinking, characteristic thinking, and entrepreneurial skills to gain a more comprehensive perspective on mastering student abilities in the TCDS era?

In accordance with the formulation of the problem, the objectives of the research to be conducted are as follows: (1) to examine creative thinking, characteristic thinking, and entrepreneurial skills in the context of successful mastery of student abilities in the TCDS era; (2) to verify a structural model of creative thinking, characteristic thinking, and entrepreneurial skills in the context of successful mastery of student abilities in the TCDS era; and 3) to provide a more holistic perspective in pursuing the successful mastery of student abilities in the TCDS.

B. METHODS

A cross-sectional survey is used in this study, which employs a quantitative approach (Creswell, 2014). This method provides a more detailed picture of the problem that is being investigated (Chua, 2016). Another justification is that the use of this quantitative method of cross-sectional surveys has its own advantages in terms of data collection and analysis, which allows for more robust and high-quality research to be produced (Creswell, 2014).

Students from the Faculty of Teacher Training and Education and the Faculty of Economics and Business in Universitas Muhammadiyah Purwokerto make up the research population. The sample size is limited to 85 students in the mathematics education study program and 315 students in the accounting study program, with the former being the more representative group. According to the expertise and research group of the two researchers, namely in the areas of creative teaching and learning and Islamic banking and finance, the selection of the sample was justified on the basis of these factors. The detail of the method are as shown in Figure 1.

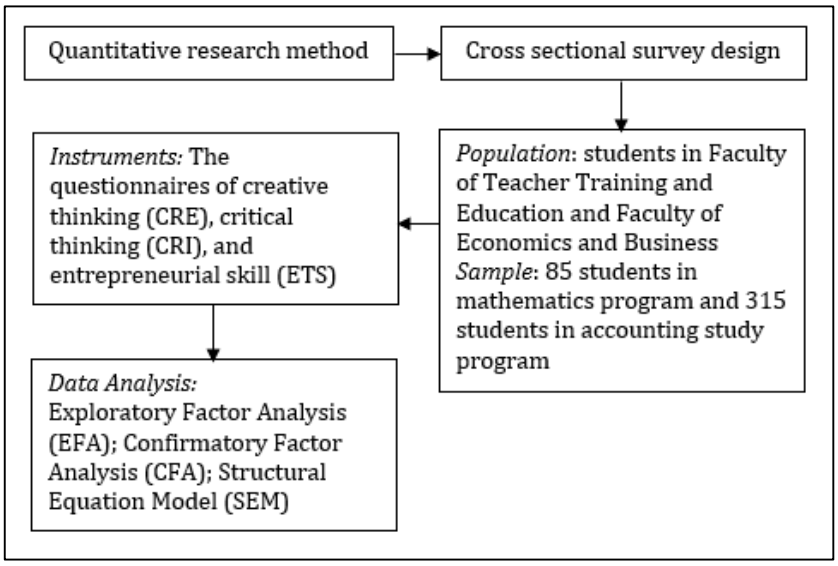

Figure 1. The Research Method

1. The Construct Reliability

In the meantime, the reliability of respondents' responses to the assessed items was tested in this study using the reliability method. In order to determine whether the instruments developed in different cultures and education systems can be used in the culture and education system under consideration, it is necessary to conduct this investigation. For mathematical reliability instruments and mathematical experience, the Cronbach's alpha coefficient is used to calculate the internal reliability of the instrument, taking into consideration that responses are selected using a Likert scale for mathematical reliability instruments and mathematical experience (Cohen, Manion, & Morrison, 2013). According to Gay and Mills (2012), Cronbach's alpha is a number between 0 and 1, with a value of 0 indicating no internal reliability and a value of 1 indicating perfect internal reliability, and a value of 1 indicates perfect internal reliability. Cronbach's alpha value of 0.07 is widely regarded as the bare minimum in terms of reliability (Tabachnick, B & Fidell, 2014). Therefore, according to social science experts, an acceptable coefficient of dependability is defined as a value greater than or equal to 0.70 when compared to the maximum value of 0.70. Cronbach's alpha was calculated in this study, and a value of 0.7 or higher was used to indicate reliability.

2. The Construct Validity

The construct validity of the questionnaire instrument was determined through the analysis of the data collected and the application of analytical criteria to the outcomes. It was decided to take into account the recommendations made by Tabachnick and Fidell (2014), which received a coefficient value greater than 0,3 from the researchers. Before the factor analysis could be completed, a number of tests were carried out, including Barlett's test of sphericity and the Kaiser-Meyer-Oikin measure of sampling adequacy (KMO). Specifically, a significant Barlett's Test of Sphericity ($p< 0.05$) indicated that the correlation between items was sufficient for factor analysis, and a KMO test result greater than 0,5 indicated that the data did not have multicollinearity problems and that the items were appropriate for factor

analysis. The varimax rotation test was then carried out in order to determine the validity of the concept as well as the validity of the items included in the various components of the questionnaire in the following step. To examine the diversity of dimensions or indicators that exist in both perceptions and user participation, the Exploratory Factor Analysis (EFA) approach has been used when conducting construct validity procedures for perceptions and user participation. Low loading factor items (those with a loading factor of less than 0.5) will be rejected according to the order in which they were received (Kline, 2017). A common technique used by researchers to sort through a large number of questionnaire items and organize them into specific constructs that are related to one or more dependent variables in a study is factor analysis. Subsequently, according to Hair et al. (2014), the CFA analysis was used to confirm the extent to which the measurement model measures variables reflecting constructs in the model of measurement. The validity and reliability of the construct were evaluated based on the results of the CFA pooled analysis, which was conducted. A loading factor of greater than 0.05 will be removed from the model, and the model will be statistically tested using a goodness-of-fit score to ensure that it is a good match with the respondent information. Upon concluding that the model provides an acceptable fit, the study will move on to the next step, which will involve putting the structural equation model to the test.

3. The Structural Equation Model

The structural equation model (SEM) is one of the models that can be used to evaluate a relationship produced by one or more variables in a current condition (Creswell, 2014). A statistical method for analyzing a relationship formed by one or more variables in a measured or unmeasured path structure is called structural equation modeling (SEM) (Kline, 2017). We can use this model to determine the level of relationship between two phenomena in an attempt to determine the success of a phenomenon. Specifically, the purpose of this study is to examine the success rate of students in mastering their abilities during the time period covered by the TCDS, as measured by three primary factors: creative thinking, critical thinking, and entrepreneurship skills Later, SEM will investigate the accuracy and drawbacks of the system.

There are four categories of adjustments that can be made to the suitability of *Goodness of Fit* (GOF) in SEM: a) *Chi-Square Statistics*; b) *Adjusted Goodness of Fit Index* (AGFI); c) *Goodness of Fit Index* (GFI); and d) *Root Mean Square Error of Approximation* (RMSEA). The analysis for those categories consists of a good GFI and AGFI value of more than 0.90, indicating that the model produced is adequate, and a maximum GFI or AGFI value of one, indicating that the model produced is insufficient. In contrast, the Chi-square and the df are greater than 3.0 (Chi-square and df > 3.0). Therefore, the RMSEA value of 0.08 indicates that the model is very close to meeting the best model's performance criteria (Hair et al., 2014). Additionally, in addition to testing the model that was created, there is also a test for parameter estimates to see if they are statistically significantly different from zero at a 95 percent confidence level. *The Statistical Product and Service Solutions-Analysis of Moment Structures* (SPSS-AMOS) computer software package was used to conduct this study's SEM (Byrne, 2019).

4. The Correlation Value

When the correlation is less than 0.10, it can be divided into three categories: A small contribution, a medium contribution, and a significant contribution are all possible (Kline, 2017). Significant contributions (0.10) and negative contributions (0.10) were deemed inconsequential because of their small magnitudes. If the p-value is less than 0.10 and the hypothesis is negative, the hypothesis will be rejected even if the p-value is statistically significant.

C. RESULT AND DISCUSSION

1. The Respondents Profile

The respondents to this study were made up of 85 students from the faculty of teaching and education and 315 students from the faculty of economics and business, according to the findings. In addition, the respondents to this study were divided into three groups based on their gender, semester of college, and amount of time they spent on the internet each day, as shown in Table 1.

Table 1. The Respondents Profile

Profile	Classification	Numbers	Percentage
Faculty	Teacher Training and Education	85	21,25
	Economics and Business	344	78,75
Gender	Male	114	28,50
	Female	286	71,50
Semester	I	84	21,00
	III	222	55,50
	V	68	17,00
	VII	26	6,50
Internet access per day	<3 hr	25	6,25
	3-5 hr	92	23,00
	>5 hr	283	70,75

According to the findings in Table 1, a total of 21.25 percent of students are from the faculties of teaching and education, with the remaining students coming from the faculties of economics and business administration (315 students). Furthermore, there are 114 male students and the rest are female students, which is a significant disparity in terms of gender. Furthermore, as many as 84 students are enrolled in semester I, 222 students are enrolled in semester III, and the remaining students are enrolled in semester V and semester VII (68 and 26 students). The most recent profile information is derived from the duration of internet access, which shows that the majority of students are active online for more than 5 hours per day (70.75 percent), while the remainder are engaged in activities lasting 3-5 hours and less than 3 hours (92 and 25 students).

2. The Reliability

It was determined that the results of the questionnaires completed by the respondents were consistent through the use of internal reliability in this research. The reliability value (Cronbach alpha) for this study is greater than 0.70 because the responses are presented on a Likert scale, which is considered acceptable and used in this study. On the following Table 2 is

a summary of the reliability values for all constructs investigated in this study, as shown in Table 2.

Table 2. The Cronbach Alpha Constructs

Constructs	Sub-Constructs	Value
Creative Thinking (*CRE*)	Open Minded (*OM*)	0,786
	Beyond the Imagination (*BI*)	0,778
	Flexibility (*FL*)	0,722
	Take a Risk (*TR*)	0,782
Critical Thinking (*CRI*)	Analyze (*AN*)	0,711
	Syntesize (*SN*)	0,756
	Problem Solving (*PS*)	0,713
	Concluding (*CN*)	0,755
	Evaluating (*EV*)	0,742
Entrepreneurial Skill (*ETS*)	Knowledge (*KW*)	0,741
	Hard-work (*HW*)	0,721
	Confidence (*CF*)	0,745
	Innovative (*IN*)	0,756
	Honest (*HN*)	0,774

3. The Exploratory Factor Analysis

It was decided to use the EFA method to investigate the constructs of perceptions and public participation in order to assess the diversity of dimensions or indicators that exist in each of the three constructs studied. Deleted items with low loading factors (less than 0.5) will be removed in a phased manner, beginning with the least loaded items and progressing up the list until all of the items with low loading factors have been removed from the database (Hair et al., 2014). We can use factor analysis when conducting a study in order to discover and arrange a large number of questionnaire questions into different constructs under the variables under consideration, which can then be further examined, as shown in Table 3.

Table 3. The KMO and Barlett's Test of Creative Thinking

The Test		Value
Kaiser-Meyer-Oikin Measure of Sampling Adequacy		0,894
Barlett's Test of Sphericity	Approx. Chi-Square	3290,803
	df	276
	Sig.	0,000

Significant findings from this study included the fact that the Kaiser Meyer-Oikin (KMO) value for the items in the creative thinking construct questionnaire increased significantly (0,894), surpassing the value of 0,50, which indicated that the data did not have a serious multicollinearity problem and that factor analysis could be used to successfully analyze the items in the construct. Following the application of Barlett's test of sphericity to the item in question, the statistically significant value of 0,000 ($p<0,001$) was obtained, indicating that the item satisfies all of the necessary criteria for factor analysis (See Table 3). The following is The KMO and Barlett's Test of Critical Thinking, as shown in Table 4.

Table 4. The KMO and Barlett's Test of Critical Thinking

The Test		Value
Kaiser-Meyer-Oikin Measure of Sampling Adequacy		0,866
Barlett's Test of Sphericity	Approx. Chi-Square	2408,877
	df	190
	Sig.	0,000

Subsequently, the findings from critical thinking construct questionnaire in table 4 had a KMO value greater than 0,50, which was consistent with our hypothesis (0,866). There are no significant multicollocation issues in the data, which means that factor analysis can be used to determine whether the items in the construct are related to one another. Following the application of Barlett's test, it was determined that the item had a statistically significant value of 0,000 (p<0,001), indicating that it is appropriate for factor analysis (Byrne, 2019). In the end, the KMO for the final construct, entrepreneurial skills, is 0.925, with a significance level of 0.000 (p<0.001), indicating that there is a statistically significant difference between the groups. As a result, it can be concluded that this construct is statistically significant and that confirmatory factor analysis can be conducted on it, as shown in Table 5.

Table 5. The KMO and Barlett's Test of Entrepeneur Skills

The Test		Value
Kaiser-Meyer-Oikin Measure of Sampling Adequacy		0,925
Barlett's Test of Sphericity	Approx. Chi-Square	5475,297
	Df	435
	Sig.	0,000

4. The Confirmatory Factor Analysis

Following the findings of the EFA analysis discussed above, it is possible to divide creative thinking (CRE) into four sub-constructs, which are as follows: *open minded* (OM), *beyond the imagination* (BI), *flexibility* (FL), and *willingness to take a risk* (TR). Four items make up the OM (OM1, 3, 4, 5), five items make up the BI (BI1, 2, 3, 4, 5), and five items make up the FL (FL1, 2, 3, 4, 5). The TR is made up of four items (TR1, 3, 4, 5), and the OM is made up of four items (OM1, 3, 4, 5). (TR3, 5, 6, 7). (TR3, 5, 6, and 7 are examples of this.) It is possible to see a relationship between the sub-constructs of the CRE in the following table. There is a strong relationship between the two sub-constructs (OM ↔ BI; FL ↔ TR) and a moderate relationship between the others (OM ↔ FL; BI ↔ TR; FL ↔ TR; OM ↔ TR). The following is The Correlation of the CRE sub-construct as shown in Table 6.

Table 6. The Correlation of the CRE sub-construct

Correlation	Estimate Value
OM ↔ FL	0,489
BI ↔ TR	0,441
OM ↔ BI	0,825
FL ↔ TR	0,877
BI ↔ FL	0,430
OM ↔ TR	0,499

Analyze (AN), *synthesize* (SN), *problem solve* (PS), *conclude* (CN), and *evaluate* (EV) are the sub-constructs of the *critical thinking* construct (CRI), which is divided into five categories. An example of this would be the AN, which is comprised of three pieces (AN2, 3, 4), the SN, which is composed of three pieces (SN1, 2, 3), the PS, which is composed of four pieces (PS1, 2, 3, 4), the CN, which includes three pieces (CN1, 2, 4), and the EV, which is comprised of three pieces (EV1, 2, 3). In particular, high (β>0,500) and medium (0,200< $\beta \leq$ 0,500) correlation coefficients between each sub-construct of the public participation model are separated into two categories: high (AN ↔ CN; PS ↔ EV; AN ↔ SN; CN ↔ EV; AN ↔ EV; AN ↔ EV, AN ↔ PS, PS ↔ CN) and medium correlation coefficients between sub-constructs (SN ↔ PS; SN ↔ CN). Specifically, high correlation coefficients between sub Table 7 outlines the relationships that exist between each sub-construct in greater detail, as shown in Table 7.

Table 7. The Correlation of the CRI sub-construct

Correlation	Estimate Value
AN ↔ CN	0,706
PS ↔ EV	0,911
SN ↔ PS	0,332
AN ↔ SN	0,761
CN ↔ EV	0,742
AN ↔ EV	0,550
AN ↔ PS	0,581
SN ↔ CN	0,437
PS ↔ CN	0,737
SN ↔ EV	0,281

Lastly, *entrepreneurial skills* (ETS) are broken down into five sub-constructs: *knowledge* (KW), *hard work* (HW), *confidence* (CF), *innovative* (IN), and *Honest* (HN). The KW sub-construct consists of five items (KW1, 3, 4, 5, 6), the HW sub-construct consists of six items (HW1, 2, 3, 4, 5, 6), the CF sub-construct consists of six items (CF1, 2, 3, 4, 5, 6), the IN sub-construct consists of six items (IN1, 2, 3, 4, 5, 6), and the HN sub-construct also consists of six items (HN1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11). There was a high correlation (β> 0,500) between the five sub-constructs, with detailed estimation values presented as shown in Table 8.

Table 8. The Correlation of the ETS sub-construct

Correlation	Estimate Value
HW ↔ KW	0,831
IN ↔ KW	0,683
IN ↔ HN	0,749
CF ↔ HN	0,862
HW ↔ CF	0,848
CF ↔ IN	0,765
CF ↔ KW	0,822
HN ↔ KW	0,791
HW ↔ HN	0,824
HW ↔ IN	0,584

5. The Structural Equation Model

This review is used to determine whether or not a model is consistent with the data from the investigation. When conducting an analysis, it is necessary to examine the equivalence index first to ensure that a suitable model has been proposed that is commensurate with the respondent's data before proceeding with the analysis. It is necessary to employ at least one equivalence index in order to achieve the level of equivalence required for it to be declared equivalent. There are three equivalence categories, and each category requires the use of at least one equivalence index in order to achieve the level of equivalence required for it to be declared equivalent. A Structural Equation Model (SEM) study found that the RMSEA is 0,178 and the CMIN/df is 3,862, both of which are less than 5,0, and that the RMSEA is less than 5,0. The RMSEA is less than 5,0. The CFI has a compatibility index of 0,823, the TLI has a compatibility index of 0,777, and the NFI has a compatibility index of 0,812. According to the findings of the analysis, a statistically significant level of concordance was discovered between these three types of data. This level of concordance was discovered between the three types of data. Regarding the creative thinking, critical thinking, and entrepreneurial skills measurement models, the conclusion was reached by stating that the model is consistent with the data that has been gathered. Figure 1 depicts a more in-depth discussion of the SEM model of creative thinking, critical thinking, and entrepreneurial skills, which is depicted in more detail as shown in Figure 2.

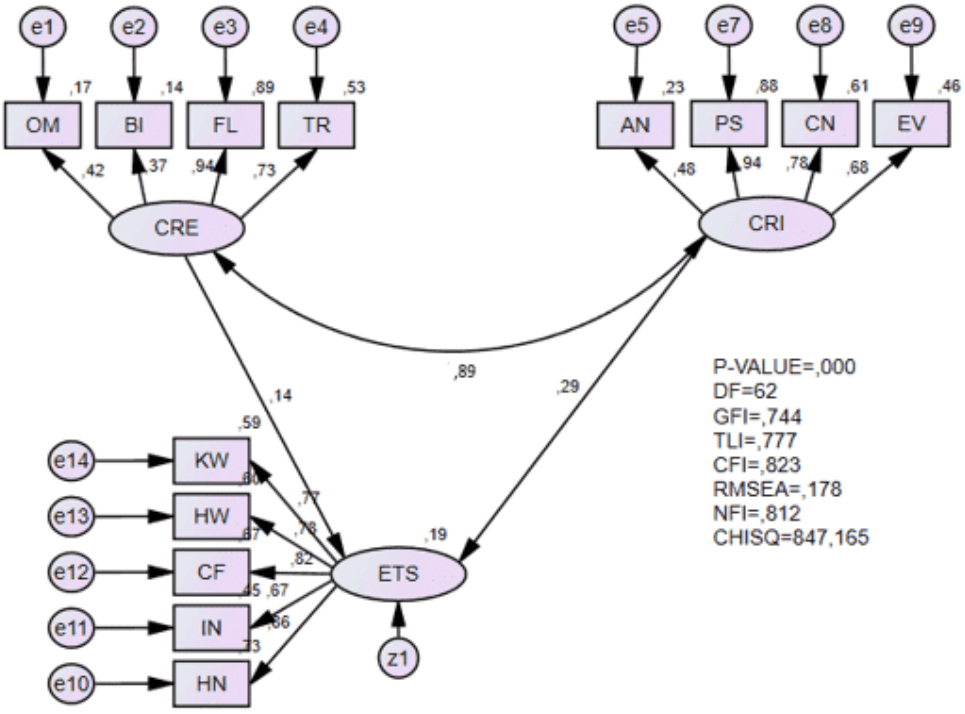

Figure 2. The Model of Creative Thinking, Critical Thinking, and Entrepeneurial Skills

Three variables are discovered during the course of the investigation into the relationships between the variables under consideration. The variables to be considered are *the regression weights* (β), *the standard error* (SE), *the critical ratio* (CR), and the significant coefficients, all of which are industry-standard measurements. Given their statistical

significance, these results are taken into consideration when deciding whether to accept or reject the hypothesis. It is possible to divide the relationship between constructs into three types based on how they are connected. A low contribution characterizes the contribution stage for values less than 0.10, a moderate contribution characterizes the contribution stage for values between 0,10 to 0,50, and a large contribution characterizes the participation phase for values greater than 0,50, as shown in the diagram. When the values of contribution stages are less than 0,10, they are classified as low contribution stages (Cohen et al., 2013). At times when the connection stage is small (0,10) and the outcome is poor, it is deemed unimportant to be present at that point in the connection process. Therefore, even if the hypothesis is statistically significant, the hypothesis will be rejected if the p value is less than 0,10 and negative. This will be true regardless of whether or not the hypothesis was originally statistically significant in the first place. Any outcome with a p value of less than 0,05 is considered statistically significant, regardless of where the data came from or who collected it. Specifically, the findings of the study revealed a moderate association between creative thinking and entrepeneurial skills (*β = 0.291; SE = 0,467; CR = 2,553; p = 0,000; p <0,001*), as well as a moderate association between critical thinking and entrepeneurial skills (*β = 0,143; SE = 0,359; CR = 4,633; p = 0,000; p <0,001*). Alternatively, a high correlation was found between creative thinking and critical thinking (*β = 0.894, SE = 0.481, CR = 3,643, p = 0,000, p <0,001*). The analysis of the SEM model was conducted in order to determine which SEM model was the most appropriate based on the findings of the analysis of the SEM model. Detailed results for all three constructs are presented in table 9, which includes all of the relationships between the three constructs, as shown in Table 9.

Table 9. The SEM Analyzing of CRE, CRI, and ETS

Sub-constructs			β	SE	CR	p	Decision
ETS	←	CRE	0,428	0,145	2,954	,003	Significance
ETS	←	CRI	0,684	0,126	5,440	***	Significance
OM	←	CRE	1,000				
BI	←	CRE	0,865	0,122	7,075	***	Significance
FL	←	CRE	2,376	0,232	10,261	***	Significance
TR	←	CRE	1,734	0,179	9,667	***	Significance
AN	←	CRI	1,000				
PS	←	CRI	1,873	0,156	12,028	***	Significance
CN	←	CRI	1,587	0,140	11,313	***	Significance
EV	←	CRI	1,543	0,145	10,668	***	Significance
HN	←	ETS	1,000				
IN	←	ETS	0,823	0,056	14,595	***	Significance
CF	←	ETS	0,929	0,048	19,227	***	Significance
HW	←	ETS	0,867	0,049	17,869	***	Significance
KW	←	ETS	0,888	0,050	17,728	***	Significance

D. CONCLUSION AND SUGGESTIONS

Digital skills for the twenty-first century are comprised of four fundamental capabilities: cognition abilities; process capabilities; systems capabilities; and social skills. Using one's ability to think creatively to demonstrate cognitive abilities can be very effective. Critical

thinking, on the other hand, is a skill that can be developed at the university level and is used to transform raw data into meaningful information. As a result of this research, the following findings were discovered: The EFA analysis revealed that the CRE construct contained four valid sub-constructs, while the CRI and ETS constructs each contained five valid sub-constructs; (2) The CFA analysis revealed that there was a strong and moderate link between the four valid sub-constructs of the CRE construct and the ten valid sub-constructs correlation for both the CRI and ETS constructs. (3) The results of the SEM analysis reveal a statistically significant relationship between CRE, CRI, and ETS, with a moderately significant relationship between CRE and ETS *(β = 0,291*), as well as a statistically significant relationship between CRI and ETS *(β = 0,143*). The correlation between CRE and CRI, on the other hand, was found to be high *(β = 0.894*). Finally, demonstrate that the CRE, CRI, and ETS have played a role in improving the performance of university students during the TCDS era of time.

Results of this study may lead to new ways of thinking about how students' abilities in TCDS can be improved through creative thinking, critical thinking, and entrepreneurial skill. A greater number of studies are required to obtain additional benefits and the most recent discoveries from aspects that influence students' performance in today's technologically advanced world.

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