The Factorial Structure of a Multi-Purpose Questionnaire in the Field of Nursing Education

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Abstract
This study aims to verify the factorial structure and validity of the tool used to measure the impact of curriculum, teaching methods, character building, self-efficacy, and emotional intelligence among nursing students at the University of Benghazi, Libya. The results of exploratory factor analysis showed no strong correlations between the scale paragraphs, indicating no problems related to polylinearism. Several main themes were identified that reflect the tool's ability to effectively measure different concepts. The emotional intelligence dimension was the most influential, followed by curriculum, personality building, teaching methods, and finally self-efficacy. The quality of all paragraphs of the scale also confirmed the reliability of the tool used. Preliminary results of confirmatory factor analysis showed that the measurement indicators of the original model were not satisfactory, indicating a mismatch between the model and the data. After reevaluating the model and deleting items with poor saturations, the conformity indicators improved significantly. The results also showed high composite stability, reflecting the reliability of different dimensions. The model has confirmed the sincerity of differentiation, enhancing its credibility. The results confirm the validity of the tool used to measure the concepts studied, allowing accurate and reliable conclusions to be reached. It also highlights the importance of periodically reevaluating models to improve their accuracy and reliability.

Keywords: Exploratory factor analysis, Confirmatory factor analysis, Nursing education, Questionnaire.

Introduction:

Factor Analysis:

The quest of psychologists to systematically describe human intellectual abilities led to the development of factor analysis methods. Galton, an activist in the nineteenth century, established these methods by developing quantitative techniques to determine

relationships between variables. It was Carl Pearson who was the first to explicitly define factor analysis. In 1902, McDonnell published the first practical application of factor analysis, comparing the physical properties of three thousand criminals and a thousand university students at Cambridge. Factor analysis is a means of organizing measures Interconnected in a simplified way. Traditionally, it is used to explore the potential infrastructure of a set of variables without imposing any pre-model, and through exploratory factor analysis, the number and structures of basic structures are determined. (Diana & Suhr, 2000)

Factor analysis is a statistical method that studies a large number of variables and explains the relationship of these variables to each other, through the correlations between them. These factors are independent of each other, in which case the problem of multiple linear relationships between variables has been eliminated. Thanks to Spearman in 1863, who developed his ideas, and added new dimensions to the concept appeared in his studies published in 1904 and announced the results of his study of intelligence, which is the practical beginning of factor analysis. The intake Statistical researcher also 1901 Pearson) subject factor analysis as a statistical concept, and his research in which he laid the pillars of the main component's method (Sous, Malik, and Omar, 2021)

Objectives of factor analysis:

1. Summarizes variables in a smaller number of key factors that can explain the phenomenon.
2. Highlight the set of latent elements that are difficult to detect and that can have a role in explaining the relationships between a large number of variables.
3. Obtain a new set of variables (factors) and a smaller number to partially or completely replace the original set of variables.
4. Identify variables that have significant statistical significance and that require further analysis such as regression.
5. It is a useful technique in reducing complex relationships between a set of variables to a relatively simple linear form as it reveals unexpected relationships.
6. Solves the problem of explanatory variables such as the problem of high correlations between independent variables that lead to the instability of the values of their standard regression coefficients in regression analysis. (Abu Fayed, 2016)

Terms of use of factor analysis:

There are several conditions to consider when using factor analysis to ensure the accuracy and reliability of the results. The most prominent of these conditions are:

1- Sample size: It is preferable that the sample be relatively large. It is recommended that the number of participants be between 5 to 10 times the number of variables used in the analysis.

2- Correlation between variables: There must be sufficient correlations between variables, as it is preferable that most correlations between variables be statistically significant. The correlation array can be used to verify this.
3- Normal distribution: It is preferable for data to follow the normal distribution, although some factor analysis techniques can work well with abnormal data.
4- Absence of anomalous variables: The data must be checked to ensure that there are no abnormal or extreme values, as these values can affect the results of the analysis.
5- Suitability of the model: It is important to assess the suitability of the model used. Tests such as the Chi-square test and the Goodness of Fit Index can be used to verify this. (Field, 2018)

Factor analysis methods:

Method Component Principal

It is one of the most accurate, common and used factor analysis methods due to the accuracy of its results compared to the rest of the methods. This method is done by extracting the coefficients of the factors successively, and the coefficients of the first factor 1F, which has the largest value of the commonness of the variables, are extracted, and then the coefficients of the second factor 2F, which represents the largest value of the remaining commonness, are extracted from the rest of the correlation matrix and continue in this way until all the coefficients are extracted for the required factors. This method has several advantages that it leads to fine saturations, each factor extracts the maximum amount of variance, and also results in as little residual as possible, and the correlational matrix reduces to the least number of unrelated orthogonal factors. (Sauce et al., 2021)

Diagonal method Country Method

The country method is one of the direct and easy methods in factor analysis, and it can be used if we have a small number of variables and lead to the extraction of the largest possible number of factors and this method requires previous and accurate knowledge of the values of the prevalence of variables, and without this knowledge it cannot be used. The diagonal method derives its name from the fact that it is based on the direct use of diagonal values in the correlational matrix. The diagonal method begins by deriving this value in its entirety in the first factor, so the root of this value is the saturation of the first variable over the first factor, called diagonal saturation and so on. (Abu Fayed, 2016)

The central method using the average correlation method Averoid:

The central method using the average correlations (Averoid Method) is a technique used in factor analysis to evaluate the relationships between variables by averaging correlations. This method focuses on providing a central estimate of how variables interact with each other, making it easier to understand complex relationships in data.

The method calculates the arithmetic mean of the correlations of variables in a given set, which helps reduce the impact of variables with high or low correlations. When there are highly correlated variables, they may lead to distorted or inaccurate results when analyzing data. By using average correlations, researchers can get a clearer picture of the links between variables, helping to identify the most important and influential factors. This method is especially useful in cases with a large number of variables, as the relationships between them can become complex. Using average correlations, researchers can make informed decisions about which variables to include in the final model, enhancing the accuracy of the analysis and helping to avoid errors resulting from inappropriate correlations. (1983, Gorsuch)

Axes of Rotation

This method is based on the initial estimation of the subscriptions in the country cells of the correlation matrix based on correlation boxes, and this method is similar to the method of the basic components in the mechanism of extracting factors, as the basic axes method starts from setting the initial commonness values, which are the multiple correlation coefficients in the diagonal cells of the matrix, and then this method estimates new commonness values to replace the previous initial commonness values, and the process of estimating the new commonality continues until the program reaches the maximum convergence between the new commonness values, And the old commonness values, so that when using the SPSS package, this difference does not exceed .001 (the default number in the SPSS package is 25 attempts) between the current and tribal commonness values without achieving a convergence equal to or less than 0.001, the program stops extracting the factors. The estimate of contributions may be the square of multiple correlation between one variable and the rest of the variables, or the highest simple correlation in each column of the matrix. (Ramadan, 2014)

General concepts in factor analysis

Latent root (Eigenvalue)

It is a basic concept in factor analysis, as it is used to determine the power of factors or variables inherent in explaining variance in data. The latent root reflects the amount of information or variance that each factor provides relative to the data set. The latent root is a value extracted from a variance matrix or correlation matrix, and helps researchers understand how important each factor is in the model. When multiple factors are analyzed, the latent root of each factor is calculated, and these values are used to determine the most influential factors. A latent root that exceeds 1 is usually considered an indicator that the factor explains a greater variance than individual variables. The latent root is also used to determine how many factors should be retained in the model, where factors with latent roots greater than 1 are important factors to include. Latent roots provide an objective way to evaluate factors, which promotes accurate understanding of data and helps in making informed decisions about how many factors

to retain, enhancing the accuracy of the results. Thus, the latent root is a vital tool in factor analysis, as it helps identify and interpret factors that influence data, allowing researchers to understand the underlying variance in a systematic and scientific way. Field, (2018)

Communality:
Since a single variable contributes in different amounts to each factor, and whether its contributions are substantial or insignificant, the sum of the squares of these contributions, or saturations on the matrix factors, is the value of the commonality of the variable or socials and the total variance of the variable = its prevalence value + error variance The variable shares more than one factor and is known as the common factor, or the general factor, and its degree of prevalence is known as Community .The factor includes at least three variables. (Sauce et al., 2021)

Criteria for determining the number of extracted agents: Kaiser Criterion
It is a criterion used in factor analysis to determine the number of factors that should be retained in a model. This criterion is based on the idea that factors that are considered important should be able to explain variance greater than the mean. Specifically, any factor that has a latent root (Eigenvalue) greater than 1 is an important factor and should be included in the analysis. This is because a latent root of more than 1 means that the factor explains a greater variance than what individual variables do.(Kaiser, 1960)

Types of factor analysis:
Exploratory Factor Analysis
It is a statistical method that aims to interpret the coefficients of directed correlations - which have statistical significance - between various variables, in other words, exploratory factor analysis is a mathematical process aimed at simplifying the correlations between the various variables involved in the analysis to reach the common factors that describe and interpret the relationship between these variables. It is a statistical approach to download multiple data linked to each other in different degrees in the form of independent classifications based on qualitative foundations according to the classification and the researcher examines these classification bases and traces between them from Common characteristics. Exploratory factor analysis is a statistical method that aims to reduce a number of variables that make up the main variable under consideration or neglect, to a smaller number called factors. (Laounand Ayesh, 2016)
Tigra (2012) stated that exploratory factor analysis has two main purposes: to reduce the multiplicity of measured variables or indicators to a few latent variables that summarize them. Another purpose is to reveal the underlying factorial structure, or the space of common semantics that underlies the multivariability.

Methods of data scouting analysis are statistical tools that focus on studying a set of data from multiple aspects. This type of analysis allows for valuable information that can lead to more accurate analyses, helping to clarify the phenomenon studied. The researcher may experience inconsistent results, which could be useful for further analysis. Sometimes, the researcher may decide to repeat the experiment or divide the study sample into two or more groups, and then collect and analyze the data separately for each group. The researcher should pay special attention to consistent results between groups, through which a specific theoretical model can be checked, detect revealing variables that were not previously considered, or include variables that are not related to the study. Thus, the scouting analysis of data is an interactive process that requires good knowledge from the researcher of the statistical method used and the nature of the data being analyzed. (Sous et al., 2021)

Confirmed Factor Analysis (CFA):

Assertive factor analysis (CFA) is a multivariate statistical procedure that is used to verify the psychometric properties and to know the efficiency of the measured variables that represent the number of dimensions, and confirmatory factor analysis (CFA) and exploratory factor analysis (EFA) are similar techniques, in the exploratory factor analysis process (EFA).) The data is simply explored, and it also has a role in providing information about the number of factors required to represent data in exploratory factor analysis, as all measured variables are related to each latent variable, but in affirmative factor analysis (CFA) where the number of factors required in the data can be determined and the measured variable is related to the latent variable, confirmatory factor analysis (CFA) is a tool used to confirm or reject measurement theory Hair, Hult, Ringle, &Sarstedt (2017) Confirmatory factor analysis is also used to assess the ability of a factor model to be expressed in an actual data set in comparison between factor models.

Factorial analysis is a step in modeling the structural equation, which aims to study the link between the theoretical factor (latent) and its dimensions (indicators) that represent it, and its use helps to reduce the number of paragraphs or even dimensions to the number that is commensurate with the study environment, and also aims to examine the evidence of structural honesty (Construct Validity) of the scale or questionnaire, based on the existence of a prior scientific theory (Prior Knowledge) Or scientific literature or based on the results of exploratory factor analysis (EFA), and constructivist honesty includes two types of honesty, namely convergent validity and discriminant validity. To test the results of the confirmatory factor analysis, Kline (2011) pointed to a set of key indicators that aim to measure the extent of correspondence or appropriateness between the hypothetical theoretical model and the measured reality through the collected data. Confirmatory factor analysis is used to ensure the structural validity of the study scale, and to ensure the assumptions of the factor structure and

verify the validity of the model and its validity and ensure its conformity with the study data. Confirmatory factor analysis is used for the following purposes:

Development or construction of new metrics:
It is used to test the factor structure of measurement tools, such as: questionnaires, by verifying the number of assumed factors, as well as the saturation of vocabulary with factors, and this facilitates the correction of the scale in light of its sub-dimensions (factors). It also determines the nature of the relationships between factors or dimensions. Brown (2006) argues that CAF contributes to the estimation of scale stability, in order to avoid estimation problems for traditional methods, such as Cronbach's alpha.

Sincerity of construction or concept:
Concepts in psychological science are multifaceted and multidimensional. The CFA provides us with evidence of convergent and discriminatory honesty, as discriminatory honesty indicates that measurements of different concepts are distinct (there are low correlations between them). Brown (2006) pointed out that high correlations between different concepts, for example (85, 0) or more, indicate weak discriminatory truthfulness, while convergent honesty indicates that different measurements of the same concept are highly correlated. To examine factorial or constructivist honesty to determine whether a concept is one-dimensional or Multidimensional, how are the sub-dimensions of the concept related? and how the vocabulary is related to the concept or factor. But many experts point out that the saturation of vocabulary with the factor is convergent sincerity, which is part of structural honesty.

Testing the effects of the method:
The effect of the method indicates that the variation of the measured property or concept is not due to the content of the vocabulary only, but to the way the vocabulary is formulated and presented, in addition to the positive formulation and negative formulation of the vocabulary. In general, the method refers to the effect of response bias as a result of social desirability, and different response methods such as: observation, self-determination or positive versus negative vocabulary may lead to low correlations between different images to measure the concept. For example, when there are positive statements and negative statements, data analysis Two factors are produced, while one factor is expected in light of the theory. (Amer, 2018)

Equivalence or stability of measurement through different combinations:
Measurement stability refers to the consistency, similarity or equivalence of the scale structure through groups of individuals or time. Therefore, theCFA aims to ascertain the equivalence of the scale across subgroups in the community, and if the equivalence or

stability of the scale structure is not established across subgroups of the population, the test is said to be biased, and this can be confirmed through Multi-group CFA analysis.(Amer, 2018)

Nursing Education:

Medical education, including nursing education, is an important economic asset in developed and developing societies. Nursing education is seen as one of the key elements, with a focus on qualifying practitioners. Nursing education is more training than education, as it relies heavily on the traditional vocational training model, which involves acquiring skills through hands-on training with part of the theory. The main objective of nursing education is to develop certain skills and knowledge to ensure that a specific level of performance and behavior is achieved in accordance with the requirements of educational institutions.Freshwater & Stickley, 2004).

Nursing education is the process of developing the skills and knowledge necessary to practice the nursing profession effectively. Nursing education aims to prepare nurses to provide comprehensive and safe health care to patients, through study programs that include theoretical and practical aspects. (Cherry & Jacob, 2016) The nursing profession is an essential part of healthcare systems, playing a vital role in promoting the health and recovery of individuals after illness. According to the World Health Organization, the nurse is the link between the patient and the health care team, and nursing education is based on a combination of science, knowledge and skills needed to care for patients holistically (Saadea and Al-Husseinat, 2015).

Nursing schools use diverse curricula to equip nurses with the necessary knowledge and skills. The curriculum consists of a series of learning experiences that include content and exercises that enhance learning. The curriculum focuses on clinical experience and practical practice, and also includes critical thinking, communication and teamwork skills. It also includes advanced information that contributes to improving the efficiency and effectiveness of nurses, and enables practitioners to deal with complex healthcare challenges. The importance of ethical and professional values in nursing practice is also emphasized (Xiao and Men, 2022).

Teaching is an essential element in broadening people's perceptions, and its methods have evolved through the ages. Each science has its own importance and method of presenting knowledge, and the field of nursing requires diverse teaching strategies that guide students towards applying their knowledge in practical exams (Alammar, Ahmad, Almutairi, & Salem, 2020). Historically, traditional teaching methods have relied on students receiving knowledge passively, proving to be inappropriate to modern professional standards. This has led to the emergence of new pedagogical theories that support the acquisition of basic mental, social and motor skills) (Ni et al., 2022);(Saada & Husseinat, 2015)

On the other hand, nursing education must be comprehensive to meet the diverse needs of students, as it is not limited to academic achievement, but must enhance their personal abilities to face challenges in their working lives. Students need skills such as flexibility, compassion, empathy, and moral responsibility (Rokhman Hum, & Syaifudin, 2014).Personality is one of the core topics in psychology, as it deals with the physical, emotional, mental and social aspects of a person, and influences his interactions with the environment (Habibi, Abadi, and Abdul Basit, 2022). Personality influences performance and behavior, covering values and attitudes. Character building is a structured effort to form beneficial individuals for themselves and others, making the acquisition of these skills necessary for nursing students (Blanchard, Grath, & Kerme 2021). Therefore, personality is a key pillar that expands students' academic and professional perception.

The self-efficacy of nursing students is a key element to improve the application of their knowledge and enhance their professional skills. Developing these competencies is a priority for nursing teachers and school administrators. Nursing students face multiple pressures during their clinical cycles, such as fear of infection, unsafe practices, and negative assessments, which can lead to medical errors that threaten patient safety. Therefore, the pedagogical nurse must work to enhance students' self-efficacy, which indicates their ability to take effective action to manage future situations. Shows the belief that students Able to complete tasks and achieve positive learning outcomes when an appropriate level of self-efficacy is reached (Alosaimi, 2021).

In addition, the acquisition of emotional intelligence is a vital element of the nursing profession, as the art and science of nursing cannot be separated from emotions. Nurses constantly deal with human emotions, such as pain, sadness, rest, and hope. Evans and Allen point out that including emotional intelligence in the curriculum helps students manage complex emotional situations. If they can deal with their emotions effectively, they will be better able to interact with others confidently and efficiently. Integrating emotional intelligence into education allows nurses to understand themselves and how to build relationships with others, which directly affects the therapeutic relationship and patient experience. Emotional intelligence (EI) is defined as a set of non-cognitive abilities that enhance an individual's ability to succeed in life (Freshwater & Stickley, 2004).

Objective of the study

This study aimsto verify the structural and structural validity factor structure using exploratory factor analysis and confirmatory factor analysis for a multi-purpose questionnaire in the field of nursing education. This questionnaire was prepared to measure the impact of curricula and teaching methods and measure personality building, self-efficacy and emotional intelligence among nursing students at the University of Benghazi in the State of Libya

Methodology

Study sample: The study sample consists of 218 students of the Faculty of Nursing at the University of Benghazi, Libya, who are enrolled to study in the academic year (2023, 2024) distributed over 10 masters.

Study Tool: The tool used is the questionnaire

Description of the tool: This tool was prepared after reviewing previous studies, as this tool contained five basic variables, namely curricula, teaching methods, emotional intelligence, character building and self-efficacy, and each variable includes a set of paragraphs. The curriculum variable contains ten paragraphs, the teaching methods variable contains nine paragraphs, the emotional intelligence variable includes thirteen paragraphs, the personality building variable consists of ten paragraphs, and the self-efficacy variable includes eight paragraphs.

Measuring the apparent validity of the questionnaire:

The honesty of the tools is one of the conditions that must be met in the measurement tools that will be used in the study, and it is one of the quality standards of the scale used, and it is related to the results of the scale and not the scale itself, and expresses the accuracy with which the test measures what it was developed for, meaning that the honest test measures the function for which it was developed and does not measure anything else. The questionnaire is specifically designed to be presented to a group of experts and professors who have extensive experience in the field of psychology and the preparation of scales in Malaysian universities in order to know the apparent validity of this questionnaire and the consistency of paragraphs with variables. Table 1 shows the resident members of the questionnaire in its initial form. After that, some adjustments were made based on the observations of the evaluative committee, and the tool will be presented in its final form in the study annex

Table 1 Data of the resident committee members for the questionnaire

Years of Experience	Degree	Specialization	Name
25 years	Doctor's Stadium	Forbidden	. Dr. Khairy Ahmed Arhuma Masoud
12 years	PHD	SCIENCE EDUCATION	Dr. Mohamed Mai
3 Years	Senior lecturer	Human resource development	Dr. Samah Malik
19 years old	PHD	Statistical	Dr.

		Psychology	AbdulazizFal

Structural or formative honesty:

To verify this characteristic, exploratory factor analysis will be applied, which is to verify the suitability of all statements to the scale and the suitability of each phrase with the dimension, as well as can reduce a number of factors or phrases using orthogonal rotation of axes by the Firemax method (Varimax) is a method used in factor analysis to increase the interpretability of extracted factors. This method aims to achieve a distinction between factors so that each factor is highly related to a limited number of variables, and less related to variables other. By modifying the positions of the axes, Varimex seeks to increase the variance between factors, helping to facilitate understanding of the relationship between variables and factors. Thus, it contributes to reduced complexity and increased clarity of data, making the results easier to interpret and use in research. Based on the results that will be obtained, the statements will be processed, where the relationship between the variables within one factor is stronger than the relationship with the variables in other factors, and Firemax (Varimax) to rotate the axes vertically from that, where it can be judged that a variable belongs to a particular component by loading it on that factor, and the greater the absolute value, the greater the statistical significance. Confirmatory factor analysis is then applied to these tools. To take this step, the researcher took several steps as follows:

Study procedure:

The researcher applied the scale of the study to a random sample consisting of students of the Faculty of Nursing at the University of Benghazi, in order to carry out the second step to ensure structural truthfulness, which is exploratory factor analysis. 240 male and female students from the Faculty of Nursing at the University of Benghazi were randomly selected and the questionnaire was applied to these students, after that the responses were collected from the students and the responses retrieved amounted to 218 tools.

Exploratory Factor Analysis Steps

To analyze the underlying factors of the scales of the study variables and verify their psychometric properties. The researcher conducted the structural exploratory factor analysis (EFA) of the data using the main component analysis (PCA) as part of the study analysis for the purpose of examining the content validity of the data using (SPSS, Version 26). These tests can help the researcher to modify and refine the elements and reduce their number (Pallant, 2016), two tests have been performed in the analysis of the main components, the first test consists of measuring the Kaiser-Mayer-Olekin (KMO) measurement of sample adequacy, and Bartlett's test of sphericity, and the first test is performed, to check whether there is enough information about the construction scale,

as well as support the correlation matrix factor, which is recommended to be 0.6 or higher. If exploring the correlation matrix shows that there are many operands above 0.3 but less than 0.5 and relative values greater than 1, this indicates that the data met the requirements of the assumptions and accepted the data (Pallant, 2016). The second test involves analyzing data using appropriate key factor analysis, where elements were analyzed using varimax rotation so that paragraphs with factor saturations less than 0.4 (Pallant, 2016) are excluded. Exploratory factor analysis of variables was conducted for curriculum measures, teaching methods, emotional intelligence, character building and self-efficacy.

The results of the correlation matrix shown in the table below that the highest correlation value was 0.84, which indicates that the correlations did not pass 0.9 as the specified maximum. This result proves that the data is free from the problem of polylinearism, which has negative effects on the results, Which indicates the validity of the data and the ability to continue the analysis based on what was recommended by the experts, and the analysis of the basic elements in the exploratory factor analysis of the variables was conducted for curriculum measures, teaching methods, emotional intelligence, character building and self-efficacy, where the results showed a number of five axes representing 62.221% of the total variance shown. So it can be explained by 62.221% of the study dimensions related to curriculum, teaching methods, emotional intelligence, character building and self-efficacy, and therefore This data collection tool was sufficient to be adopted for final analysis. The Initial Eigenvalues for each axis of the study variables related to the quality of educational training were greater than 1, as shown in Table 2. The results of the Kaiser-Mayer-Olekin (KMO) scale for the adequacy of the sample size for the relevant study variables as shown in the table below showed that the scale value was 0.865, a result that indicates that the analysis meets the required sample size, which is more than the recommended value of 0.6 for statisticians, while Bartlett's test test of sphericity) shows sufficient correlation within the variables where chi-squared is equal to 12141.210 and the value of statistical significance is P=0.001, so the model of study variables related to curriculum measures, teaching methods, emotional intelligence, personality building and self-efficacy meets the established assumptions.

Table 2 Kaiser-Mayer-Olkin test and Bartlett test for study variables

.865	Kaiser-Meyer-Olekin scale (CMO) Kaiser-meyer-olkin measure of sampling adequacy.	
12141.210	Approximate chi-square Approx. Chi-Square	Bartlett Test Bartlett's Test of Sphericity
1167	: Df degree of	

	freedom	
0.000	: SigSignificance Level	

In light of the data analysis using PCA analysis, 53 items were analyzed using varimax rotation with a saturation factor of less than 0.4 hidden, where all items were related to study variables related to curriculum measures, teaching methods, emotional intelligence, personality building and self-efficacy. The results showed that the paragraphs of the studied variable were distributed in five main dimensions based on the theoretical framework of the study tool. The results shown in the table indicate that the emotional intelligence dimension had the highest latent root value of 13.157, and this factor explains 26.851% of the total explained variance. It is followed by the curriculum variable, which received a latent root value of 5.311, and this factor explains 10.839 of the total variances. It is followed by the personality structure variable, which received the latent root value of 4.665, and this factor explains 9.521 of the total variances. Followed by the teaching methods variable, which occurred on the latent root value of 3.871 and this factor explains the magnitude of 7.899 of the total variances. It is followed by self-efficacy, which has a latent root value of 3.484 and this factor is explained by 7.110 of the total variances.

The researcher also used the anti-image correlation test to find out the quality of each paragraph of the scale separately, and looking at Table No. 3, we find that the values of the counter-correlation of the paragraphs of the study variables are greater than 0.50, which indicates that each paragraph of the scale is of high quality, and therefore it is suitable for use in factor analysis. The results of the communality coefficient shown in Table 3 also confirmed the quality of the paragraphs of the scale being Greater than the lowest recommended value is 0.30. The results also show that the saturation values of the scale paragraphs are greater than 0.40, which are good values as recommended (Pallant, 2016).

Table 3 Factor saturations and latent roots of study variables

		Paragraph saturation (loading)				symbol	
Coefficient of prevalence	**Self-efficacy**	**Teaching Methods**	**Building Al-Shakhsiya**	**Curriculum**	**Emotional intelligence**	**Paragraphs**	**Variable**

0.636					0.795	EI2	Emotional intelligence
0.641					0.791	EI3	
0.656					0.79	EI1	
0.659					0.788	EI4	
0.549					0.758	EI11	
0.484					0.743	EI13	
0.496					0.738	EI12	
0.619					0.722	EI10	
0.579					0.72	EI8	
0.627					0.711	EI9	
0.674					0.678	EI5	
0.635					0.647	EI7	
0.666					0.617	EI6	
0.587				0.844		EC8	Curricula
0.577				0.801		EC4	
0.542				0.788		EC6	
0.672				0.782		EC5	
0.67				0.777		EC7	
0.658				0.725		EC2	
0.676				0.721		EC10	
0.731				0.717		EC1	
0.536				0.708		EC3	
0.569				0.702		EC9	
0.588			0.816			PB8	building Personality
0.604			0.813			PB7	
0.595			0.805			PB6	
0.618			0.801			PB5	
0.731			0.769			PB4	
0.718			0.754			PB1	
0.721			0.754			PB3	
0.733			0.752			PB2	
0.351			0.615			PB10	
0.452			0.578			PB9	

0.626		0.893				TM5	Teaching methods
0.846		0.875				TM2	
0.783		0.873				TM4	
0.838		0.846				TM3	
0.851		0.756				TM1	
0.566		0.701				TM7	
0.586		0.689				TM6	
0.415		0.575				TM8	
0.743	0.842					SE3	Self-efficacy
0.724	0.84					SE2	
0.758	0.837					SE1	
0.714	0.831					SE5	
0.72	0.825					SE4	
0.394	0.524					SE8	
0.336	0.496					SE6	
0.341	0.493					SE7	
-	3.484	3.871	4.665	5.311	13.157	-	Latent root
-	0.894	0.877	0.872	0.928	0.939	-	Alpha coefficient

Confirmatory Factory Analysis steps:

Confirmation factor analysis was used to evaluate the ability of the factor model to express in the actual data set in comparing factor models, where version 26 of the Amos program was used to test the conformity of the measurement model to the data to ensure the validity of what was reached in this study of the factor structure of the scale, after analyzing the data in advance by exploratory factor analysis.

The study used a number of indicators to ensure the conformity of the study model, as conformity is one of the important issues in modeling structural equations (SEM) and related to the extent to which the theoretical model matches the data collected by the study, and there are a large number of indicators that confirm the quality of conformity and the most prominent indicators of good conformity provided by most modeling programs are: Chi-square It is used to process many statistical applications, it is used to test the homogeneity of several independent estimates of community variance or independent estimates of coefficients The simple correlation, and for a good match test, between the assumed model and the sample data, and the value that best indicates a chi-square match is zero, and the chi-square test uses

independence that studies the relationship between two descriptive variables, whose data are of the binary type, sometimes called compatibility tables Hair (2017). Also important is the Mean Square Error of Approximation Root (RMSEA) Indicator A value less than 0.05 indicates good match, and a value that indicates the best match is zero Byrne (2013). RMSEA is one of the best indicators in terms of good performance of the square root of the average approach error (RMSEA).) and taking into account the error of approximation, and measures the spacing by degrees of freedom, which makes it sensitive to the number of free parameters and is affected by the complexity of the model, and there are estimates of conformity in the RMSEA index Values less than 0.05 indicate a good match, values ranging from 0.05 to 0.080 indicate a reasonable convergence error in the population, and values ranging from 0.08 to 0.10 indicate insufficient matching. mediocre fit If the index values exceed 0.10, it indicates a bad match, and the RMSEA index has a zero value that indicates the best possible match, and the higher its value, the lower the quality of the match, and the worse it is Hair et al, (2017)

The Comparative Fit Index (CFI) is one of the best comparison indicators, as it is based on comparing the chi-square of the hypothetical search model with the value of the chi-square of the independent model Hair et al. (2017) Here it is possible to refer to the standard score of the index, which exceeds 0.90, which indicates a good match of the assumed research model, as well as the standard score of the index confined between zero and one, and the closer it is to one, the degree of conformity is high, and the comparative conformity index and the standard conformity index are known, and the value that indicates the best match for all previous indicators is the correct one and the range of these indicators is between zero and one is correct (Kline, 2016)

The results when interpreting this indicator indicate the extent to which the assumed model has improved from the nullity model, as the word nothingness means the extreme state indicating or indicating the absence of relationships between the variables, comparing the assumed model, and the non-standard model aims to estimate the extent of improvement in the conformity that Kay connected between the hypothetical model, and the non-existent model aims to estimate the extent of improvement in the conformity reached by the assumed model by mismatching the non-standard model, while the Tucker-Lewis index is sometimes called the non-standard conformity index and this depends on The indicator on comparing a base model (independent model or nothingness model) on a punitive function when parameters increase and the complexity of the model increases, and these additions are useless in improving the level of conformity to the assumed model, in order to compensate for the complexity of the assumed model Hair et al. (2017), and in this study the measurement model evaluation of the general measurement model was carried out where all the latent variables were linked to each other. That is, linking all the variables of the study with each other, to know the conformity of the model, as well

as to know the validity of the model and indicators of congruence and differentiation of this model.

Total standard model of resolution variables:

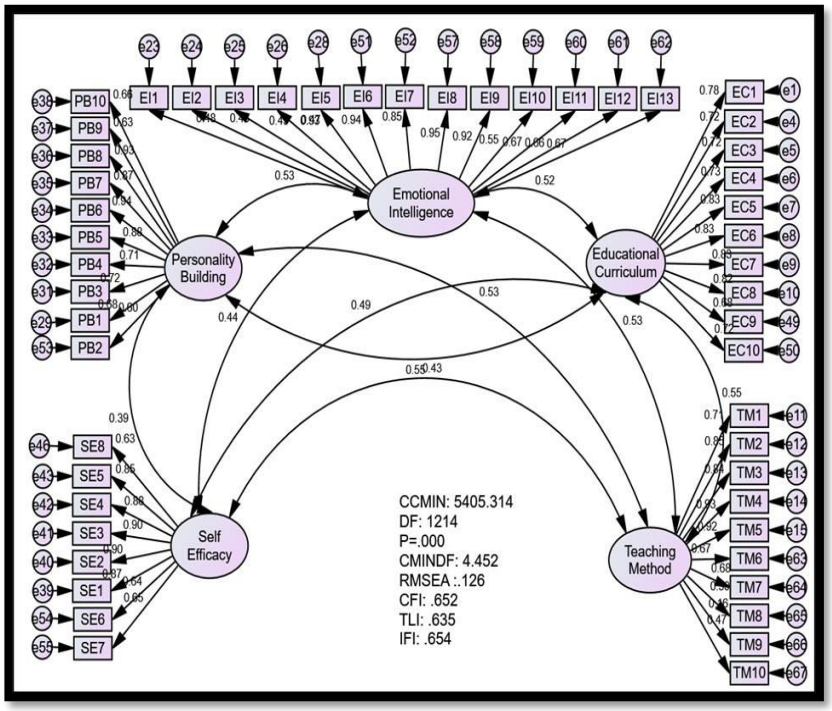
The confirmatory factor analysis of the macrostandard model was performed for all study variables together, namely, curriculum, teaching methods, personality building, self-efficacy and emotional intelligence. In order to test the validity of the measurement model, confirmatory factor analysis was performed. The following is the confirmatory factor analysis model for a scale in its initial form: Figure1 and Table 4

Table 4: Measures of congruence for the structural model

Statistical recommendations	**Value**	**Indicator symbol**	**Indicator Name**
Acceptable	5405.314	CMIN	**Chi-square**
	1214	DF	**Degrees of freedom**
Acceptable	4.452	CMIN/DF	**Standard chi-square**
Not suitable	0.126	RMSEA	**Square Root of Mean of Estimation Error Squares**
Not suitable	0.635	TELE	**Non-standard conformity (Tucker-Lewis)**
Not suitable	0.652	CFI	**Comparative matching quality**
Not suitable	0.654	IFI	**Increased Relevance Index**

The results in Table 4 and Figure 1 indicate that the measurement indicators for this model are unacceptable, we note that the chi-square (CMIN), which expresses the extent to which the model matches the data, has a relatively large value of 5405.314. Although this value may indicate a good incompatibility, the recommendation here considers it acceptable. The degrees of freedom (DF), which is the difference between the number of parameters and data points, is 1214. This value indicates that there is enough room to evaluate the model accurately. and Index The square root of the average approach error, known as (RMSEA), had a value greater than the standard value, with a value of 0.126, the comparative match(CFI) index with a value of 0.652, as well as the Tucker Lewis(TLI) index, with a value of 0.635, as well as the incremental match (IFI) index with a value of 0.654and the values of these indicators indicate an unacceptable level of conformity, so this model needs to be re-evaluated (Byrne, 2013)

Figure 1 Emphasizeable factor analysis model for a scale in its initial form Figure



After re-evaluating the measurement model by ascertaining the extent to which the elements are related to their dimensions and not related to other dimensions in the same model and through the adjustment index, it was found that the elements had caused problems in the quality of the model's matching, and therefore they were deleted to improve the quality of matching, as a paragraph was deleted in the personality building variable, which is the second paragraph that got poor saturation. Also, the seventh paragraph in the self-efficacy variable was deleted because it got poor saturation, three paragraphs in the teaching methods variable were also deleted, namely the sixth paragraph, the seventh paragraph, and the eighth paragraph that received a weak saturation. Six paragraphs in the emotional intelligence variable got weak saturations, namely the first and second paragraphs, the third and fourth, the tenth paragraph and the thirteenthparagraph also got a weak saturation, so they were deleted.

After that, the confirmatory factor analysis of the structural model was re-analyzed after deleting a set of paragraphs, Table No. 5 and Figure No. 2 presents the result of the analysis.

Table 5 Conformity measures for the structural model

Statistical recommendations	Value	Indicator symbol	Indicator Name
Acceptable	1241.968	CMIN	Chi-square
	647	DF	Degrees of freedom
Very suitable	1.920	CMIN/DF	Standard chi-square
Very suitable	0.065	RMSEA	Square Root of Mean of Estimation Error Squares
Very suitable	0.931	TELE	Non-standard conformity (Tucker-Lewis)
Very suitable	0.926	CFI	Comparative matching quality
Very suitable	0.932	IFI	Increased Relevance Index

Based on the values presented in Table 5 and the confirmatory factor analysis in Figure 2, the structural model analyzed corresponds very well to the data, as all major indicators fall within the range of acceptable or excellent values. The model shows good fit based on these indicators. The Kai Square index was 1241.968 and the degree of freedom was 647, and the standard Kay Square was 1.920 and indicates a matching quality score of 1.920 It is lower than the recommended standard value of 0.5. The RMSEA (RMSEA) square root index has improved to 0.065 and indicates the quality of model matching because it is below the recommended value of 0.080. The comparative conformance index was 0.926, the Tucker-Lewis index was 0.931, and the incremental congruence index was 0.932, and the values of these indicators indicate an excellent level of conformity. So it can be said that the scale model has obtained the required level of matching. Table 5 shows the values of these indicators.

Figure nº 2 Modified measurement model (final)

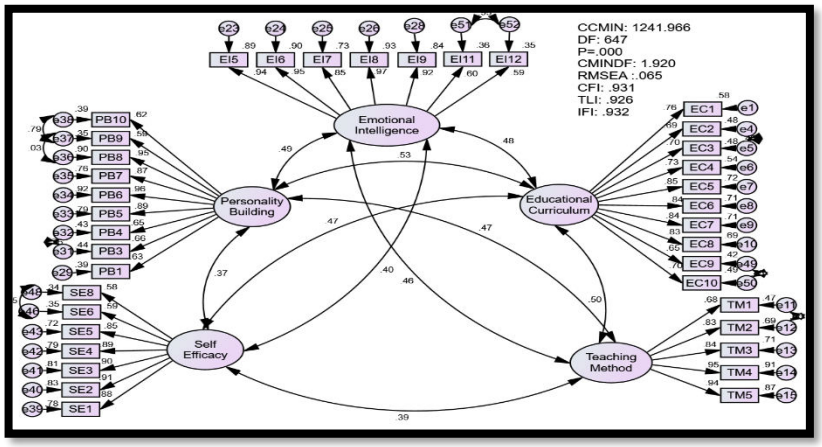


Figure 2 also shows the correlation values between all study variables, where the correlation value between curricula and teaching methods was .50 r = which is statistically significant at the level of p <.001. The relationship between curriculum and emotional intelligence was also r = .48, the value of the correlation between teaching methods and emotional intelligence was r = .46, and the value of the correlation between curriculum and personality building was r = .53, and the value of the correlation between emotional intelligence and personality building r = .49, and the value of the link between teaching methods and personality building was r = .47, and the value of the correlation between curriculum and self-efficacy r = .47, and also the value of the correlation between teaching methods and self-efficacy was r = .39, and the value of the relationship between emotional intelligence and self-efficacy was r = .40, and the correlation between personality building and self-efficacy was r = .37We note that these relationships were significant at the significance level p < .001, and these relationships range from medium to strong.

Honesty and consistency of the overall standard model:

It is necessary to make truthfulness and stability estimates in order to validate standardized measurement tables because these estimates reveal whether the scales really measure what is supposed to be measured, moreover, in modeling structural equations, there are some values in statistics that are used to measure model stability. These factors include composite stability and saturation ratio for each element (Loading), as well as the Average Variance Extracted of the axis at correlation squaring (Byrne, 2013)(Kline ,2016) Where the results of the total measurement model showed that the saturation of the elements was greater than 0.50, and this confirms the correlation between the dimensions of the model and its paragraphs, as the statistical value of t for each paragraph is greater than 1.964 and the level of significance (probability value) is less than 0.001, and this confirms the convergent validity, as well as the Cronbach alpha coefficient and the compound stability is greater than 0.7 and this confirms the stability of the total measurement model of the study, as well as the value

of the extracted variance is greater than 0.5. It can These results are seen in Table 6 and therefore it can be said that the results of the overall standard model were appropriate

Table 6 Honesty and reliability of the total measurement model of the study variables

Composite stability	Abstract variation	Standard error	Value "T"	Significance value	Saturation	Items	Dimensions
0.932	0.581				0.763	EC1	Curriculum
		0.073	10.503	***	0.689	EC2	
		0.077	10.626	***	0.696	EC3	
		0.075	11.258	***	0.732	EC4	
		0.071	13.379	***	0.846	EC5	
		0.074	13.278	***	0.841	EC6	
		0.077	13.276	***	0.841	EC7	
		0.078	13.068	***	0.83	EC8	
		0.077	9.77	***	0.647	EC9	
		0.069	10.733	***	0.702	EC10	
0.93	0.729				0.683	TM1	Teaching Methods
		0.086	14.879	***	0.83	TM2	
		0.122	11.484	***	0.84	TM3	
		0.114	12.788	***	0.953	TM4	
		0.109	12.612	***	0.935	TM5	
0.944	0.715				0.942	EI5	Emotional intelligence
		0.034	29.932	***	0.951	EI6	
		0.049	20.577	***	0.854	EI7	
		0.033	32.311	***	0.966	EI8	
		0.042	25.971	***	0.919	EI9	

		0.055	10.501	***	0.599	EI11	
		0.057	10.265	***	0.589	EI12	
0.927	0.595				0.628	PB1	Character Building
		0.12	8.605	***	0.66	PB3	
		0.122	8.521	***	0.652	PB4	
		0.121	10.764	***	0.887	PB5	
		0.125	11.34	***	0.959	PB6	
		0.127	10.612	***	0.869	PB7	
		0.122	11.275	***	0.95	PB8	
		0.129	7.854	***	0.592	PB9	
		0.135	8.183	***	0.621	PB10	
0.929	0.659				0.882	SE1	Self-efficacy
		0.049	20.128	***	0.91	SE2	
		0.052	19.736	***	0.902	SE3	
		0.052	19.087	***	0.889	SE4	
		0.057	17.308	***	0.848	SE5	
		0.062	9.742	***	0.589	SE6	
		0.059	9.537	***	0.58	SE8	

The results presented in Table 6 indicate a high quality in the design of the standard model used in this study. Composite stability, ranging from 0.927 to 0.944, reflects strong reliability for different dimensions, as these values ensure a high level of internal stability of the data. This stability is consistent with the values of the Cronbach alpha coefficient which, although not directly mentioned in the table, can be inferred to exceed 0.7 based on the high values of the composite stability. This suggests that dimensions and elements are reliable The Cronbach alpha coefficient provides an additional indication that the elements within each dimension consistently measure the same concept. The extracted variance, which ranges from 0.581 to 0.729, shows that dimensions effectively explain a large proportion of the variance in the data, which confirms the power of the dimensions in explaining the phenomenon studied. Furthermore, the saturation values for each element exceed 0.50, indicating that the elements are strongly related to the dimensions to which they belong. High T-values

between 7.854 and 29.932, as well as significance values less than 0.001, indicate that each element has a significant and reliable statistical impact on the dimension to which it belongs. For example, in the curriculum variant the best saturations were the fifth paragraph (EC5) got a saturation of .846, then the seventh paragraph (EC7) had a saturation value of .841, followed by the tenth paragraph (EC10) of saturation value of 702.In the variable of teaching methods, the fourth and fifth paragraphs (TM4,TM5) got the best saturations and their value was .953 and .935, then the third paragraph (TM3) with a saturation rate of .840, and got the best saturations in the emotional intelligence variable (EI8) with a value of .966, followed by the sixth paragraph (EI6) with a saturation value of .951, then the fifth paragraph (EI5) had a saturation of .942, and in the personality building variable the sixth paragraph (PB6) got a saturation of 959. It is the highest saturation, followed by the eighth paragraph (PB8) with a saturation value of .950, and the fifth paragraph (PB5) got a saturation of .887, also in the self-efficacy variable the second paragraph (SE2) had the highest saturation with a value of .910, followed by the third paragraph (SE3) with a saturation of .902, then the fourth paragraph (SE4) and its saturation was .889. In general, the results of the analysis confirm the high convergence validity of the model, as the statistical values and figures received support the strength of the convergent honesty of the model, indicating that the model measures what is intended to be measured accurately and shows a robust and consistent design.

Sincerity of differentiation:

The validity of differentiation is related to verifying in the measurement model the extent to which the elements of different variables or axes are differentiated from each other, so the validity of differentiation for the current study model was verified using the Fornell-Larker test, according to the Wornell and Larker test. The validity of differentiation condition in the standard model is achieved using structural equation modeling analysis when the ratio of the average variance extracted) is higher than the ratios squared of the correlations between the model factors while the other ratios represent the correlations between those hypothetical factors in the matrix

Table 7: Validity and reliability of the macro measurement model

5	4	3	2	1	Variable
				0.846	Emotional intelligence
			0.812	0.40	Self-efficacy
		0.854	0.39	0.46	Teaching Methods
	0.762	0.50	0.47	0.48	Curriculum

0.771	0.53	0.47	0.37	0.49	Character Building

In Table No. 7, it can be observed the shaded values, which are the average variance extracted by our values, which are the average correlation between the variables of the model, it is clear that the ratio of the average variance extracted was higher than all the correlation squared ratios for all the relationships between these factors, as well as we find that the correlation values, which are above the average correlation, were less than 0.85, so it can be said that the standard model of this study has achieved the sincerity of differentiation. This means that the different variables in the model are distinguished from each other, and they measure independent aspects. These results enhance the credibility of the model used in the study, allowing for more accurate and reliable conclusions.

Explanation of the results of the study:

First, the results of the exploratory factor analysis:

The results of exploratory factor analysis of measures associated with curriculum, teaching methods, emotional intelligence, personality building, and self-efficacy showed that the input data did not show high correlations between paragraphs, which means that multilinear is not a problem with these data. Analyses confirmed intermediate correlations, demonstrating the validity of the data for use in subsequent analysis.

A number of axes representing a significant percentage of the total variance were identified, reflecting the ability of the tool used to effectively measure different concepts. Specifically, a number of key themes have been identified, and these axes have contributed significantly to the interpretation of the total variance of the data, making the tool reliable for final data collection. It was found that all axes related to the quality of pedagogical training were of higher values than the minimum required, which enhances the reliability of the results. Adequacy tests indicated sufficient correlations between the variables, which enhances the feasibility of the model used.

The orthogonal rotation of the Varimax method was used to analyze the basic elements, and the low-load factors were eliminated. The results showed the distribution of paragraphs into several main dimensions, with the deletion of some paragraphs that did not show a strong correlation. The emotional intelligence dimension was the most influential, followed by the curriculum, then character building, teaching methods, and finally self-efficacy.

The Anti-image correlation test was also used to assess the quality of each paragraph of the scale, where the results showed that all values were above the required limit, indicating the high quality of each paragraph. The results of the prevalence coefficient also confirmed that the paragraphs of the scale have a remarkable quality, which enhances the reliability of the instrument used in the analysis.

Overall, these results reflect the validity of factor analysis to interpret data on curriculum, teaching methods, emotional intelligence, character building and self-efficacy, enhancing the reliability of this tool in future research.

Second, the results of the confirmatory factor analysis:

The results obtained from the confirmatory factor analysis of the measurement model for the study variables, namely curriculum, teaching methods, emotional intelligence, character building and self-efficacy, indicate that the indicators for measuring the original model were not satisfactory enough. This suggests a mismatch between the model and the data, which may hinder the ability to infer accurate and reliable results. In this analysis, the values of some indicators, such as the chi-square, indicated a clear gap between the model and the data. Although The values were considered unacceptable, but some recommendations for improvement were considered possible.

When reevaluating the model, emphasis was placed on how the elements were related to their dimensions, as well as not to other dimensions within the same model. Through the analysis of the adjustment index, some elements that caused problems with the quality of the model matching were identified. Accordingly, decisions were made to delete some elements that showed poor saturations, which contributed to significantly improving the quality of the model.

After implementing these modifications, the new results showed that the structural model became very well aligned with the data. All key indicators, such as the RMSEA and various matching indicators, showed values that fall within acceptable ranges, reflecting a clear improvement in the level of conformity. Based on these indicators, it can be said that the model met the required standards of quality.

Furthermore, analyses of composite stability showed that the values were high, indicating strong reliability of different dimensions. This stability is consistent with the values of the Cronbach alpha coefficient, which show that all elements within each dimension consistently and reliably measure the same concept. High values of composite stability indicate a high level of internal stability of the data, which enhances the credibility of the model as a whole. In addition, the results of the extracted variance showed that the dimensions studied explained a large proportion of the variance in the data. This is further evidence of the power of the dimensions in explaining the phenomenon studied. The saturation values of each element exceeded the minimum required values, indicating that the elements are strongly related to the dimensions to which they belong. It is also important to note that high values of the value of "T" indicate a significant statistical impact for each element in the dimension to which it belongs, which enhances the strength of the model. For example, in the curriculum variable, some paragraphs showed the highest saturation scores, reflecting their ability to effectively measure the desired concept.

For the detailed analysis of the average variance extracted, the results indicate that the average variance extracted was higher than all the correlation squared ratios between the variables. This clearly indicates that the model has achieved the sincerity of differentiation, which means that the different variables represent independent aspects of each other. These results enhance the credibility of the model used in the study, allowing for more accurate and reliable conclusions.

In general, it can be said that the results of the analysis confirm the high convergence validity of the model, as statistical values support the strength and reliability in measuring the concepts studied. The new design of the model shows a significant improvement, reflecting the model's ability to accurately measure what is being measured for measurement. This emphasizes the need to periodically reevaluate prototypes to improve their accuracy and reliability.

The results of the affirmative factor analysis also showed the existence of clear and influential correlations and relationships between the five study variables. These findings are of great importance in understanding how these variables interact and their mutual influences. The results show moderate to strong relationships between the different variables in the study. An intermediate relationship means that there is a remarkable but not strong enough correlation to lead to definitive conclusions, while a strong correlation indicates a clear and direct correlation. An accurate understanding of these gradients helps estimate the extent to which each variable affects the other. These findings highlight the complex interactions between variables, such as the relationship between curriculum and emotional intelligence, or between teaching methods and character building. These interactions reflect that improving one variable can positively affect others. For example, if the curriculum is optimized to be more inclusive, it may enhance students' emotional intelligence, which in turn contributes to building a more stable personality. Understanding the nature of these relationships can also have a significant impact on educational practices. For example, teachers and decision-makers can use these findings to develop instructional strategies that focus on enhancing social and emotional skills alongside academic content. This can lead to an improvement in the overall learning experience, as students realize that learning is not only about information but also about life skills. The results also show that curriculum development and teaching methods can lead to better academic outcomes. When teachers recognize the importance of the links between curriculum, pedagogy, and emotional intelligence, they can design more effective educational programs that meet the diverse needs of students, helping to improve their academic and personal performance. We will explain these relationships in some detail.

Conclusion:

This paper discussed the steps of preparing a multi-purpose questionnaire and verifying its structure using exploratory and affirmative factor analysis. The results showed that exploratory analysis did not show high correlations between vertebrae, indicating the

absence of the problem of multilinearism. A number of important themes have been identified, especially those related to the quality of pedagogical training, which enhances the reliability of the results. Orthogonal rotation was used to eliminate low-load factors, and paragraphs were distributed on key dimensions, where the emotional intelligence dimension was the most influential. In terms of confirmatory factor analysis, the initial measurement model was not satisfactory, necessitating a re-evaluation of the model and the deletion of some weak elements. After these adjustments, the quality of the model improved significantly, and the indicators showed good compatibility with the data. The analyses also showed high composite stability, reflecting high dimensional reliability. The veracity of differentiation was also achieved, demonstrating the independence of variables. Overall, the results enhance the validity of the model, underscoring the importance of reevaluating models to ensure their accuracy and reliability.

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Attache

Multipurpose Questionnaire

Strongly disagree	Disagree	I can't decide.	Agree	I strongly agree	Paragraphs	figure
					Curriculum	**First variable**
					The nursing curriculum (subject content) introduces new topics in each semester that fit my previous experiences and helps me build my knowledge gradually with ease.	**1**
					Nursing curricula (course content) give me the opportunity to apply theories to real situations during practical training.	**2**
					The nursing curriculum (subject content) deepens my overall classroom skills by stimulating me to think critically.	**3**
					The illustrations in the curriculum help connect new ideas with prior knowledge, enhancing my understanding of the topics.	**4**
					Nursing curriculum diagrams (subject content) help build a deep understanding of concepts.	**5**
					All homework given by the lecturer is consistent with the objectives of the nursing curriculum and	**6**

					helps me improve my personal and professional skills.	
					The nursing curriculum reflects a balance between theoretical lessons and practical application, which enhances my ability to use knowledge in real-life situations.	**7**
					Nursing curricula (subject content) enable students to understand ongoing developments in nursing and apply them in different contexts.	**8**
					Nursing curricula (subject content) are supported by modern means and techniques that support me in self-learning and different learning situations.	**9**
					Nursing curricula (subject content) promote students' creative thinking through practical challenges that allow them to solve real-world problems.	**10**
					Teaching Methods	**Second variable**
					The lecturer clearly states the objectives of the lecturer	**1**
					The teaching methods adopted by the lecturer (such as group work and the use of various media)	**2**

					support me in achieving the learning objectives.	
					The teaching methods used by the lecturer improve my practical nursing skills by encouraging me to participate actively in the classroom.	**3**
					The lecturer uses a variety of teaching methods that motivate me to solve problems in real situations.	**4**
					The diverse teaching methods used by the lecturer enhance my teamwork skills through effective collaboration.	**5**
					The diverse teaching methods improved my effective communication skills (continuous interaction with the lecturer, colleagues and patients).	**6**
					The teaching methods have enhanced my ability to organize my learning independently.	**7**
					The teaching methods have improved my ability to self-research.	**8**
					The lecturer uses assessment methods that are appropriate to the development of my knowledge and skills, allowing me to make continuous progress.	**9**

					Character Building	Third variable
					I believe that the nursing curriculum (subject content) helped me improve my morals by applying human values in practical situations.	1
					I learned through nursing school the importance of loyalty in other life situations.	2
					Through my studies in the College of Nursing, I learned how to apply the values of tolerance and love in dealing with others.	3
					I feel that I can apply my nursing knowledge in a professional manner that reflects human values.	4
					I believe I take responsibility for my mistakes and learn from them to improve my professional practice.	5
					I believe I have a strong and balanced personality as a result of learning from the real-life experiences I have been through.	6
					Through my studies in nursing, I learned how to contribute to society by volunteering in charitable work.	7
					I learned how to respect other cultures through	8

					our interactions in diverse learning environments.	
					I learned how to help patients outside of my working hours through practical situations.	**9**
					I learned how to be a responsible person towards society by interacting with social challenges.	**10**
					Self-efficacy	**Variable Fourth**
					I will be able to achieve most of the goals I set for myself	**1**
					I can do the difficult tasks that I am assigned to with ease	**2**
					If someone opposes me, I can find ways to get what I want.	**3**
					Be able to successfully overcome many challenges.	**4**
					I am confident that I can effectively perform many different tasks at the same time	**5**
					I can stay calm when faced with difficulties because I can rely on my coping abilities.	**6**
					When I have an unpleasant task, I stick to it until I'm done.	**7**
					I am confident that I can efficiently deal with unforeseen events.	**8**

					Emotional intelligence	Fifth variable
					I'm very confident in myself.	1
					I express my feelings clearly	2
					Know my weaknesses	3
					I consider myself trusted by others	4
					I feel the suffering of others	5
					I deal with others flexibly	6
					Work better with others	7
					I control my emotions when making a decision	8
					I can overcome feelings of frustration	9
					I control myself when exposed to a sad situation	10
					I can pinpoint the source of my emotions.	11
					I am able to read other people's feelings from their facial expressions.	12
					I can lift the spirits of depressed people.	13