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Factorial explanation of the integration of curriculum design, professional training and job training

Explicación factorial de la integración del diseño curricular, la formación profesional y la capacitación laboral

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Abstract

This article tries to give a statistical explanation that links elements of curriculum design, professional training and job training through quantitative research. An instrument was elaborated expressly containing the three axes described above, with 10 simple variables per axis, obtaining a total of 30 variables of decimal ratio measurement. For this study, a statistical analysis of Cronbach's alpha was performed for the reliability of the instrument; frequency and percentage to describe the sample and a factor analysis for the integrational explanation of the phenomenon under study.

Curriculum

Resumen

El presente artículo trata de dar una explicación estadística que vincule elementos del diseño curricular, la formación profesional y la capacitación laboral a través de una investigación cuantitativa. Se elaboró un instrumento *ex profeso* conteniendo los tres ejes antes descritos, con 10 variables simples por eje, obteniéndose un total de 30 variables de medición decimal de razón. Para este estudio se realizaron análisis estadísticos de alfa de Cronbach para la confiabilidad del instrumento; frecuencia y porcentaje para describir la muestra y un análisis factorial para la explicación integracional del fenómeno de estudio.

Currículum

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Introduction

The present investigation tries to give an objective explanation about the connection and possible implication between the axes of curriculum design, professional training and job training. The importance of this study lies in the fact that it can be observed that the trend of higher education must be for successful labor insertion, however many times what is learned in universities is not directly linked to job performance or what is stipulated through the curricular mesh, so it is important to visualize tentative explanations from an objective approach such as statistics.

Methodology

The methodology used in this study is quantitative in terms of the research design, for which a decimal numerical ratio measurement instrument was designed. Three axes of research were measured: curriculum design, professional training and job training. Each axis with 10 simple variables.

A Cronbach's alpha analysis was carried out for the validity and reliability of the instrument. A frequency and percentage analysis to know the data of the respondents and an analysis of main factors with extraction of multiple communalities of R2 and a normalized varimax rotation.

The 1% Kaiser criterion was used for the integrational analysis. With which four explanatory factors were obtained.

Results

Cronbach's Alpha Analysis

The results of the Cronbach's alpha analysis indicate that the instrument has a reliability of 0.95 according to the De Vellis criterion, which is considered a very good score.

Frequency and percentage analysis of the respondents' data

Based on an analysis of frequencies and percentages, the sample is made up of 246 respondents, mostly teachers or students from the Autonomous University of Coahuila, there are only 19 university respondents or external normalists, of which 66.6 % are women (n = 164); the rest are men (n = 82, 33.3%).

The ages of the respondents ranged from 14 to 71 years of age, being the most representative from 17 to 23 years (n = 127, 51.62%). The occupation was very diverse there are 45 full-time teachers (18.29%); 148 undergraduate students (60.16%); 32 graduate students (13.00%); 3 civil servants (1.21%) and 18 part-time teachers (7.31).

Integrational analysis of main factors

An integrational analysis of main factors was carried out with extraction of multiple communalities of R2 and a normalized varimax rotation. The significance was from 0.43 according to the n of 246 subjects and a probable level of error of 0.5.

	V. own	% Total S^2	Accum. V. P.	Accum. %
Factor 1	12.87	42.89	12.87	42.89
Factor 2	2.81	9.36	15.67	52.25
Factor 3	1.56	5.21	17.24	57.46
Factor 4	1.12	3.74	18.36	61.20

Table 1 Eigenvalues analysis of main factors

With the Kaiser criterion, four factors were extracted that describe the 61.20 explanation of the study phenomenon.

F. 1 Substitution of professional preparation for the development of job training

In factor 1, it is observed that the integration of variables gives the explanation that for the consolidation of the elements that constitute job training, university professional preparation for work must be replaced. In other words, when such substitution is made, there is the socio-labor implication of issues related to employment (for example: unemployment, informality, underemployment…); It is also observed that the educational-labor reforms are taken as implications in the socio-labor reality; training is seen as an aid to having a decent job; the incidence of professional training in the socio-labor reality is seen; the characteristics of decent work are linked (for example: human dignity, social security ...); the rules-norms are considered for effective communicationSocial rights are known (for example: the right to health, education ...), as well as the rights and obligations as a worker and the legal conditions regarding hiring. In addition to assessing the before and now of saving, afores, pensions in the socio-educational-labor reality.

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	Factor 1
Replace	0.452757
job	0.632060
Realid	0.686266
Capaci	0.588891
Formac	0.638081
Worthy	0.754444
Rules	0.637610
Social	0.749159
Obligation	0.796425
Condition	0.830818
Saving	0.790820

Table 2 F. 1 Substitution of professional preparation for the development of job training

F. 2 Explanation of curriculum design through the elements of professional preparation

In factor 2, it is explained through the elements of professional preparation such as Motivating the worker to give better products and / or results at work and Achieving the learning of skills with skills to be professionally competitive; the features of the curricular design included in the research instrument. For example, it is present to achieve the traits of the career graduation profile; professional skills for the labor market; guide in the construction of student learning; educational reforms; educational public policies; evaluation processes and the selection of the content of educational programs.

	Factor 2
Profile	0.631505
ComML	0.645161
Guide	0.710576
Refo	0.605702
Polit	0.683332
Evalu	0.626259
Select	0.733182
Resul	0.448379
Learning	0.430766

Table 3 F. 2 Explanation of curriculum design through the elements of professional preparation

F. 3 Orthogonal explanation of vocational training

Factor 3 gives an orthogonal explanation of what the professional training of university students implies based on the following elements: it helps to get a secure job with good remuneration; it is related to the success of the worker; motivates the worker to give better products and / or results at work; replaces college career preparation for work.

Achieves the learning of skills with skills to be professionally competitive; improves job opportunities in the labor market; builds the professional future of a person towards a life plan; develop towards a better quality of life and provide personal / professional satisfaction in work activities.

	Factor 3
Remun	0.593167
Success	0.693777
Resul	0.623064
Replace	0.484340
I learned	0.632267
Porto	0.632514
Future	0.713144
Quality	0.660615
Satisfied	0.686443

Table 4 F. 3 Orthogonal explanation of vocational training

F. 4 Educational figure as elements of curricular design

Factor 4 shows an explanation of the curricular design through the intervention of the educational figure, in the first instance when it stimulates the obtaining of response in its students and when it helps the cognitive autonomy of its students.

	Factor 4
Answer	**0.691494**
Autonom	**0.594763**

Table 5 F. 4 Educational figure as elements of curriculum design

Conclusion

Through this study, it is concluded that in the factorial integrational analysis it is possible to visualize interesting explanations in the sense of having for factor 1 to replace the professional preparation received in the initial professional instruction of the universities in order to observe development in the training labor, that is to say that what is learned in schools is disconnected in accordance with what is acquired in the labor field.

In the second factor, it is stated that in order to observe the elements of curricular design, the motivation of the workers and the learning and acquisition of labor competencies need to be present. In other words, in a pragmatic way there should be a representation of what is learned to improve working conditions.

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It is highlighted that vocational training is explained only through its own elements, which gives an idea that a preparation is not being exercised that accounts for what is organized in the curricular designs or that is managed to be projected in the labor field through training.

Finally, despite the new educational precepts on which classroom processes focus on students, this research concludes that an educational figure is necessary, but that it must be in favor of the construction of metacognitive skills in students, such as It is the case that they give answers to different needs and unknowns that arise in school environments and that they build cognitive autonomy, that is, that they improve mental processes by themselves.

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